

IVC Course Code : 506

GENERAL FOUNDATION COURSE (GFC)

First Year

(w.e.f. 2018-19)

Intermediate Vocational Course



STATE INSTITUTE OF VOCATIONAL EDUCATION, A.P.

BOARD OF INTERMEDIATE EDUCATION, A.P.



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Commissioner & Secretary
Intermediate Education
ANDHRA PRADESH
GUNTUR.

S.I.V.E Co - Ordinating Committee

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Reader

State Institute of Vocational Education
Commissioner of Intermediate Education, Guntur

Sri Dr. G.V.S.R. Murthy, M,Sc., Ph.D.

Lecturer

State Institute of Vocational Education
Commissioner of Intermediate Education, Guntur

DTP

Katari Ravi Kumar *B.Com, MCITP.*

Text Book Development Committee

General Foundation Course

AUTHORS

Dr. P.V. Ramana Kumar

M.A., M.B.A., M.L.I.Sc[cl]., PGDCA., Ph.D.,
Junior Lecturer in G.F.C
Govt. Vocational Junior College
Maddilapalem, Visakhapatnam-13

Dr. B. A. Swamy

M.A., (Gold Medal), M.Phill., PGDES., Ph.D.
Junior Lecturer In GFC
Govt. Junior College
Amadalavalasa, Srikakulam - 532 185

Sri. G. Tirupathaiah

M.A[Eco]., M.A[RD]., B.Ed.,
Junior Lecturer In GFC
Govt. Junior College
Vinukonda, Guntur 522 647

EDITOR

Dr. P.V. Ramana Kumar

M.A., M.B.A., M.L.I.Sc[cl]., PGDCA., Ph.D.,
Junior Lecturer in G.F.C
Govt. Vocational Junior College
Maddilapalem, Visakhapatnam-13

1st YEAR

GENERAL FOUNDATION COURSE

Periods/Week : 05 TIME SCHEDULE, WEIGHTAGE AND BLUEPRINT Periods/Year : 135

S.No.	Name of the Unit	No.of Periods	Weightage in Marks	Short Answer Questions	Long Answer Question
1	GENERAL EDUCATION	35	18	3	2
2	ENVIRONMENTAL POLLUTION	40	18	3	2
3	RURAL DEVELOPMENT	40	16	2	2
4	INFORMATION AND COMMUNICATION TOOLS	35	16	2	2

EVALUATION OF ON THE JOB TRAINING:

The “On the Job Training” shall carry 100 marks for each year and pass marks is 50. During on the job training the candidate shall put in a minimum of 90 % of attendance.

The evaluation shall be done in the last week of January.

Marks allotted for evaluation:

S.No	Name of the activity	Max. Marks allotted for each activity
1	Attendance and punctuality	30
2	Familiarity with technical terms	05
3	Familiarity with tools and material	05
4	Manual skills	05
5	Application of knowledge	10
6	Problem solving skills	10
7	Comprehension and observation	10
8	Human relations	05
9	Ability to communicate	10
10	Maintenance of dairy	10
	Total	100

NOTE: The On the Job Training mentioned is tentative. The spirit of On the Job training is to be maintained. The colleges are at liberty to conduct on the job training according to their local feasibility of institutions & industries. They may conduct the entire on the job training periods of I year and (450) II year either by conducting classes in morning session and send the students for OJT in afternoon session or two days in week or weekly or monthly or by any mode which is feasible for both the college and the institution. However, the total assigned periods for on the job training should be completed. The institutions are at liberty to conduct On the Job training during summer also, however there will not be any financial commitment to the department.

GENERAL FOUNDATION COURSE

GENERAL FOUNDATION COURSE

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UNIT – I

GENERAL EDUCATION

Structure

1. Vocational Education
2. Child Labour
3. Early Marriages
4. Corruption
5. Road Safety
6. Yoga
7. Personality
8. Self-Confidence
9. Public Health
10. Human Rights

1.1 VOCATIONAL EDUCATION

Vocational Education provides the students with a pathway to employment through their development of specialized knowledge and saleable skills. The instruction gives emphasis mainly to the development of basic manipulative skills, technical knowledge and occupational information.

Vocational courses provided through collaborative arrangements with the relevant professional institutions give lots of emphasis on on-the-job training. These valuable methods bridge the gaps between school and employment and give the student the opportunity to earn while learning.

The major objective of each course is to provide student an opportunity to acquire functional skills, desirable work habits that will enable them to be the productive members of the community and society.

1.2 VOCATIONAL EDUCATION AT +2 LEVEL IN ANDHRA PRADESH

INTRODUCTION:

Vocational Education first received attention in independent India when the Radha Krishnan Commission (1948) recommended that in order to direct students to vocations at the end of class X, a large number of intermediate colleges should be opened. “The aim of these colleges would be to meet a variety of needs of our young men and women by giving a vocational bias to their courses by retaining at the same time their value in a system of general education as preparation for university courses”.

The Commission (1952) also emphasized “the secondary education is a complete unit by itself and not merely a preparatory stage, that at the end of this period, the student should be in a position, if he wishes, to enter into responsibility of life and take up some vocations”. It also recommended diversification of the course at the secondary stage.

This resulted in the creation of multipurpose schools.

Then the Government appointed the Education Commission of 1964 under the Chairmanship of (Late) Prof. D.S. Kothari. The commission suggested restructuring of Education to 10+2+3 pattern and district streams of general and vocational education at the higher secondary stage were recommended with an intention of intercepting the goal-less climb-up of the youth on the educational ladder and diverting them to a productive path. These recommendations became a vital component of the National Policy on Education (NPE 1968) where in the “effectively terminal nature of the vocational stream” was emphasized.

The Central Advisory Board of Education (CABE) entrusted the NCERT in 1975 to prepare curricula and help the State Governments in implementing Vocational Education. The vocational education programme at higher secondary stage was thus initiated in 1976 when the NCERT document “Higher Secondary Education and its Vocationalisation” was presented to the country setting out a conceptual framework for implementation.

After this document the vocational education at the senior secondary level came into existence. Initially, the progress of implementation was very slow because of inadequate resources, lack of proper management system, inadequate teacher training etc.

One now encounters much greater awareness about vocational education in society in general. The expansion of the people from these courses is also increasing.

1.3 NATIONAL POLICY ON EDUCATION:

The National Policy on Education (1986) has accorded very high priority to the programme of Vocationalization of Education. In inter alia, it states that, the introduction of systematic, well planned and rigorously implemented programmes of vocational education is crucial in the proposed educational reorganization. It states that the vocational education will be a distinct stream, intended to prepare students for identified occupations spanning several areas of activity and that vocational courses will ordinarily be provided after the secondary stage, but keeping the scheme flexible, they may also be available after class VIII.

The revised policy formulations (1992) retain policy framework laid by NPE 1986. Moreover, it envisages, children at the Higher Secondary level are imparted generic vocational courses which cut across several occupational fields and which are not occupational specific.

1.4 AIMS AND OBJECTIVES OF VOCATIONAL EDUCATION:

Some important objectives of Vocational Education are:

- To diversify a sizeable segment of students at the senior secondary stage to the world of work.
- To link education with productivity, economic development and individual prosperity.
- To meet the skilled and middle level manpower needs of the growing sectors of the economy – both organised and unorganized.
- To reduce the miss-match between demand and supply of manpower.

- To prepare students for self-reliance and gainful employment.
- To prevent aimless pursuit of higher education.

1.5 ADVANTAGES OF VOCATIONAL EDUCATION:

1. **Low-Cost Education:** Not everybody can meet the expense of college to do a four-year degree programme, with the additional cost of various other expenses during the course. Vocational courses are generally low-priced alternative for individuals who do not want to take up a loan to go to a university. Many vocational courses are similar to a four-year degree which offers employment to the students after the program. This makes them pretty useful for those who do not have the resources to shell out cash for a college grade.
2. **Job Ready:** Vocational studies formulate an individual for a precise job. It trains a person with the skills and abilities compulsory to do a specific job, such as interior designing, fashion designing, auto repairing, computer networking etc. Many a time, the programme for the courses is arranged after taking recommendations from the local employers. Along with classroom guidelines, practical knowledge the students are trained through field work. Workshop based education is also emphasized to give the students hands-on knowledge on a given subject. This formulates the student for the job at hand and thus, he is capable of giving full integrity to his job, due to the vast understanding.
3. **Easy Employment:** Vocational education makes it stress-free for the students to find work. Generally, it is understood that employers choose to hire a student who has done a vocational course rather than a simple college pass out, as because in a vocational course, a student is taught precisely for a specific job. The student already owns the right personality, skills, potentials and education for the job and the companies feel that he will be more fruitful than a systematic college pass out due to his particle knowledge.
4. **Success in Career:** People, who are by now working and those who want to get additional education to progress their professions and cannot afford to take a four-year halt and going for an another college degree can choose a vocational course to improve their skills and testimonials. The time period for the course is less, but the expertise that is imparted to students through such courses, is fairly equivalent to the college courses, in terms of superiority. Thus, by doing a vocational course, an expert can enrich his career forecasts and accomplish success.
5. Vocational graduates have better employment opportunities than graduates from academic tertiary schools. It goes without saying that getting an office job is a struggle.

6. Technical programs typically include required core classes and electives that allow students to branch into sub-topics or specialty areas. This makes for a more focused learning experience than a bachelor's degree that includes liberal arts requirements.
7. Vocational school programs are typically shorter than a four-year private or public college. Associate degree programs at community colleges or technical schools typically include two years of full-time study.
8. The term 'vocational' actually means 'work-related'. So if you are doing a vocational qualification it means you are learning skills that will help you to get, and do, a job.
9. Some people are not aware that eligible for actually get vocational qualifications that will take you up to the same level as a degree, so the opportunities for continued personal development are still there, even if you don't choose the conventional route.
10. Vocational graduates have entrepreneurial skills. Take for example someone who did carpentry, they are able to employ themselves.
11. Vocational graduates possess good attitudes toward work; they are able to physically engage themselves from start to finish of a project.
12. For students who have trouble with motivation and accountability, vocational courses offer an excellent chance to develop these vital skills. Showing up for class on time, and all.
13. With a vocational qualification, you're more likely to be able to start working sooner, giving you the experience you need to back up what you're learning and you get to earn money at the same time.
14. Vocational graduates possess necessary technical skills in their specialization.
15. Like developing countries India and South Asian countries have potential human resources lacking skills. The industrial sector growth cannot utilise these huge resource due to the poor technical skills. In this situation, Vocational Education is very useful to train these resources according to the industry needs.

1.6 LIST OF TWO YEAR VOCATIONAL COURSES

S. No	Name of the Vocational Course	Further Study Opportunities	Job Opportunities
Engineering & Technology Courses (Category – I)			
1	Automobile Engineering Technician (AET)	With the help of Bridge Course Eligible for Polytechnic second year through lateral entry and also B.E., or B.Tech through EAMCET. Eligible for regular graduation courses like B.A. and B.Com without bridge course.	Apprenticeship in various departments like Varun Motors, Brakes India Ltd, Self-Employment in Workshop, Garages, Small Scale Industries, APSRTC, Engineering Workshops Army Technical
2	Construction Technology (CT)		Building supervisors, Building maintenance, assistant civil engineers and construction assistants.
3	Computer Science and Engineering (CSE)		Computer operator, Office assistance Billing clerk, DTP and job works
4	Electronics Engineering Technician (EET)		Electronic technician, TV's, Mobiles and other electronic durables technician.
5	Electrical Technician (ET)		Electrical Technician, Lift Operator All industries maintenance and repairs House wiring, Line man and wire man
6	Mechanical Engineering Technician (MET)		Apprenticeship in various departments like Varun Motors, Brakes India Ltd, Self-Employment in Workshop, Garages, Small Scale Industries.
7	Building Construction and Maintenance Technician (BCMT)		Building supervisors, Building maintenance, assistant civil engineers and construction assistants.
8	Printing Technology (PT)		All types of printing presses, Newspaper printing industry

Agricultural Courses (Category – II)			
9	Crop Production and Management (CPM)	B.Sc Agriculture through EAMCET B.Sc Nursing through bridge course Eligible for regular graduation courses like B.A., and B.Com without bridge course. Polytechnic in Fisheries B.Sc pure Fisheries for Fisheries groups only.	Agri Business in Vermi compost, Nurseries, Agri fish Culture, Spiralling Growing, Fertilizer Companies and Shops, Seed Companies & Shops
10	Dairying		Milk and its products industries like Visakha, vijaya, Heritage and Arokya dairies and also business of producing, storing, and distributing milk and its products.
11	Fisheries		Field Asst, Call Boys, Hatchery Technician, Feed Preparation and Supply, Plant In charge, Extension Supervisors, Aqua formSupervisorsPlant caretakers, foreign opportunities.
12	Sericulture		Silk farming, is the cultivation of silkworms to produce silk.
Home Science Courses (Category – III)			
13	Commercial Garment Technology (CGT)	Eligible for regular graduation courses like B.A., and B.Com.	Pattern maker, STVC instructor, ITI instructor, Self Employment, boutique management.
14	Fashion Garment Making		Pattern maker, STVC instructor, ITI instructor, Self Employment, boutique management. Dyeing and printing units.
15	Hotel operations (HO)		Star hotels, Restaurants, hostels, catering services, Railway services and functions.
16	Pre – School Teacher Training (PSTT)		Anganwadi teachers, play school teachers and pre-school teachers.

Business & Commerce Course (Category – IV)			
17	Accounting and Taxation (A&T)	Eligible for regular graduation courses like B.A., B.B.M., ICWA.,, C.S and B.Com.	Accountants, Tax Consultancy, Auditors, M.S. Office work, Tally, cashiers,GST Consultancy.
18	Retail Marketing (RM)		Sales executives and sales supervisors, computer operators in malls, retail store managers.
19	Office Assistant ship (OA)		Accountants, Billing Clerk, Banks Assistant, Accounts Assistant, Computer Operator. Front office assistant.
20	Banking & Financial Services (BFS)		Cashier, Bank Clerk, Billing Clerk, Banks Assistant, Accounts Assistant, Computer Operator, Stock exchange clerk, Securities dealer (Assistant)
21	Insurance and Marketing (IM)		Sales executive in various Insurance companies.
Paramedical Courses (Category – V)			
22	Medical Lab Technician (MLT)	With the help of Bridge Course they can admit directly into B.Sc MLT/ B.Sc Nursing and B.P.T through counselling by Dr. NTR Health University they can also admit MBBS through EAMCET. Eligible for regular graduation courses like B.A., and B.Sc.	Govt. and Private Hospital Apprenticeship Training, Individual Lab, Central and State Govt. Lab Technician Jobs Railway, Military Hospital Jobs, clinical laboratories and blood banks.
23	Multipurpose Health Worker (MPHW) (F)		Hospitals, Specialized clinics, PHCs and community health centres /Nursing Other States and Foreign Opportunities
24	Ophthalmic Technician (OT)		Ophthalmic Technician, Health Information Technicians, Govt. And private Eye hospital.
25	Physiotherapy (PT)		Physiotherapy technician in clinics, old age homes, hospitals. Jobs in public sectors, apprenticeship training.

Humanities & Other Courses (Category – VI)			
26	Computer Graphics & Animation (CGA)	Eligible for regular graduation courses like B.A. and B.Com.	Film industry, video maker and editor, Graphics and animator. Video mixer.
27	Tourism and Travel Technique (TTT)		APTDC guides, receptionists in hotels and restaurants, tourism desk in star hotels, travel agencies.
Bridge Courses (Theory) Mathematics, Physical Sciences (Physics & Chemistry) Biological Sciences (Botany & Zoology)		Bridge Courses (Practical's) (Second Year) Physical Sciences (Physics & Chemistry) Biological Sciences (Botany & Zoology)	

2.1 CHILD LABOUR

According to International Labour Organisation (ILO), Children's or adolescents' participation in work that does not affect their health and personal development or interfere with their schooling, is generally regarded as being something positive. Such harmless work includes activities such as helping their parents around the home, assisting family or earning pocket money outside school hours and over holidays. These kinds of activities, suggests ILO, may contribute to children's development by providing them with skills and experience, and help to prepare them to be productive members of society during their adult life.

The term child labour, suggests ILO is best defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development. It refers to work that is mentally, physically, socially or morally dangerous and harmful to children, or work whose schedule interferes with their ability to attend regular school, or work that affects in any manner their ability to focus during school or experience healthy childhood.

According to UNICEF' it is the child labour activities if between 5 to 11 years of age, he or she did at least one hour of economic activity or at least 28 hours of domestic work in a week, and in case of children between 12 to 14 years of age, he or she did at least 14 hours of economic activity or at least 42 hours of economic activity in domestic work per week. UNICEF in another report suggests, "Children's work needs to be seen as happening along a continuum, with destructive or exploitative work at one end and beneficial work- promoting or enhancing children's development without interfering with their schooling, recreation and

rest- at the other. And between these two poles are vast areas of work that need not negatively affect a child's development.”

India's Census 2011 office defines child labour as participation of a child less than 17 years of age in any economically productive activity with or without compensation, wages or profit. Such participation could be physical or mental or both. This work includes part-time help or unpaid work on the farm, family enterprise or in any other economic activity such as cultivation and milk production for sale or domestic consumption. Indian government classifies child labourers into two groups: Main workers are those who work 6 months or more per year and marginal child workers are those who work at any time during the year but less than 6 months in a year.

Some child rights activities argue that child labour must include every child who is not in school because he or she is a hidden child worker. UNICEF, however, points out that India faces major shortages of schools, classrooms and teachers particularly in rural areas where 90 percent of child labour problem is observed. About 1 in 5 primary schools have just one teacher to teach students across all grades.

2.2 Child Labour Laws in India:

India is a federal form of government, and child labour is a matter on which both the central government and state governments can Legislate, and have the major national legislative developments include the following:

1. The Factories Act of 1948:

The Act prohibits the employment of children below the age of 14 years in any factory. The law also placed rules on whom, when and how long can pre-adults aged 15-18 years be employed in any factory.

2. The Mines Act of 1952:

The Act prohibits the employment of children below 18 years of age in a mine.

3. The Child Labour (Prohibition and Regulation) Act of 1986:

The Act prohibits the employment of children below the of 14 years in hazardous occupations identified in a list by the law. The list was expanded in 2006, and again in 2008.

4. The Juvenile Justice(Care and Protection) of Children Act of 2000:

This law made it a crime, punishable with a prison term, for anyone to procure or employ a child in any hazardous employment or in bondage.

5. The Right of Children to Free and Compulsory Education Act of 2009:

The law mandates free and compulsory education to all children aged 6 to 14 years. This legislation also mandated that 25 percent of seats in every private school must be allocated for children from disadvantage groups and physically challenged children.

India formulated a National Policy on Child Labour in 1987. This Policy seeks to adopt a gradual and sequential approach with a focus on rehabilitation of children working in hazardous occupations. It projected strict enforcement of Indian laws on child labour combined with development programs to address the root causes of child labour such as poverty. In 1988, this led to the National Child Labour Protect (NCLP) initiative. This legal and development initiative continues, with a current central government funding of 602 cores, targeted solely to eliminate child labour in India. Despite these efforts, child labour remains a major challenge for India.

2.3 Causes for Child Labour:

1. Poverty: Children who come from poor families may be forced to work to support their siblings and parents or supplement the household income when expenses are more than the parents' earnings. It is a huge problem especially in developing countries where parents are unable to generate income due to the lack of employment opportunities or education. Children can be found employed in mines or hawking in the streets to earn money that is used to provide basic necessities such as food and clothing for the family. Children may also be employed in factories to generate income for the family instead of attending school. Such a practice is a common phenomenon in poverty-stricken regions with large factories set up by international companies.

2. Low Aspiration: It is important for parents and children to understand that they can work hard and make something great of themselves. A low aspiration by parents and children is a major cause of child labour because in such a situation, being employed in a local factory, or selling grocery in the streets is the normal way of life. To these types of children and parents, success only belongs to a certain region or group of people. They do not aspire to become professionals in the society or great entrepreneurs. It is a mind-set that forms the very foundation of child labour.

3. Huge demand for unskilled labourers: The demand for unskilled labourers is another cause of child labour. Children are mostly unskilled and provide a cheap source of labour, making them an attractive option for many greedy employers. Child labour, by virtue of being cheap, increases the margin of profits for such entrepreneurs whose only objective is profit maximization even if it comes at the expense of ethics and good business practices.

These types of employers can also force children to work under unfavourable conditions through manipulation or blatant threats.

4. Illiteracy: A society with many educated people understands the importance of going to school and pursuing dreams. Children have the ability and time to become whatever they aspire to be. Illiteracy, on the other hand, makes it difficult for many people to understand the importance of education. Illiterate people view education as a preserve of the privileged in the society. They will therefore not provide support to children so that they can go to school and build solid foundations for future success. The same view of life is seen among illiterate parents who prioritize children contributing to the upkeep of the family over going to school.

5. Early Marriages: Marrying at an early age is a major contributing factor to overpopulation. Young parents are able to sire a lot of children because they remain fertile for a long time. Having many children with little or no resources to support those leads to child labour. Older children are forced to work in order to help their parents support the family.

6. High cost of education: Quality education is expensive. To many parents who live in abject poverty, priority is given to providing food for the family because education is too expensive to afford especially when there are many children to pay school fees for. Instead of letting children stay at home because there is lack of money to send them to school, parents opt to have them working as unskilled labourers to help support the family. Some parents can also only afford basic education which means that children will be forced to look for work since they cannot pursue their education further.

2.4 Consequences of Child Labour

1. Loss of Quality childhood: It is important for human beings to enjoy every stage of their development. A child should play with friends and make memories for a lifetime. Youths should explore life and form strong foundations that would define their adult lives. Child labour, therefore, leads to loss of quality childhood as children will be deprived of the opportunity to enjoy the amazing experiences that come with being young. Children are often encouraged to play because it helps in their growth and development. A child forced to work will miss many of the good things associated with childhood.

2. Health issues: Child labour can also lead to health complications due to undernourishment and poor working conditions. It is highly unlikely that people who employ children also have the moral capacity to ensure that they have good working conditions. Working in places such as mines and badly conditioned factories may result in lifetime health issues

for children employed to work in these places. A child assigned physically demanding duties may suffer physical trauma that may mark him or her for life.

- 3. Mental trauma:** It is not a pleasant experience to be kept working as a child while your age-mates are out playing and going to school. Children also lack the ability to shield themselves from most of the challenges that occur in the workplace. Issues such as bullying, sexual exploitation, and unfavourable working hours may result in mental trauma in these children. They will find it hard to forget the past and may become societal misfits because of bad childhood experiences. Child labour may also result in the lack of emotional growth and thus insensitivity.
- 4. Illiteracy:** Children that are employed do not have the time to go to school. They spend a lot of time in their workstations as the days and years go by. The lack of education and illiteracy makes them individuals with limited opportunities as far as employment is concerned. Education also prepares a person for several challenges in the society and without it, one may turn out to lack the basic skills required to overcome many of life's problems. An individual who has gone to school may be aware of how to approach certain situations in life without resorting to brute force. An illiterate person, on the other hand, considers force to be the only answer to nearly all of the challenges experienced.

2.5 Measures to control Child Labour:

How can child labour be reduced or completely eradicated? Every child born has the right to have dreams and pursue those dreams. Even though the realization of some of these aspirations may be limited by several challenges, it is still possible to overcome them and achieve the highest levels of success.

There is need to involve various stakeholders to realize this objective. These are some of the ways in which the problem of child labour can be addressed:

- 1. Free education:** Free education holds the key to eliminating child labour. Parents that do not have money for school fees can use this as an opportunity to provide their children with education. It has already proved to be a success in many places around the globe and with more effort; the cases of child labour will greatly reduce. Mid-day meals schemes can also be used as a motivating factor for children whose parents can barely afford a meal to learn. Even if they will be attending school because of the free meals, they will still be able to learn and create a good education foundation for themselves and also improve hostel facilities.
- 2. Moral Polishing:** Child labour should not be entertained at all. It is legally and morally wrong. Children should not be allowed to provide labour at the expense of getting an

education and enjoying their childhood. Factory owners, shopkeepers, and industries among others should not employ children. The society should be educated on the negative impacts of child labour so that it becomes an issue that is frowned upon whenever it occurs. This type of moral polishing would act as a deterrent to people who intend to employ children and use them as a source of cheap labour. Many of the ills that go on in the society do so because people turn a blind eye or fail to consider their moral impacts. With this kind of approach, cases of child labour will greatly fall among our communities.

- 3. Create demand for skilled and trained workers:** By creating the demand for skilled and trained workers, child labour cases will reduce since almost all child labourers fall under the unskilled worker category. It will lead to adult employment as the demand for skilled labour rises. Establishing skill-based learning centres, vocational training centres, and technical training institutions improves literacy and contributes to the availability of skilled and trained workers in the job market. Creation of job opportunities by the government is also another way that cases of unemployment can be reduced and household income for the population increased. Such government policies improve living standards and eliminate the need for children to seek work in order to support their families.
- 4. Awareness:** Creating awareness about the illegality of child labour can also help in stemming the practice. Parents should be made aware that sending their children to work has legal ramifications and the law would take its course if they are found to be aiding and abetting this vice. It is the ignorance among many parents and members of the society that makes them participate in child labour practices. Conducting a campaign to create awareness about its harmful effects would eliminate the practice. The government, together with non-governmental organizations and the civil society, can create a strategy to make such an initiative a success.
- 5. Empowerment of poor people:** Poor people are the most affected by child labour. The poor living standards and financial constraints sometimes make them unwilling participants in this vice. Empowering poor people through knowledge and income generating projects would go a long way in reducing cases of child labour. Parental literacy also plays an important role in ensuring that the rights of children are upheld, and minors are not used as a source of labour. Empowering parents with this kind of knowledge can create a positive change in the society and encourage the shunning of child labour practices in communities.

2.6 Role of Non-governmental organizations:

Many NGOs like BachPan Bachao Andolan, CARE India, Child Rights and You, Global march against child labour etc. Have been working to eradicate child labour in India. Pratham is India's largest non- governmental organization with the mission "every child in school and learning well" Founded in 1994, Pratham has aimed to reduce child labour and offer schooling to children irrespective of their gender, religion and social background. It has grown by introducing low cost education models that are sustainable and reproducible. In 2005, Pratham was involved in coordinating a child labour rescue operation with India's Ministry of Labour and police, when around 500 children were rescued from Zaria sweat shops in New Delhi.

3.1 EARLY MARRIAGES

Throughout the world, marriage is regarded as a moment of joy and celebration. Early marriage refers to the marriage of the children aged below 18 years. Early marriage is often a forced marriage as it takes place without the consent of both the bride and bridegroom (Child marriage and Forced marriage). The imposition of a marriage partner upon a child means that a girl's or boy's childhood is cut short and their fundamental rights are compromised. Young girls are robbed of their youth and are required to take on roles for which they are not psychologically or physically prepared (UNICEF). Although early marriages affect both the sexes but girls have been a major victim. Its practise has inflicted harmful effects on the parties involved and also the overall society. Early marriage is everywhere considered a violation of the Human Right and efforts are being made to beware people of its adverse effects.

3.2 Causes of Early Marriages:

1. **Gender discrimination:** Child marriage is a product of social and cultural norms that devalue women and girls and discriminate against them, often limiting their roles to the domestic realm and thus preventing them from accessing educational, vocational or economic opportunities outside the household.
2. **Kidnapping and trafficking:** Some poor families are tempted to sell their girls into marriage because the transaction enables large sums of money to change hands. Many of those sold into marriage, often into the hands of wealthy, older men in other countries; face a dreadful fate of marital rape, other violence and further subjugation.
3. **Climate:** In some places external forces, such as climate change, feed a family's poverty and fuel the urgency parents feel to protect their daughters and sons. Losing their crops to floods

or their homes to land erosion, families can rush to marry off their daughters early before they are displaced or before their economic situation deteriorates further.

4. **Poverty and economic insecurity:** Many parents genuinely believe that marriage will secure a daughter's future and that it is in her best interests to marry early. Alternatively girls may be viewed as an economic burden, as a commodity, or as a means for settling familial debts or disputes, or securing social, economic or political alliances. And girls themselves sometimes make the careful decision to marry early in hopes of leaving poverty behind them. Child marriage indirectly promotes poverty, however, as it often means that girls who marry young likely will not be properly educated, gain the needed skills to make informed decisions or take part in the workforce.
5. **Cultural or religious customs:** Deeply rooted cultural or religious customs often lead parents to marry their daughters early. In places such as India, where inter-caste marriages are stigmatized, delaying a daughter's marriage, parents fear, can jeopardize the chances of finding a good match for her later.
6. **Controlling or "protecting" the girl's sexuality:** In certain cultures, marrying a girl young and thus presumably protecting her virginity — is thought to protect her honour and, by virtue of that, the family's. If the girl's reputation is compromised through premarital sexual activity, the family may be socially stigmatized, and the girl may find it difficult to find anyone willing to marry her later. In other situations, families think that marrying their daughters early mitigates the risk of their being sexually harassed or raped by strangers, a cruel irony given that child brides are three times more likely to be raped by their husbands.
7. **Dowry or bride-price:** These long-standing customs, in which money or gifts such as livestock change hands, can sometimes create powerful incentives for parents to marry off their daughters young. In Bangladesh, where the dowry price increases as girls get older or educated, poor families obligated to cover that cost find strong incentive in marrying off their daughters early.
8. **Inadequate laws:** Many countries have laws against child marriage before age 18, yet those laws often are not enforced. In India, for example, laws forbidding child marriage date to 1929. Yet, with every other Indian girl getting married early, it is home to more child brides than any other country in the world. 9 In 2009 Afghanistan passed a law enabling the Shiite minority to impose its own form of family law including permitting child marriage. In spite of its 2003 Child Rights Act, which rose to 18 the minimum age for its daughters to marry, Nigeria administers three different legal systems imposing different rules for child marriage.

Some laws regarding child marriage allow for exceptions, such as permission from the parents, whose decisions and actions may be governed more by local custom and tradition.

3.3 Consequences of Early Marriage:

- 1. Early maternal deaths:** Girls who marry earlier in life are less likely to be informed about reproductive issues, and because of this, pregnancy-related deaths are known to be the leading cause of mortality among married girls between 15 and 19 years of age. These girls are twice more likely to die in childbirth than girls between 20 and 24 years of age. Girls younger than 15 years of age are 5 times more likely to die in childbirth.
- 2. Infant health:** Infants born to mothers under the age of 18 are 60% more likely to die in their first year than to mothers over the age of 19. If the children survive, they are more likely to suffer from low birth weight, malnutrition, and late physical and cognitive development.
- 3. Violence:** Young girls in a child marriage are more likely to experience domestic violence in their marriages as opposed to older women. A study conducted in India by the International Centre for Research on Women showed that girls married before 18 years of age are twice as likely to be beaten, slapped, or threatened by their husband's and three times more likely to experience sexual violence. Young brides often show symptoms of sexual abuse and post-traumatic stress.
- 4. Inability to plan or manage families:** Women who marry early are likely to bear more children than those who marry later. Young mothers exercise less influence and control over their children and have less ability to make decisions about their nutrition, health care, and household management.
- 5. Increase Population:** Moreover, one of the main effects of early marriage is the increase in the number of children. An early married couple is usually expected to have more children than a relatively late married couple (Early marriage). The study, by UNICEF, show that there is always a negative correlation between the time of marriage and the number of children, the early the marriage is larger will be the size of the family. This causes an increase in the size of the overall population which worsens the social life of the common people and increase unemployment, child labour and poverty in the society.
- 6. Increased level of divorce:** The highest rates of early marriages and out of which 45 per cent women suffer from domestic violence on a regular basis. Early marriage has also been linked to wife abandonment and increased level of divorce and separation. Child brides also face the risk if being widowed by their elderly husbands. While divorce plunges an early married woman into poverty, young brides who lose their husband face the high probability of not being taken in to marriage again, in these societies. Domestic violence in India includes any

form of violence suffered by a person from a biological relative, but typically is the violence suffered by a woman by male members of her family or relatives.

- 7. Violation of the Human Rights:** Finally, these harmful effects caused by the practice of early marriages calls for attention of the United Nations to come up with the laws discouraging the early marriages. Early marriages should be regarded as a violation of the Human Rights and the parties involved in this crime should be charged heavily. Furthermore, the government in each country should make efforts to eliminate poverty and provide education to its population which will result in the decrease in the child marriages. The governments should also encourage NGOs which provide girls with a job to increase their economic standards and beware people of the dangerous effects of early marriages. The government must also negotiate with the religious scholars and should seek for their help in eliminating the early marriages. These actions, if implemented, will surely eliminate the practice of early marriages and will provide an end to its harmful effects.

4.1 CORRUPTION

Corruption is an issue that adversely affects the country's economy and the credibility of central, state and local government agencies. Not only has it held the economy back from reaching new heights, but rampant corruption has stunted India's development. A study conducted by Transparency International in 2005 recorded that more than 92% of Indians had at some point or another paid a bribe to a public official to get a job done. In a study conducted in 2008, Transparency International reported that about 50% of Indians had first-hand experience of paying bribes or using contacts to get services performed by public offices.

Transparency International's 2016 Corruption Perception Index ranks the country 79th place out of 176 countries.

The largest contributors to corruption are entitlement programs and social spending schemes enacted by the Indian government. Examples include the Mahatma Gandhi National Rural Employment Guarantee Act and the National Rural Health Mission. Other areas of corruption include India's trucking industry which is forced to pay billions of rupees in bribes annually to numerous regulatory and police stops on interstate highways.

Meaning:

Corruption means perversion of morality, integrity, character of duty out of mercenary motives (e.g. bribery) without regard to honour, right or justice. In public life, a corrupt person is one who bestows undue favour on someone with whom; he has monetary or

other interests (e.g. nepotism). Simultaneously, those who genuinely deserve those things as their right remain deprived.

Corruption in public life is not a modern phenomenon. It was prevalent in the political and civic life of even Maura period as has been discussed by Chanakya in the Arthasastra. But it is only recently that Corruption has become remnant in our public life. People no longer protest against corrupt practices, fight injustice or express any shock when big scandals are exposed. Many of the biggest scandals since 2010 have involved very high level of government, including Cabinet Ministers and Chief Ministers, such as in the 2G spectrum scam the 2010 commonwealth games scam and Adarsh Housing society scam, coal mining scam, mining scandal in Karnataka and recent bail for sale corruption by the Judiciary. Also corruption is not uniquely Indian phenomenon; it is witnessed all over the world (USA, Japan, Italy, etc.) Forms of corruption in India: bribery, nepotism, theft and wastage of public property, dereliction of duty...etc., Extent of corruption: Start with a hospital where a child is born and move further on to education-system, career opportunities, political system, judiciary law and order, other day-to-day activities...till post-mortem report and crematorium.

Result of corruption: Individual sufferings, people loss faith in the existing system, prevalence of chaos and 'anarchy, society disintegrates, country becomes weak, foreign invasion may occur.

4.2 Main Causes of Corruption

1. **Low Pay scales/ Wages:** Most of the employees in government sector are paid low wages and salaries. Hence some employees revert to corruption for more financial benefits.
2. **Low Job opportunities.** This is another cause of corruption. Due to lack of job opportunities at will, there are many people who like to go for corruption mode to get the job offer. They will be ready to pay lump sum amounts for the job offer to the higher officials or politicians.
3. **Lack of Strict and fast punishments:** Even if someone is found guilty or even caught red-handed by the anti-corruption officials or media, the convicts get less punishment. First they will be suspended for few months or weeks and then re-posted to another location with same Job grade and pay. So this means the official who did the corrupt practice is given a free license to continue his practice. If the government is so strict that any such corrupt incidents will lead to permanent removal from job and also punishment like several years imprisonment then the corruption will come down to a large extent.
4. **Lack of Unity in public:** Public openly criticize corruption but interestingly there is no unity among the public to stop corruption. If a person wants to get his done his work, he gets it done by corruption means if possible and then later criticizes the corrupt official. If the public

stands united against corruption in such a way that no one is ready to offer bribes to get their work done then the corrupt officials will have no other option but to work in corruption free manner. During election, politicians try to lure the people by offering money and other things. If these politicians win and get power, they try to regain 10 to 100 times the amount spent for their elections.

5. **Lack of transparency in affairs and deals:** Many seat selection processes like in education, contracts for job, employee income reports (wealth possession), etc. lack transparency. For this purpose, there is a new act namely RTI: right to information, but the act is not strong enough to prevent malpractices.
6. **Lack of Independent detective agency:** India has no independent detective agency which can investigate with full power and freedom to expose the corrupt individuals. The existing agencies like Central Bureau of investigation are named by the highest court of Indian judicial system as a parrot which indicates how free these investigating agencies to work. Hence anyone who commits offense will not be as afraid of the investigation as they can escape from it by taking help of ruling political party.
7. **Option of many political parties:** In India anyone can establish a political party. So there are many political parties in India. If the political party wins, then the members in it will desire to expand the party to all over the country. To do so, they need enough financial reserves. For this, once they come into power, they opt for corrupt means to make the wealth needed to expand the party.
8. **Lack of judicial powers:** In our judicial system and other independent organization like the election commission cannot ban a politician from contesting in case they make a mistake or do not comply with the rules during election campaign (like distributing money to people etc.).
9. **Lack of accountability:** In government there is a big trend of corruption. This is because of lack of accountability. The employee's on government offices do not perform to their par excellence. If they receive 100 files to be cleared in a week they may not even clear 50 of them in that week. They tend to post-pone the clearance of the files. So those who are in urgency of the clearance have to get them done by rewarding the officials involved in the clearance office. This lack of accountability in government offices is chief cause of corruption.

If there is a mandate that all the files or at-least 95% of files received by government offices for clearance are cleared in the said period than corruption can be minimized to a large extent.

4.3 Measures to Control Corruption:

There are some specific measures to control increasing corruption.

1. The Right to Information Act (RTI) gives one all the required information about the Government, such as what the Government is doing with our tax payments. Under this act, one has the right to ask the Government on any problem which one faces. There is a Public Information Officer (PIO) appointed in every Government department, who is responsible for collecting information wanted by the citizens and providing them with the relevant information on payment of a nominal fee to the PIO. If the PIO refuses to accept the application or if the applicant does not receive the required information on time then the applicant can make a complaint to the respective information commission, which has the power to impose a penalty up to Rs.25, 000 on the errant PIO.
2. Another potent check on corruption is Central Vigilance Commission (CVC). It was setup by the Government to advise and guide Central Government agencies in the areas of vigilance. If there are any cases of corruption or any complaints thereof, then that can be reported to the CVC. CVC also shoulders the responsibility of creating more awareness among people regarding the consequences of giving and taking of bribes and corruption.
3. Establishment of special courts for speedy justice can be a huge positive aspect. Much time should not elapse between the registration of a case and the delivery of judgment.
4. Strong and stringent laws need to be enacted which gives no room for the guilty to escape.
5. In many cases, the employees opt for corrupt means out of compulsion and not by choice. Some people are of the opinion that the wages paid are insufficient to feed their families. If they are paid better, they would not be forced to accept bribe.
6. A compressive code for ministers, members of legislature and political parties.
7. A voluntary organization at national level should be established to break the vicious circle.
8. Law and order machinery should be allowed to work without political interference.

4.4 Anti-corruption police and courts:

The Directorate General of Income Tax Investigation, Central Vigilance Commission and Central Bureau of Investigation all deal with anti-corruption initiatives. Certain states such as Andhra Pradesh (Anti-Corruption Bureau, Andhra Pradesh) and Karnataka also have their own anti-corruption agencies and courts.

Andhra Pradesh Anti-Corruption Bureau (ACB) has launched a large scale investigation in the “cash-for-bail” scam. CBI court judge Talluri Pattabhi Rama Rao was arrested on 19 June 2012 for taking a bribe to grant bail to former Karnataka Minister Gali Janardhan Reddy, who was allegedly amassing assets disproportionate to his known sources

of income. Investigation revealed that India Cements (one of India's largest cement companies) had been investing in Reddy's businesses in return for government contracts. A case has also been opened against seven other individuals under the Indian Penal Code and the Prevention of Corruption Act.

5.1 ROAD SAFETY

In the last decade alone, India lost 1.3 million people to preventable road crashes and another 5.3 million have been left disabled for life. India has the highest number of road crash fatalities, with a crash occurring every minute and one death every four minutes. While it has just 1% of the world's vehicles, India accounts for over 10% of global road crash fatalities – the highest in the world. According to the 'Road Accidents in India', 2015 report released in June, 2016, by the Transport Research Wing (TRW) of Ministry of Road Transport and Highways (MoRTH), 1, 46,133 people were killed in road crashes in 2015 including 12,589 children. This number is not only the highest that India has ever recorded in history, but it represents a 53.9% increase over the last decade, and nearly a ten-fold increase since 1970. Not only does the loss or impairment of a breadwinner of a family inflict emotional trauma on lakhs of families, it imposes a severe financial burden by pushing entire households into poverty.

In a 2014 report, the former Planning Commission of India had estimated that the annual cost of road crashes in India is 3% of its GDP. With India's GDP in 2015-16 being INR 136 lakh crore, these figures translate into a monetary loss of INR 4.07 lakh crore. Ironically, it is over five times the budget of the Ministry of Road Transport and Highways, the nodal agency for ensuring road safety in India. This amount, if saved, can fund various schemes by the government for several years.

5.2 Current status of road safety in India rest of the world

According to the World Health Organization's Global Status Report on Road Safety, 2015, more than 1.2 million people die on world's roads each year, making injuries sustained due to road crashes a leading cause of death in low and middle-income countries.

It has now been recognized as a development issue, in addition to being a public health problem, with low and middle-income economies losing up to 3% of their GDP to losses due to road crashes. While the number of road crash deaths in the world has remained fairly constant since 2007 at 1.25 million deaths in 2013, there has been a continuous increase in road crash deaths in India since 2007, with only a marginal reduction in 2012. In fact, India surpassed China in 2007 as the country with the highest number of road crashes annually.

Road crash deaths among vulnerable road users such as pedestrians, cyclists and motorcyclists have been intolerably high across the globe, amounting to almost half of all deaths on the world's roads. However, the likelihood of dying on the road as a motorcyclist, cyclist or pedestrian varies by region. While 92 countries have by 2015, put in place policies to ensure safety for pedestrians and cyclists, compared to 68 in 2010, India still has no laws protecting vulnerable road users, who account for over 35% of all road crash deaths in the country.

5.3 Recent developments in road safety legislation

The sole statute governing Road Safety in India, the Motor Vehicles Act, 1988 (MVA) has been largely ineffective in tackling the rising road crash deaths in the country. Due to the lack of a comprehensive and administrative framework for Road Safety in India, most interventions to tackle this epidemic have remained unsustainable. In the Monsoon Session of Parliament (July-August, 2016), the Government of India introduced the Motor Vehicles (Amendment) Bill, 2017. The Bill aims to amend 68 out of 223 sections and insert 28 new sections in the MVA, 1988, in order to fill the legislative gaps existing in the current framework. The Motor Vehicles (Amendment) Bill, 2017 was passed by Lok Sabha on April 10, 2017 and now awaits passage by the Rajya Sabha.

5.4 Road accidents in India

- India witnessed 17 deaths and 55 road accidents every hour in 2016, one of the highest in the world, according to the latest report released by the Union road transport and highways ministry.
- The report compiled by the ministry's Transport Research Wing said road accidents killed 150,785 people across India in 2016 — a 3.3% jump from 2015 when 146,000 lakh road fatalities were reported — indicating Indian roads continue to be one of the deadliest in the world.
- The number of road accidents, however, declined from 501,000 lakh in 2015 to 480,652 lakh in 2016.
- “This reflects an alarming trend that while the number of accidents has gone down, their severity has increased resulting in many more deaths. One of the main reasons for the high number of fatalities is speeding by drivers,” said a senior road ministry official.
- According to a World Bank estimate, road accidents cost India about 3% of its gross domestic product every year.

- Almost half or 46.3% of the road fatalities victim in 2016 were in the age-group of 18-35 years. The maximum number of road accidents — 1.9 lakh — occurred on two-lane roads.
- At 1,591, Delhi topped the list of million plus cities that reported the highest number of road accident deaths in 2016 while Chennai had the highest number of road accidents at 7,486.
- Uttar Pradesh recorded the highest number of road accident deaths in 2016 at 19,320 followed by Tamil Nadu at 17,218 and Maharashtra at 12,935.
- Andhra Pradesh has been placed third on the list of states with the highest accident rates in 2017. According to the statistics provided by National Highways Authorities of India (NHAI), AP witnessed 30,045 road accidents with 8,210 deaths which make 7.52 percent of the countries total.
- Road sector experts say one of the primary reasons behind such a high number of road accidents in India is the fact that the increase in road length has failed to keep pace with the number of registered motor vehicles. Officials at the Transport Department who analysed the accidents in AP concluded that the most dangerous period is between 2 a.m. and 5 a.m. which accounts for 60 percent of the total accidents.
- Around 67 accidents have occurred on the roads of Andhra Pradesh every single day between January and June 2016. On an average, 24 persons lost their lives and 88 persons suffered from injuries due to road accidents on a daily basis in the state, statistics obtained from the AP Road Transport Authority revealed.
- 40 percent of the accidents in the state involved overspeeding, 20 percent due to drunken driving, 18 percent for negligent driving, 12 percent accidents were caused due to driving without rest and five percent due to technical failures.
- While vehicle registration has gone up by 10% during 2005-2015, road length during the same period increased only 3.75%. This has resulted in congestion on roads leading to a spike in accidents, experts said.
- At 33.8% two-wheelers accounted for the highest share in the total number of road accidents followed by cars, jeeps, and taxis at 23.6%.
- Of the 52,500 two-wheeler riders killed in road accidents, 19.3% were not wearing helmets at the time of the accident.

5.5 Main reasons behind road accidents and fatalities

Overspeeding and talking on mobile phone are the two main reasons behind the road accidents and deaths, according to road transport ministry's research wing overspeeding

accounted for 66% of road accidents and 61% deaths talking on mobile phone caused 4,976 road accidents and 2,138 deaths.

Top 13 states, including Uttar Pradesh (19,320), Tamil Nadu (17,218) and Maharashtra (12,935) account for nearly 84% road accident deaths in India last year

Two-wheelers involved in maximum accidents. Of the 52,500 two-wheeler riders killed in road accidents, 19.3 % were without helmets.

New Delhi and Chennai reported maximum number of road accidents while Uttar Pradesh had most deaths due to speeding and talking on mobile phone, according to transport ministry's research wing report.

5.6 Road Safety Awareness in India:

Road safety is a major issue in many countries. A big country like India has various states which in turn have villages and concerned authorities to take care of the smooth running of the same. Hence it is very important to have a centralized system which can be reflected in the implementation of the rules and regulations of the country.

A Road safety programs in India are an essential matter which requires various amendments and implementations for the smooth functioning of the traffic. Rules have been set but followed or not is another issue altogether. Government has taken various preventive measures to ensure the safety of the citizens using the road. Usage can be in the form of driving or walking. Measures are rules which are enforced by the concerned authorities. The enforcement in India is necessary because people violate the rules and this leads to road mishaps. As per the latest survey, India has the highest number of road accidents.

5.7 Measures to Control Road Accidents:

1. Seat belt wearing is an important rule for the people travelling in the front seat of the four wheeled vehicles. Heavy penalties have been levied in certain states for the people who violate the rule. This is a major safety measure taken by the government. The wearing of the seat belt reduces the risk of major injury if accident happens and surveys have proved the fact.
2. Two wheeled vehicle drivers have to wear helmets and failing to do so can lead to heavy penalty. Measures are taken by the government for the benefit of the people.
3. Use of cell phone while driving is prohibited. But hardly people try to follow the rule sometimes. To prevent this, preventive measures like fine payment has been levied on the citizens who are found driving and talking on the mobile simultaneously. Red light jumping and no lane driving is another hazard in maintaining road discipline. This is the

reason why the government has taken the measure of penalty payment of red light jumpers. Over speeding also leads to punishment and many people end up paying fine for the same.

4. Keep your vehicle in good mechanical order. Replace worn tires and brakes as needed. Keep windshield washer fluid full and change out windshield wipers on a regular basis.
5. Drive according to road conditions. Drive slower when the weather is bad. Road surfaces deteriorate in rain, ice or snow. The ability to stop quickly greatly reduces when the roads are not dry.
6. Periodically shift your eyes to the side-view mirrors, the rear-view mirror, and ahead to where you'll be in 10-15 seconds. Doing this, you can spot a potentially dangerous situation before it happens.
7. Look extra carefully in parking lots or parking areas. Many fender-benders happen in these areas. Follow the rules set up in parking areas. These rules are for the safety of all drivers.
8. Turn your head to check for traffic before changing lanes. Do not rely on your mirrors when making a lane change. All vehicles have "blind spots" in which your mirrors cannot see. Do not ride in the blind spots of other vehicles.
9. Avoid other vehicles. Back off and don't tailgate or allow others to tailgate you. Try to avoid driving next to another vehicle in case it has to swerve to avoid an animal or debris that may be in the road.
10. Follow the rules of the road like speed limits, there are other rules of the road that you must follow if you want to avoid having accidents, and getting traffic tickets. If you are approaching a stop sign or a red light, start slowing down long before you get to it, so that you are able to come to a complete stop at the stop line. Obey all traffic signs; they are there for a reason.

Road safety assessment in India is necessary to evaluate the safety measures and the enforcement of the same. The assessment helps in making amendments if requires so that the optimum results of safety are obtained.

The main objective of the assessment is to evaluate the coverage and availability of the safety measures on the roads at the state and the national level at large.

6.1 YOGA

Introduction:

The word yoga means 'unity' or 'oneness' and is derived from the Sanskrit word yuj which means 'to join'. This unity or joining is described in spiritual terms as the union of the

individual consciousness with the universal consciousness. On a more practical level, yoga is a means of balancing and harmonising the body, mind and emotions. This is done through the practice of asana, pranayama, mudra, bandha, shatkarma and meditation, and must be achieved before union can take place with the higher reality.

Yoga is the science of right living and, as such, is intended to be incorporated in daily life. It works on all aspects of the person: the physical, vital, mental, emotional, psychic and spiritual.

"Yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the present. It is the essential need of today and the culture of tomorrow."

-Swami SatyanandaSaraswati

The science of yoga begins to work on the outermost aspect of the personality, the physical body, which for most people is a practical and familiar starting point. When imbalance is experienced at this level, the organs, muscles and nerves no longer function in harmony, rather they act in opposition to each other. For instance, the endocrine system might become irregular and the efficiency of the nervous system decrease to such an extent that a disease will manifest. Yoga aims at bringing the different bodily functions into perfect coordination so that they work for the good of the whole body.

From the physical body, yoga moves on to the mental and emotional levels. Many people suffer from phobias and neuroses as a result of the stresses and interactions of everyday living. Yoga cannot provide a cure for life but it does present a proven method for coping with it.

Swami Sivananda of Rishikesh explained yoga as a "...integration and harmony between thought, word and deed, or integration between head, heart and hand". Through the practices of yoga, awareness develops of the interrelation between the emotional, mental and physical levels, and how a disturbance in any one of these affects the others. Gradually, this awareness leads to an understanding of the more subtle areas of existence.

There are many branches of yoga: raja, hatha, jnana, karma, bhakti, mantra, kundalini and laya, to name but a few, and many texts explain them in detail. Each individual needs to find those yogas most suited to his/her particular personality and need. In the last half of this century, hatha yoga has become the most well-known and widely practised of the systems. However, the concept of what constitutes yoga is broadening as more people take it up, and this knowledge is spreading. In the ancient texts, hatha yoga consists of the shatkarmas, cleansing practices, only. Today, however, hatha yoga commonly embraces the practices of asana, pranayama, mudra and bandha as well.

6.2 The relevance of Yoga Today

Today, as we prepare to enter the 21st century, a spiritual heritage is being reclaimed of which yoga is very much a part. While yoga's central theme remains the highest goal of the spiritual path, yogic practices give direct and tangible benefits to everyone regardless of their spiritual aims.

Physical and mental therapy is one of yoga's most important achievements. What makes it so powerful and effective is the fact that it works on the holistic principles of harmony and unification. Yoga has succeeded as an alternative form of therapy in diseases such as asthma, diabetes, blood pressure, arthritis, digestive disorders and other ailments of a chronic and constitutional nature where modern science has not. Research into the effects of yogic practices on HIV is currently underway with promising results. According to medical scientists, yoga therapy is successful because of the balance created in the nervous and endocrine systems which directly influences all the other systems and organs of the body.

For most people, however, yoga is simply a means of maintaining health and well-being in an increasingly stressful society. Asanas remove the physical discomfort accumulated during a day at the office sitting in a chair, hunched over a desk. Relaxation techniques help maximise the effectiveness of ever-diminishing time off. In an age of mobile phones, beepers and twenty-four hour shopping, yogic practices make great personal and even business sense.

Beyond the needs of individuals, the underlying principles of yoga provide a real tool to combat social malaise. At a time when the world seems to be at a loss, rejecting past values without being able to establish new ones, yoga provides a means for people to find their own way of connecting with their true selves. Through this connection with their real selves it is possible for people to manifest harmony in the current age, and for compassion to emerge where hitherto there has been none.

In this respect, yoga is far from simply being physical exercises; rather, it is an aid to establishing a new way of life which embraces both inner and outer realities. However, this way of life is an experience which cannot be understood intellectually and will only become living knowledge through practice and experience.

6.3 General Guidelines for Yoga Practice

Yoga practitioner should follow the guiding principles given below while performing Yogic practices:

BEFORE THE PRACTICE:

- Saucha means cleanliness - an important prerequisite for Yogic practice. It includes cleanliness of surroundings, body and mind.
- Yogic practice should be performed in a calm and quiet atmosphere with a relaxed body and mind.
- Yogic practice should be done on an empty stomach or light stomach. Consume small amount of honey in lukewarm water if you feel weak.
- Bladder and bowels should be empty before starting Yogic practices.
- A mattress, Yoga mat, folded blanket should be used for the practice.
- Light and comfortable cotton clothes are preferred to facilitate easy movement of the body.
- Yoga should not be performed in a state of exhaustion, illness, in a hurry or in acute stress conditions.
- In case of chronic disease/ pain/ cardiac problems, a physician or a Yoga therapist should be consulted prior to performing Yogic practices.
- Yoga experts should be consulted before doing Yogic practices during pregnancy and menstruation.

DURING THE PRACTICE:

- Practice sessions should start with a prayer or an invocation as it creates a contributory environment to relax the mind.
- Yogic practices shall be performed slowly, in a relaxed manner, with awareness of the body and breath.
- Do not hold the breath unless it is specially mentioned to do so during the practice.
- Breathing should be always through the nostrils unless instructed otherwise.
- Do not hold the body tightly, or jerk the body at any point of time.
- Perform the practices according to your one's capacity. It takes some time to get good results, so persistent and regular practice is very essential.
- There are contra-indications/ limitations for each Yoga practice and such contra-indications should always be kept in mind.
- Yoga session should end with meditation/ deep silence

AFTER PRACTICE:

- Bath may be taken only after 20-30 minutes of practice.
- Food may be consumed only after 20-30 minutes of practice.

FOOD FOR THOUGHT

A few dietary guidelines can ensure that the body and mind are flexible and well-prepared for practice. A vegetarian diet is usually recommended, and for a person over 30 years, two meals a day should suffice, except in cases of illness or very high physical activity or labour.

HOW YOGA CAN HELP

Yoga is essentially a path to liberation from all the bondages. However, medical research in recent years has uncovered many physical and mental benefits that Yoga offers, corroborating the experiences of millions of practitioners. A small sampling of research shows that:

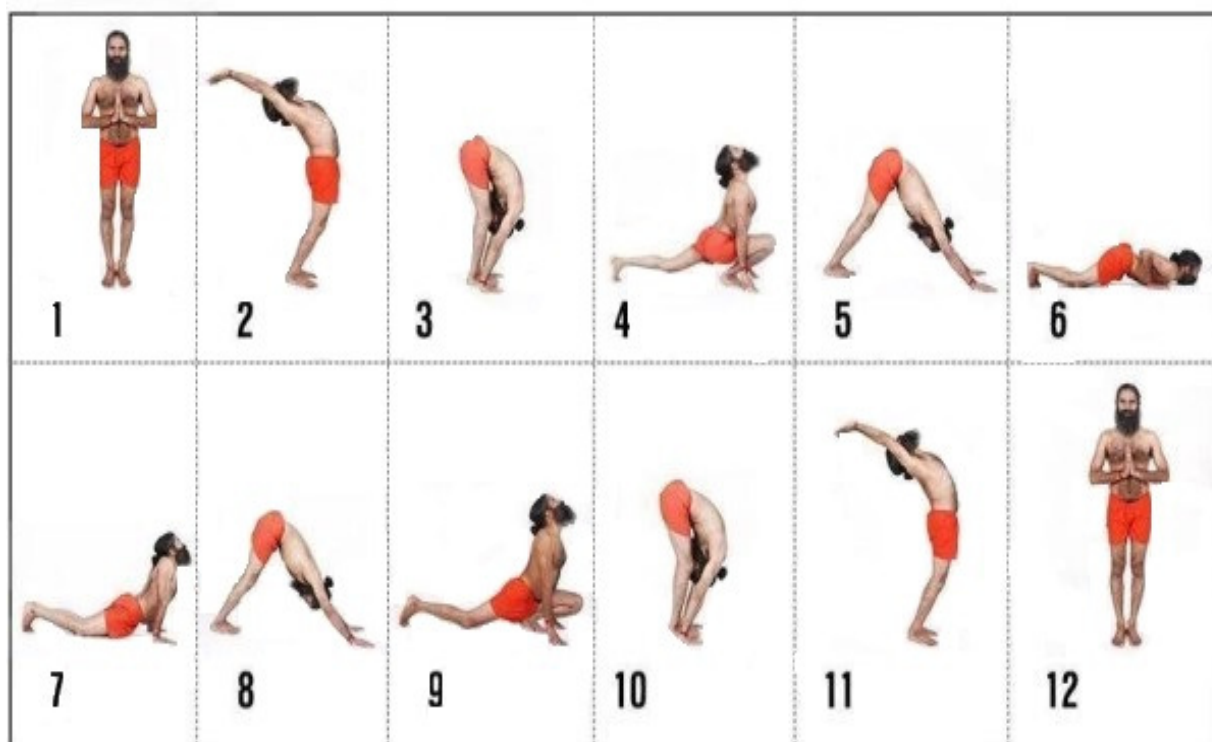
- ❖ Yoga is beneficial for physical fitness, musculoskeletal functioning and cardio-vascular health.
- ❖ It is beneficial in the management of diabetes, respiratory disorders, hypertension, hypotension and many lifestyle related disorders.
- ❖ Yoga helps to reduce depression, fatigue, anxiety disorders and stress.
- ❖ Yoga regulates menopausal symptoms. In essence, Yoga is a process of creating body and mind that are stepping-stones, not hurdles, to an exuberant and fulfilling life.

6.4 ASANAS:

Surya Namaskar

It is a complete Sadhana (spiritual practice) in itself for it includes asana, pranayama, mantra and meditation techniques. In English we know the practice as Sun Salutation; which is the literal translation of the Indian (Sanskrit language) term. It is interesting to learn that the Sanskrit word 'Surya' (meaning the Sun) – literally translates into 'Beautiful Light'. This is an indication that Surya Namaskar is at once an energizing practice.

In the ancient times; people would practice Surya Namaskaar at sunrise; the practice would be done facing up to the sun. The Yogis of yore refined the practice into something resembling the modern day practice with a sequence of 12 postures. For the Yogis; it became a staple practice to loosen the limbs in the mornings, and also as a preparation and warm-up for the other Asanas and Pranayam practices they would undertake. In fact the various postures in Surya Namaskaar helped in energizing each of the 7 Chakras (energy centers) in the human body.



How to practice Surya-Namaskaar? The practice involves 12 poses – alternately stretching the Spine backwards and forwards; and with alternate Inhale and Exhale instructions. Also, each posture has a chant associated with it – these are all different Sanskrit names of the Sun.

<p>Position 1–Pranamasana (prayer pose) “Om MitrayaNamah” Keep the eyes closed and remain standing upright with the feet together and palms together in front of your chest in namaskara mudra. Mentally offering homage to the sun, the source of energy. Relax the whole body.</p>	<p>Position 7–Bhujangasana (cobra pose) “Om HiranyagarbhayaNamah” Slide the chest forward and raise first the head, the shoulders, then, straightening the elbows, arch the back into the cobra pose. This will allow the buttocks and hips to the floor. Bend the head back, thighs and hips will remain on the floor.</p>
<p>Position 2–Hasta Utthanasana (raised arms pose)“Om RavayeNamah” Raise the hands and stretch both arms above the head, maintaining the namaste.</p>	<p>Position 8– Parvatasana (mountain pose) “Om MarichayeNamah” From bhujangasana assume parvatasana. Keep the arms and legs straight, grip the floor</p>

Extend your elbows, keeping your arms locking your ears. Bend the head, arms and upper trunk slightly backward.	with the toes and use the strength of the arms to raise the buttocks and lower the heels to the floor. Bring the head and shoulders towards the knees.
<i>Position 3–Padhastasana (hand to foot pose)</i> <i>“Om SuryayaNamah”</i> Bend forward from the hips until the fingers or palms of the hands touch the floor on either side of the feet. Bring the forehead as close to the knees as is comfortable, keeping the knees straight.	<i>Position 9– AshwaSanchalanasana (equestrian pose)“Om AdityayaNamah”</i> Keep the palms flat on the floor and the left foot in place. Bring the right leg and bring the right foot forward between the hands. Tilt the head backward and arch the back.
<i>Position 4–AshwaSanchalanasana (equestrian pose) “Om BhanaveNamah”</i> Place the hands on the floor besides the feet. Stretch the right leg back as far as is comfortable and grasp the floor with the toes. At the same time, bend the left knee, keeping the left foot on the floor at the same position. Head should be tilted backward, the back arched.	<i>Position 10–Padahastasana (hand to foot pose) “Om SavitreNamah”</i> Bring the left foot forward next to the right foot. Straighten both legs. Bring the forehead as close to the knees as possible
<i>Position 5–Santolanasana (inner equanimity pose)“Om KhagayaNamah”</i> Keep the hands and right foot still, and take the left foot back besides the right foot so that the body parallel to the floor by strengthening the abs muscles. The legs and arms straighten and the heels come down towards the floor. Bring the head and shoulders towards the knees.	<i>Position 11–Hasta Utthanasana (raised arms pose)“Om ArkayaNamah”</i> Raise the torso and stretch the arms above your head. Bend the head, arms and upper trunk backward slightly.
<i>Position 6–AshtangaNamaskara (salute with eight points)“Om PushneNamah”</i> Lower the knees, chest and chin to the floor simultaneously. The feet will come up on to the toes. Only the knees, palms, chest and chin should touch the floor.	<i>Position 12 — Pranamasana (prayer pose) “Om BhaskarayaNamah”</i> Bring the palms in front of the chest.

The buttocks, hips and abdomen should be raised.	
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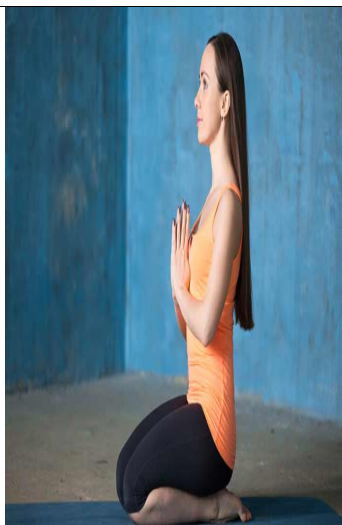
BENEFITS of SURYA NAMASKAAR:

- ❖ Surya Namaskaar improves the flexibility of the body and spine especially. Also the ligaments and joints are made more flexible.
- ❖ It stimulates and balances all the systems of the body, including the reproductive, circulatory, respiratory, and digestive systems. When a lot of rounds are practiced the heart gets a very good work-out.
- ❖ Our Endocrine system that controls the secretions of various hormones which play a crucial role in our health and moods; is kept functioning in perfect order through practicing Sun Salutations.
- ❖ Also, it is not necessary to practice the chants – and you will still get all the physical benefits of the practice.

(Please note that the names of poses may vary depending of which school of yoga you are learning – it means very little compared to the actual practice itself).

So, here's perhaps the best way to start your morning!




6.5 Some Yoga Asanas for improve Concentration and Memory Power







VAJRASANA

Procedure: Kneel down on the floor. Your knees, big toes and ankles should be parallel to each other and should touch the ground. Place your palms on the knees. Keep your spine straight. Look in the front direction, close your eyes. Relax.

Benefits: Vajrasana helps better blood circulation in the body. It modifies the blood flow by reducing the blood flow in lower portion, especially in the legs and increasing blood flow to the digestive organs resulting to efficiency of the digestive system. People with weak digestion are benefited. Better digestion checks acidity and ulcers.

	<p style="text-align: center;">PADMASANA</p> <p>Procedure: Sit on the floor with legs stretched out and spine erect. Bend your right knee and place it on your left thigh. The sole of the right foot should face upward and the heel closer to the abdomen. Repeat the same procedure with the other leg. Now, place your hands on the knees in mudra position. Keep your head straight and breathe gently.</p> <p>Benefits: Padmasana relaxes your mind and reduces muscular tension.</p>
	<p style="text-align: center;">SARVANGASANA</p> <p>Procedure: Lie down on your back keeping your legs together. Lift your legs at an angle of 90 degrees. Press your arms against the floor, bend your elbows, hold your waist by your hands and lift them up taking the legs higher making a straight line. Keep your shoulder blades straight.</p> <p>Benefits: Sarvangasana cures insomnia, relieves hypertension and soothes headaches.</p>
	<p style="text-align: center;">PASCHIMOTTANASANA</p> <p>Procedure: Sit down with your legs stretched out forward. Raise your hands straight up, with your arms touching the ears. Bend forward at the hips with your abdomen and chest hugging the thighs and your head on the knees. Your fingers should touch your toes, and you can keep your arms a little bent at the elbows.</p> <p>Benefits: Paschimottasana cures headaches and increases concentration.</p>

	<p style="text-align: center;">SUKHASANA</p> <p>Procedure: Sit on the floor with your legs spread straight in front of you. Bend your left knee and fold it in such a way that the sole of your left foot is placed on the inner side of your right thigh.</p> <p>Bend your right knee in such a way that the sole of your right foot is placed on the outer side of your left calf muscle. Place your hands on your knees. Do not stretch your body. Keep back straight, close your eyes and relax.</p> <p>Benefits: This is the best asana to relax your mind, body and soul.</p>
	<p style="text-align: center;">PADAHASTASANA</p> <p>Procedure: Stand straight with your feet together. Lift your arms straight up over your head. Your arms should touch the ears. Bend down at the hips and reach for your feet. Your torso and head should be facing and hugging the thighs and your hands placed on either side of your feet.</p> <p>Benefits: Padahasthasana invigorates your nervous system and increases blood supply to your brain.</p>
	<p style="text-align: center;">HALASANA</p> <p>Procedure: Lie down on your back and keep your arms on either side of your body with palms facing down. Lift your legs at a 90-degree angle. Then supporting your hips with your hands, lift them off the ground. Take your feet over your head at a 180-degree angle, making your toes touch the floor. Try to keep your back perpendicular to the floor. Bring back your hands to their initial position.</p> <p>Benefits: Halasana calms your nervous system, reduces stress and fatigue.</p>

	<p style="text-align: center;">VRIKSHASANA</p> <p>Procedure: Stand tall and straight with arms by the side of your body. Bend your right knee and place the right foot high up on your left thigh. The sole of the foot should be placed flat and firmly near the root of the thigh. Make sure that your left leg is straight. Find your balance.</p> <p>Benefits: This pose leaves you in a state of rejuvenation. It stretches the legs, back and arms, and invigorates you. It helps improve concentration.</p>
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While addressing the 69th session of United Nations General Assembly (UNGA) on September 27, 2014, the Honourable Prime Minister of India Shri Narendra Modi urged the world community to adopt an International Day of Yoga. "Yoga is an invaluable gift of ancient Indian tradition. It embodies unity of mind and body; thought and action; restraint and fulfilment; harmony between man and nature and a holistic approach to health and well-being. Yoga is not about exercise but to discover the sense of oneness with ourselves, the world and Nature. By changing our lifestyle and creating consciousness, it can help us to deal with climate change. Let us work towards adopting an International Yoga Day," Shri Modi said. On December 11, 2014, the 193 member UNGA approved the proposal by consensus with a record 177 co-sponsoring countries a resolution to establish 21 June as "International Day of Yoga". In its resolution, the UNGA recognised that Yoga provides a holistic approach to health and well-being and wider dissemination of information about the benefits of practicing Yoga for the health of the world population. Yoga also brings harmony in all walks of life and thus, is known for disease prevention, health promotion.

6.6 International Day of Yoga: The Ministry of AYUSH successfully organised 1st International Day of Yoga (IDY) on 21st June, 2015 at Rajpath, New Delhi. Two Guinness World Records were made viz. the Largest Yoga Lesson involving 35,985 participants and maximum number of Nationalities (84) participated in a single yoga lesson. Two days International Conference on "Yoga for Holistic Health" was organised on 21st and 22nd June, 2015 at Vigyan Bhavan, New Delhi wherein about 1300 delegates from India and abroad were participated. Millions of people in India and across the globe participated in the First ever International Day of Yoga celebration.

7.1 PERSONALITY

Introduction:

Every individual has own characteristic way of behaving, responding to emotions, perceiving things and looking at the world. No two individuals are similar. You might like going out for parties but your friend might prefer staying back at home reading his/her favourite book.

It is really not necessary that if you like partying around, your friend will also like the same. Here comes the role of personality. What an individual sees in his childhood days and most importantly his/her growing days from his personality. How an individual is raised plays an important role in shaping his/her personality.

Personality is nothing but the aggregate conglomeration of memories and incidents in an individual's entire life span. Environmental factors, family background, financial conditions, genetic factors, situations and circumstances also contribute to an individual's personality.

In a Layman's language, how we behave in our day to day lives reflects our personality. How an individual behaves depends on his family background, upbringing, social status and so on. An individual with a troubled childhood would not open up easily. His/she would always hesitate to open his heart in front of others. Some kind of fear would always be there within him. An individual who never had any major problems in life would be an extrovert and would never have issues interacting and socializing with others. You really can't blame an individual for being an extrovert. It is essential to check his/her background or past life. It is quite possible that as a child, he was not allowed to go out of his home, play and freak out with friend. These individuals start believing that their home is their only world and they are not safe outside. Such a mind-set soon becomes their personality.

8.1SELF CONFIDENCE

Self- confidence is an attitude which allows individuals to have positive yet realistic views of themselves and their situations. Self-confident people trust their own abilities, have a general sense of control in their lives, and believe that, within reason, they will be able to do what they wish, plan, and expect. Having self-confidence does mean that are realistic. Even when some of their expectations are not met, they continue to be positive and to accept themselves.

People who are not self-confident excessively on the approval of others in order to feel good about themselves. They tend to avoid taking risks because they fear failure. They generally do not expect to be successful. They often put themselves down and tend to

discount or ignore compliments paid to them. By contract, self-confident people are willing to risk the disapproval of others because they generally trust their own abilities. They tend to accept themselves; they don't feel they have to conform in order to be accepted.

Self-confidence is not necessarily a general characteristic which penetrates all aspects of a person's life. Typically, individuals will have some areas of their lives where they feel quite confident, e.g., academics, athletics, while at the same time they do not feel at all confident in other areas, e.g., personal appearance, social relationships.

8.2 How Self-Confidence is initially developed?

Many factors affect the development of self-confidence. Parents' attitudes are crucial to children's feelings about themselves, particularly in children's early years. When parents provide acceptance, children receive a solid foundation for good feelings about themselves. If one or both parents discourage moves toward independence, children may come to believe they are incapable, inadequate, or inferior. However, if parents encourage children's moves toward self-reliance and accept and love their children when they make mistakes, children will learn to accept themselves and will be on their way to developing self-confidence.

Surprisingly, lack of self-confidence is not necessarily related to lack of ability. Instead it is often the result of focusing too much on the unrealistic expectations or standards of others, especially parents and society. Friends' influences can be as powerful as or more powerful than those of parents and society in shaping feeling about one's self. Students in their college year re-examine values and develop their own identities and thus are particularly vulnerable to the influence of friends.

Build Self- Confidence:

1. Dress Shape:

Although clothes don't make the man, they certainly affect the way he feels about himself. No one is more conscious of your physical appearance than you are. When you don't look good, it changes the way you carry yourself and interact with other people. Use this to your advantage by taking care of your personal appearance. In most cases, significant improvements can be made by bathing and shaving frequently, wearing clean cloths, and being cognizant of the latest styles.

This doesn't mean you need to spend a lot on clothes. One great rule to follow is "spend twice as much, buy half as much". Rather than buying a bunch of cheap clothes, buy half as select, high quality items. In long run this decreases spending because expensive clothes wear out less easily and stay in style longer than cheap clothes. Buying less also helps reduce the clutter in your closet.

2. Walk Fast:

One of the easiest ways to tell how a person feels about herself is to examine her walk. Is it slow? Tired? Or is it energetic and purposeful? People with confidence walk quickly. They have places to go, people to see, and important work to do. Even if you aren't in a hurry, you can increase your self-confidence by putting some pep in your step. Walking 25% faster will make you look and more important.

3. Compliment other people:

When we think negatively about ourselves, we often project that feeling on to others in the form of insults and gossip. To break this cycle of negativity, get in the habit of praising other people. Refuse to engage in back stabbing gossip and make an effort to complement those around you. In the process, you'll become well liked and build self-confidence. By looking for the best in others, you indirectly bring out the best in yourself.

4. Sit in the Front row:

In schools, offices, and public assemblies around the world, people constantly strive to sit at the back of the room. Most people prefer the back because they're afraid of being noticed. This reflects a lack of self-confidence. By deciding to sit in the front row, you can get over this irrational fear and build your self-confidence. You'll also be more visible to the important people talking from the front of the room.

5. Speak up:

During group discussions many people never speak up because they're afraid that people will judge them for saying something stupid. This fear isn't really justified. Generally, people are much more accepting than we imagine. In fact, most people are dealing with the exact same fears. By making an effort to speak up at least once in every group discussion, you'll become a better public speaker, more confident in your own thoughts, and recognized as a leader by your peers.

6. Work out:

Along the same lines as personal appearance, physical fitness has a huge effect on self-confidence. If you're out of shape. You'll feel insecure, unattractive, and less energetic. By working out, you improve your physical appearance, energize yourself, and accomplish something positive. Having the discipline to work out not only makes you feel better, it creates positive momentum that you can build on the rest of the day.

7. Focus on contribution:

Too often we get caught up in our own desires. We focus too much on ourselves and not enough on the needs of other people. If you stop thinking about yourself and concentrate

on the contribution you're making to the rest of the world, you won't worry as much about your own flaws. This will increase self-confidence and allow you to contribute with maximum efficiency. The more you contribute to the world the more you'll be rewarded with personal success and recognition.

9.1 PUBLIC HEALTH

Introduction

Health is a positive state of wellbeing in which harmonious development of physical and mental capacities of individual lead to enjoyment of rich and full life. Health is thus vital for concurrent and integrated development of the individual and community and for socio-economic development of the country.

According to World Health Organization, Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. Public Health is the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of society (WHO).

Directive Principles of State Policy of Indian Constitution considers that the State shall regard raising of the level of nutrition and standard of living of its people and improvement of public health as among its primary duties under Article 47. In addition, under Article 42, the State shall make provision for securing just and humane conditions of work and for maternity relief.

The health system in India is expected to perform with objectives based on these principles and evolve its spirit and structure to achieve these objectives.

What is public health?

Public health is a social and political concept aimed at improving health, prolonging life and quality of life among whole populations through health promotion, disease prevention and other forms of health intervention.

Public health has often been defined as a science dealing with the determinants and defence of health at the population level, while clinical medicine deals with multiple maladies and their remedies at the level of an individual patient.

Public health aims to understand and influence the social, cultural and economic determinants of health as well as to study and structure health systems as efficient channels for health services delivery. Public health is thus, a discipline built on the academic tradition of inquiry involving research, teaching and professional practice to prevent disease and promote health in populations.

Education and training in public health needs to be inter-disciplinary in content so that the pathways of public health action are multi-sectorial. Public health education must include subject areas like epidemiology, biostatistics, behavioural sciences, health economics, health services management, environmental health, health inequities and human rights, gender and health, health communication, ethics of health care and research. The interventions proposed need to be evidence-based, context-specific and resource- sensitive.

9.2 Objectives of Public Health:

- To ensure adequate, qualitative, preventive and curative health care to people of the State.
- To ensure health care services to all particularly to the disadvantaged groups like scheduled tribes, scheduled castes and back ward classes.
- To provide affordable quality healthcare to the people of the State, not only through the allopathic systems of medicine but also through the homeopathic and ayurvedic systems.
- To ensure greater access to primary health care by bringing medical institutions as close to the people as possible or through mobile medical health units, particularly, in the underserved & backward districts.
- To improve health care in the districts of the State
- To eliminate diseases like polio & leprosy from the state and prevent as well as control other communicable diseases
- To reduce maternal, infant & neo-natal mortality rates
- To guarantee to the people of free treatment (including free medicines) for certain major communicable diseases
- To improve hospital services at the primary, secondary & tertiary levels in terms of infrastructure, drugs & personnel
- To impart training to doctors, nurses & other paramedical staff to upgrade their skills and knowledge to improve quality health care in the state and improve medical education in the State.

9.3 NATIONAL HEALTHPOLICY, 2017

The National Health Policy of 1983 and the National Health Policy of 2002 have served well in guiding the approach for the health sector in the Five-Year Plans. Now 14 years after the last health policy, the context has changed in four major ways. First, the health priorities are changing. Although maternal and child mortality have rapidly declined, there is growing burden on account of non-communicable diseases and some infectious

diseases. The second important change is the emergence of a robust health care industry estimated to be growing at double digit. The third change is the growing incidences of catastrophic expenditure due to health care costs, which are presently estimated to be one of the major contributors to poverty. Fourth, a rising economic growth enables enhanced fiscal capacity. Therefore, a new health policy responsive to these contextual changes is required.

The primary aim of the National Health Policy, 2017, is to inform, clarify, strengthen and prioritize the role of the Government in shaping health systems in all its dimensions-investments in health, organization of healthcare services, prevention of diseases and promotion of good health through cross sectorial actions, access to technologies, developing human resources, encouraging medical pluralism, building knowledge base, developing better financial protection strategies, strengthening regulation and health assurance.

NHP 2017 builds on the progress made since the last NHP 2002. The developments have been captured in the document “Backdrop to National Health Policy 2017-Situation Analyses”, Ministry of Health & Family Welfare, Government of India.

9.4 Key Policy Principles:

I. Professionalism, Integrity and Ethics: The health policy commits itself to the highest professional standards, integrity and ethics to be maintained in the entire system of health care delivery in the country, supported by a credible, transparent and responsible regulatory environment.

II. Equity: Reducing inequity would mean affirmative action to reach the poorest. It would mean minimizing disparity on account of gender, poverty, caste, disability, other forms of social exclusion and geographical barriers. It would imply greater investments and financial protection for the poor who suffer the largest burden of disease.

III. Affordability: As costs of care increases, affordability, as distinct from equity, requires emphasis. Catastrophic household health care expenditures defined as health expenditure exceeding 10% of its total monthly consumption expenditure or 40% of its monthly non-food consumption expenditure, are unacceptable.

IV. Universality: Prevention of exclusions on social, economic or on grounds of current health status. In this backdrop, systems and services are envisaged to be designed to cater to the entire population- including special groups.

V. Patient Centered and Quality of Care: Gender sensitive, effective, safe, and convenient healthcare services to be provided with dignity and confidentiality. There is need to evolve

and disseminate standards and guidelines for all levels of facilities and a system to ensure that the quality of healthcare is not compromised.

VI. Accountability: Financial and performance accountability, transparency in decision making, and elimination of corruption in health care systems, both in public and private.

VII. Inclusive Partnerships: A multi stakeholder approach with partnership & participation of all non- health ministries and communities. This approach would include partnerships with academic institutions, not for profit agencies, and health care industry as well.

VIII. Pluralism: Patients who so choose and when appropriate, would have access to AYUSH care providers based on documented and validated local, home and community based practices. These systems, inter alia, would also have Government support in research and supervision to develop and enrich their contribution to meeting the national health goals and objectives through integrative practices.

IX. Decentralization: Decentralisation of decision making to a level as is consistent with practical considerations and institutional capacity. Community participation in health planning processes, to be promoted side by side.

X. Dynamism and Addictiveness: constantly improving dynamic organization of health care based on new knowledge and evidence with learning from the communities and from national and international knowledge partners is designed.

10.1 HUMAN RIGHTS

Human Rights

Definition: Human rights refer to the basic rights that are believed to be entitled to every human-being. Every human-being are entitled to certain rights and freedom irrespective of their origin, ethnicity, race, colour, nationality, citizenship, sex or religion. These rights are considered universal for humanity..

10.2 Human Trafficking Act:

The action or practice of illegally transporting people from one country or area to another, typically for the purposes of forced labour or sexual exploitation.

- Through the Immoral Trafficking Prevention Act (ITPA), the Indian Government penalizes trafficking for commercial sexual exploitation, with prescribed penalty of 7 years' to life imprisonment.
- Sections 366(A) and 372 of the Indian Penal Code, prohibits kidnapping and selling minors into prostitution respectively. Penalties under these provisions are a maximum of 10 years' imprisonment and a fine.

- Protection of Children from Sexual offences (POCSO) Act, 2012, which has come into effect from 14th November, 2012 is a special law to protect children from sexual abuse and exploitation.

10.3 Right to Information Act:

The Right to Information Act was passed on 15 June 2005 by the United Progressive Alliance I (UPA) Government and came into effect from Oct. 12, 2005. It has been five years now since the Right to Information is being implemented. It is sufficient enough a period to give us an idea of its value and worth. This paper briefly discusses the salient features of Right to Information, reviews its implementation, explores its impact and attempts to offer suggestions for its optimum use.

Right to Information is a part of fundamental rights under Article 19(1) of the Constitution of India. Article 19 (1) says that every citizen has freedom of speech and expression. As early as in 1976, the Supreme Court said in the case of *Raj Narain v. State of UP* that people cannot speak or express themselves unless they know. Therefore, right to information is embedded in article 19. In the same case, Supreme Court further said that India is a democratic country. People are the masters. Therefore, the masters have a right to know how the governments, meant to serve them, are functioning. Further, every citizen pays taxes. Even a beggar on the street pays tax (in the form of sales tax, excise duty etc) when he buys a piece of soap from the market. The citizens therefore, have a right to know how their money was being spent.

Right to Information Act, 2005 empowers every citizen to:

- Ask any questions from the Government or seek any information
- Take copies of any government documents
- Inspect any government documents.
- Inspect any Government works
- Take samples of materials of any Government work.

Thus, in simple words RIGHT TO INFORMATION is a right to know.

Relation between Transparency and Right to Information

TRANSPARENCY and RIGHT TO INFORMATION has a cleansing effect on the functioning of the government and helps in keeping a check on corruption. The entire system has become so rotten that if all of us individually and together do not do our bit, it will never improve. Therefore, if want to change the system we have to be a part of that system. Transparency and Right to Information are interconnected so much that if either of them is not there than the other can also not exist. Right to Information is very essential for

democracy. It is a part of our fundamental right. For people to participate in governance, the pre-requisite is that they first know what is going on. At the International level, Right to Information and its aspects find articulation as inalienable fundamental human right in most important basic human rights documents, namely, the UDHR, the International covenant on economic, social and cultural rights.

10.4 Right to Education Act:

The Right of Children to Free and Compulsory Education Act or Right to Education Act (RTE), is an Act of the Parliament of India enacted on 4 August 2009, which describes the modalities of the importance of free and compulsory education for children between 6 and 14 in India under Article 21a of the Indian Constitution. India became one of 135 countries to make education a fundamental right of every child when the Act came into force on 1 April 2010.

The Act makes education a fundamental right of every child between the ages of 6 and 14 and specifies minimum norms in elementary schools. It requires all private schools to reserve 25% of seats to children (to be reimbursed by the state as part of the public-private partnership plan). Kids are admitted in to private schools based on economic status or caste based reservations. It also prohibits all unrecognised schools from practice, and makes provisions for no donation or capitation fees and no interview of the child or parent for admission. The Act also provides that no child shall be held back, expelled, or required to pass a board examination until the completion of elementary education. There is also a provision for special training of school drop-outs to bring them up to par with students of the same age.

The Right to Education of persons with disabilities until 18 years of age is laid down under a separate legislation - the Persons with Disabilities Act. A number of other provisions regarding improvement of school infrastructure, teacher-student ratio and faculty are made in the Act.

Education in the Indian constitution is a concurrent issue and both centre and states can legislate on the issue. The Act lays down specific responsibilities for the centre, state and local bodies for its implementation. The states have been clamouring that they lack financial capacity to deliver education of appropriate standard in all the schools needed for universal education. Thus it was clear that the central government (which collects most of the revenue) will be required to subsidise the states.

10.5 Discrimination Against Children

The Government has adopted a policy of affirmative action towards addressing issues of socially backward groups, such as the Scheduled Castes, Scheduled Tribes and the Other Backward Classes as well as the girl children. Despite these, discrimination overt and covert occurs in various forms. The guiding principles underpinning the Constitution of India are equality before law, equal protection to all and non-discrimination. There is similarity between the standards set by the Constitution and the standards set by Article 2 of the **CRC**. Equality is a dynamic concept having many dimensions and therefore cannot be confined within traditional limits. Articles 14, 15, 17, 25 to 28, 29 and 30 of the Constitution aim to secure social and economic justice to all by removing inherent biases of all kinds. Yet, children born among the Scheduled Castes, Scheduled Tribes and Backward Classes including religious minorities start life with severe handicaps. Considering that these children account for a clear majority of India's child population, it is necessary to look deeply into their problems from all angles rather than paying a lip-sympathy to them.

10.6 Juvenile Justice

The Apprentices Act, 1850 was the first legislation that laid the foundation of juvenile justice system in the country. The concept consequently gained momentum with the enactment of the Indian Penal Code (1860), Reformatory Schools Act (1897), Code of Criminal Procedure (1898) and recommendations made by the Indian Jail Committee (1919-1920). The latter Committee categorically mentioned that the child offender should be given altogether a different treatment from the one given to an adult offender. It held that imprisonment of child offenders should be prohibited and recommended for provision of reformatory schools, or their equivalent, and constitution of children's courts with procedures 'as informal and elastic as possible'. The Committee furthermore drew attention to the desirability of making provisions for children who had not committed crime so far, but could do so in the near future on account of living in criminal or inhuman surroundings or those without proper guardians or homes. It called for special enactment to cover all these children living in difficult conditions. Since then, legislative provisions relating to juvenile justice in the country have gone through various shades of orientation and emphasis.

10.7 Prohibiting Child Marriage

It is a reality that child marriage constitutes a serious human rights violation and affects both girls and boys. However, there is sufficient evidence pointing to the fact that child marriage makes girls more vulnerable to abuse, violence and exploitation as compared to boys. The 2011 Census reveals shocking statistics about child marriage. There were over

27 lakhs children in the 10-14 age group, overwhelmingly girls, who were married. Uttar Pradesh had the largest number of such children and was followed by Maharashtra, Bihar and Rajasthan, each having over 2 lakhs such children. The data also showed that about 1.7 lakh children in this tender age group were already widowed, separated or divorced. Girls are more vulnerable simply because they are females. It is not only a cause and consequence of gender inequality but constitutes a range of interlinked and interdependent human rights violations against their physical, psycho-social, health, education, economic, dignity and integrity throughout life. For instance, child marriage undermines the right to health by exposing girls to forced and traumatic initiation into sex as well as to early unplanned and frequent pregnancies. The younger the bride, the more likely she will face serious health complications due to the physical immaturity of her body at the time of child birth.

Short Answer Type Questions

1. Define Child Labour?
2. Write about Early Marriages?
3. Define Corruption?
4. What is meant by Road Safety?
5. What is Yoga?
6. Define Personality?
7. Define Self- Confidence?
8. What is Public Health?
9. Write about Human Rights?
10. Write about Right to Information Act.?

Long Answer Type Questions

1. Discuss briefly the Advantages of Vocational Education?
2. Explain the Causes of Child Labour?
3. Write about the Consequences of Early Marriages?
4. Explain the Causes of Corruption and Prevention Methods?
5. Briefly Explain measures to control Road Accidents?
6. Explain the Objectives of Public Health?
7. Write about how to build Self- Confidence?

Unit – II

Environmental Pollution

Structure

1. Pollution
2. Natural Resources
3. Environmental Protection Programmes
4. Deforestation and Afforestation

1.1 Environmental Pollution

Introduction:

Environmental education refers to organized efforts to teach about how natural environments sector and, particularly, how human beings can manage their behaviour and ecosystems in order to live sustainably. The term is often used to imply education within the school system, from primary to post-secondary. However it is sometimes used more broadly to include all efforts to educate the public and other audiences, including print materials, websites, media campaigns, etc.,

Environmental studies deals with every issue that affects an organism. It is essentially a multidisciplinary approach that brings about an appreciation of our natural world and human impacts on its integrity. It is an applied science as it seeks practical answers to making human civilization sustainable on the earth's finite resources.

Environment is not a single subject. It is an integration of several subjects that include both Science and Social Studies. To understand all the different aspects of our environment we need to understand biology, chemistry, physics, geography, resource management, economics and population issues. Thus the scope of environmental studies is extremely wide and covers some aspects of nearly every major discipline.

Related disciplines include outdoor education and experiential education. Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivation, and commitments to make informed decisions and take responsible action.

1.2 Environmental education focuses on:

- Awareness and sensitivity about the environment and environmental challenges
- Knowledge and understanding about the environmental and environmental challenges
- Attitude concern for the environment and help to maintain environmental quality
- Skills to mitigate the environmental problems
- Participation for exercising existing knowledge and environmental related programs

1.3 Environment Pollution:

Pollution:

Environmental pollution is any discharge of material or energy into water, land, or air that causes or may cause acute (short-term) or chronic (long-term) detriment to the Earth's ecological balance or that lowers the quality of life. Pollutants may cause primary damage, with direct inevitable impact on the environment, or secondary damage in the form of minor

disruptions in the delicate balance of the biological food web that detectable only over long time periods. Until relatively recently in humanity's history, where pollution has existed, it has been primarily a local problem.

The industrialization of society, the introduction of motorized vehicles, and the explosion of the human population, however, have caused an exponential growth in the production of goods and services. Coupled with this growth has been a tremendous increase in waste by-products. The indiscriminate discharge of untreated industrial and domestic wastes into waterways, the spewing of thousands of tons of particulates and airborne gases into the atmosphere, the "throwaway" attitude toward solid wastes, and the use of newly developed chemicals without considering potential consequences have resulted in major environmental disasters.

Technology has begun to solve some pollution problems, and public awareness of the extent of pollution will eventually force governments to undertake more effective environmental planning and adopt more effective antipollution measures.

Definition: Pollution is the effect of undesirable changes in our surroundings that have harmful effects on plants, animals and human beings.

1.4 Different types of pollution:

- 1. Air Pollution:** Air pollution is the accumulation in the atmosphere of substances that, in sufficient concentration, endanger human health or produce other measured effects on living matter and other materials. Among the major sources of pollution are powers and heat generation. The six major types of pollutants are carbon monoxide, hydrocarbons, nitrogen oxides, particulates, sulphur dioxide, and photochemical oxidants.

Dry air contains 78.09% nitrogen, 20.95% oxygen, 0.93% argon, 0.04% carbon dioxide, and small amounts of other gases. Air also contains a variable amount of water vapor, on average around 1% at sea level, and 0.4% over the entire atmosphere.

- 2. Water Pollution:** Water pollution is the introduction into fresh or ocean water of chemical, physical, or biological material that degrades the quality of the water and affects the organisms living in to. This process ranges from simple addition of dissolved or suspended solids to discharge of the most insidious and persistent toxic pollution (such as pesticides, heavy metals, and non degradable, bio accumulative, chemical compounds).
- 3. Land pollution:** Land pollution is the degradation of the Earth's land surface through misuse of the soil by poor agricultural practices, mineral exploitation, industrial waste dumping, and indiscriminate disposal of urban wastes.

Soil erosion a result of poor agricultural practices- removes rich humus topsoil developed over many years through vegetative decay and microbial degradation and thus strips the land of valuable nutrients for crop growth. The increases in urbanization due to population pressure presents additional soil-erosion problems; sediment loads in nearby streams may increase as much as 500 to 1,000 times over that recorded in nearby undeveloped stretches of stream.

Soil erosion not only despoils the Earth for farming and other uses, but also increases the suspended-solids load of the waterway. This increase interferes with the ecological habitat and poses silting problems in navigation channels, inhibiting the commercial use of these waters.

- 4. Noise Pollution:** Noise pollution has a relatively recent origin. It is a composite of sounds generated by human activities ranging from blasting stereo systems to the roar of supersonic transport jets. Although the frequency (pitch) of noise may be of major importance, most noise sources are measured in terms of intensity, or strength of the sound field. The standard unit, one decibel (Db), is the amount of sound that is just audible to the average human. The decibel scale is somewhat misleading because it is logarithmic rather than linear, for example, a noise source measuring 70 Db is 10 times as loud as a source measuring 60dB and 100 times as a source reading 50 Db.

Noise may be generally associated with industrial society, where heavy machinery, motor vehicles, and aircraft have become everyday items. Noise pollution is more intense in the work environment than in the general environment; although ambient noise increased an average of one dB per year during the 1980s. The average background noise in a typical home today is between 40 and 50 decibels. Some example of high-level sources in the environment are heavy trucks (90dB at 15m/50ft), freight trains (75dB at 15m/50ft), and air conditioning (60dB at 6m/20ft).

- 5. Radiation Pollution:** Radiation pollution is any form of ionizing or no ionizing radiation that results from human activities. The most well-known radiation results from the detonation of nuclear devices and the controlled release of energy by nuclear-power generating plants. Other sources of radiation include spent-fuel reprocessing plants, by-products of mining operations, and to radiation emissions from microwave ovens and other household appliances, although of considerably less magnitude, all constitute sources of environmental radiation.

The environmental effects of exposure to high-level ionizing radiation have been extensively documented through poster studies on individuals who were exposed to nuclear

radiation in Japan. Some forms of cancer show up immediately, but latent maladies of radiation poisoning have been recorded from 10 to 30 years after exposure. The effects of exposure to low-level radiation are not yet known.

A major concern about this type of exposure is the potential for genetic damage. Radiation nuclear wastes cannot be treated by conventional chemical methods and must be stored in heavily shielded containers in areas remote from biological habitats. The safest of storage sites currently used are impervious deep caves or abandoned salt mines. Most radioactive wastes, however, have half-lives of hundreds to thousands of years, and to date no storage method has been found that is absolutely infallible.

- 6. Global Pollution:** Humans also pollute the atmosphere on a global scale, although until the early 1970s little attention was paid to the possible deleterious effects of such pollution. Measurements in Hawaii suggest that the concentration of carbon dioxide in the atmosphere is increasing at a rate of about 0.2% every year. The effect of this increase may be to alter the Earth's climate by increasing the average global temperature.

Certain pollutants decrease the concentration of ozone occurring naturally in the stratosphere, which in turn increases the amount of ultraviolet radiation reaching the Earth's surface. Such radiation may damage vegetation and increase the incidence of skin cancer. Examples of stratospheric contaminants include nitrogen oxides emitted by supersonic aircraft and chlorofluoro carbons used as refrigerants and aerosol-can propellants.

The chlorofluoro carbons reach the stratosphere by upward mixing from the lower parts of the atmosphere. It is believed that these chemicals are responsible for the noticeable loss of ozone over the Polar Regions that have occurred in the 1980s.

- 7. Light pollution:** Light pollution, also known as photo pollution, is the presence of anthropogenic light in the night environment. It is exacerbated by excessive, misdirected uses of light, but even carefully used light fundamentally alters natural conditions. As a major side-effect of urbanization, it is blamed for compromising health, disrupting ecosystems and spoiling aesthetic environments.

Negative effects light pollution on human beings

1. Sleeplessness which leads depression in human beings and health problem arise.
2. Lost eye site.
3. Brest cancer in women.
4. Physiological health damages in human beings
5. Re-productive strength capacity decreases
6. Due to heavy lights disturbs the general function of human body

1.5 Measures to control Environmental Pollution:

1. Plant trees and encourage other to plant trees as well. Trees absorb and store carbon dioxide from the atmosphere, and filter out air pollution. During warmer days, trees provide cool air, unnecessary use of energy on air conditioning is avoided, hence the air pollution.
2. Automobile engines should be redesigned in such a way that their emissions cause minimum pollution. Old automobile engines should be replaced by new ones. Don't idle your vehicle. If you stop for more than 30 seconds, except in traffic, turn off your engine.
3. In agriculture, biological control of pests should be applied to replace wide use of insecticides, pesticides and fungicides. Biological nitrogen fixation should be adopted.
4. People should be encouraged to share the vehicle, and to avoid vehicles for short distances. Walking, bicycling, riding the bus, or working from home can save you money as well as reducing air pollution.
5. Compost yard waste instead of burning it. Outdoor burning is not advisable, as it pollutes air. Breathing this smoke is bad for you and your family and your neighbours. Plus, it can be used as compost in your garden.
6. Dispose the waste after separating them into bio degradable and non-biodegradable waste material
7. Send your waste oil, old batteries and used tyres to a garage for recycling or safe disposal; all these can cause serious pollution.
8. Solid waste is placed in a suitably selected and prepared landfill site in a carefully prescribed manner.
9. Proper attention should be given by the government to make people realize the implications of environmental problem,
10. Recycling plants for municipal wastes and sewage should be established. In many cities it has already been implemented.
11. Satellite and space technology may be adopted for weather forecasting, agriculture resource inventories and monitoring of air borne particles.
12. Shampoos, lotions and similar products should not be bought in plastic bottles. It has recently been suggested that use of plastic containers and glasses may cause cancer.
13. Sponges and towels should be used in place of paper towels and also the use of paper cups and plates and similar materials should be stopped.
14. Green belts should be created. Such areas should be developed around densely populated cities. There should be strict restriction for establishment of large buildings and industries along the Green belt areas.

1.6 OCCUPATIONAL HAZARDS

Occupational health and safety is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. The goal of all occupational health and safety programs is to foster a safe work environment. As a secondary effect, it may also protect co-workers, family members, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the workplace environment. It may involve interactions among many subject areas, including occupational medicine, occupational hygiene public health, safety engineering, chemistry, health physics, ergonomics, toxicology, epidemiology, environmental health, industrial relations, and public policy.

Various Occupational Hazards

The four main types of occupational hazards and diseases are as follows:

1. Chemical Hazards
2. Biological Hazards
3. Environmental Hazards
4. Psychological Hazards.

1. Chemical Hazards: The common chemical substances, such as carbon monoxide, carbon dioxide, nitrogen dioxide, sulphur dioxide, hydrocarbons, sulphuric acid, tannic acid acetic acid, fumeric acid, ozone, limes and alkalies cause injury to the employee when they are absorbed through skin and inhaling or ingesting. Workers may suffer from respiratory diseases, skin diseases, allergy, heart disease, cancer and neurological disorders.

These diseases may be temporary or chronic in nature. Often a disease may be difficult to diagnose because either its symptoms may appear after a long dormant period or may not be apparent at all. These diseases often shorten employee's life expectancy.

2. Biological Hazards: These hazards are manifested by diseases caused by bacteria, fungi, viruses, insects, dietary deficiencies, excessive drinking, allergies, brain fever, imbalances, tetanus, stresses and strains. All these tell upon employee's health.

3. Environmental Hazards: Environmental hazards may include noise pollution, vibration and shocks, illumination, radiation, heat, ventilation, air and water pollution. These hazards cause redness of eyes, genetic disorders, cancer, sterility, hearing loss, nerve injury etc., to workers.

4. Psychological Hazards: Industrial stress caused by various stressors such as task and role demands, organisational leadership, lack of group cohesion, intergroup and interpersonal conflicts, life and career changes, etc., lead to emotional disturbances which, in turn, lead to

fatigue and exhaustion. All these affect health of employees. Apart from occupational hazards, there are some occupational diseases also that impair health of employees in industries.

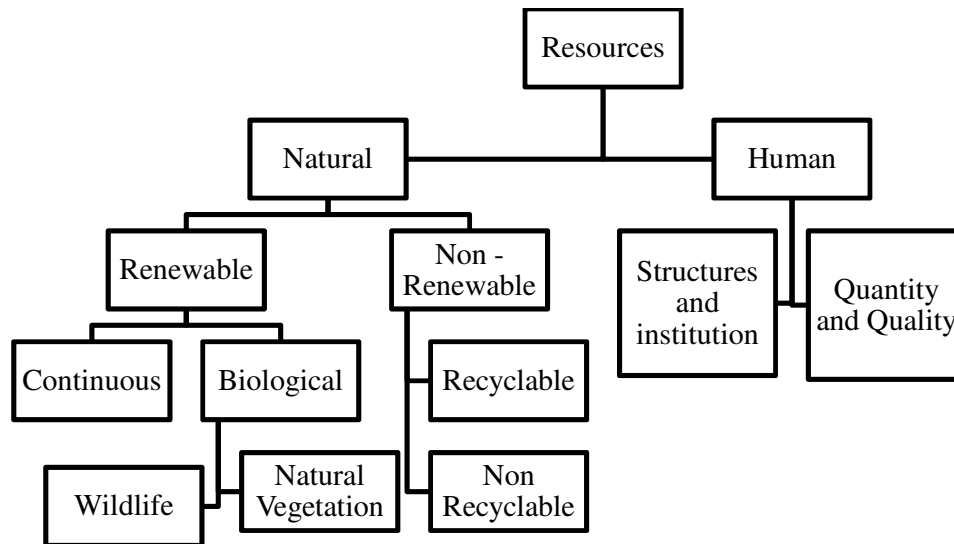
2.1 Natural Resources

About ten thousand years ago, when mankind changed from a hunter-gatherer, living in wilderness areas such as forests and grasslands, into an agriculturalist and pastoralist, we began to change the environment to suit our own requirements. As our ability to grow food and use domestic animals grew, these ‘natural’ ecosystems were developed into agricultural land. Most traditional agriculturists depended extensively on rain, streams and rivers for water. Later they began to use wells to tap underground water sources and to impound water and created irrigated land by building dams. Recently we began to use fertilizers and pesticides to further boost the production of food from the same amount of land. However we now realize that all this has led to several undesirable changes in our environment. Mankind has been overusing and depleting natural resources. The over-intensive use of land has been found to exhaust the capability of the ecosystem to support the growing demands of more and more people, all requiring more intensive use of resources. Industrial growth, urbanisation, population growth and the enormous increase in the use of consumer goods, have all put further stresses on the environment. They create great quantities of solid waste. Pollution of air, water and soil has begun to seriously affect human health.

Everything available in our environment which can be used to satisfy our needs provided, it is technologically accessible, economically feasible and culturally acceptable can be termed as ‘Resource’.

The process of transformation of things available in our environment involves an inter-dependent relationship between nature, technology and institutions. Human beings interact with nature through technology and create institutions to accelerate their economic development. Do you think that resources are free gifts of nature as is assumed by many? They are not. Resources are a function of human activities. Human beings themselves are essential components of resources. They transform material available in our environment into resources and use them. These resources can be classified in the following ways–

- (a) On the basis of origin – biotic and abiotic
- (b) On the basis of exhaustibility – renewable and non-renewable
- (c) On the basis of ownership – individual, community, national and international
- (d) On the basis of status of development – potential, developed stock and reserves.



2.2 TYPES OF RESOURCES

A. On the Basis of Origin

1. **Biotic Resources:** These are obtained from biosphere and have life such as human beings, flora and fauna, fisheries, livestock etc.
2. **Abiotic Resources:** All those things which are composed of non-living things are called abiotic resources. For example, rocks and metals.

B. On the Basis of Exhaustibility

1. **Renewable Resources:** The resources which can be renewed or reproduced by physical, chemical or mechanical processes are known as renewable or replenish able resources. For example, solar and wind energy, water, forests and wildlife, etc. The renewable resource may further be divided into continuous and biological resources.
 - a. **Continuous Resources:** Continuous resources are available continuously and easily. For example solar energy, rainfall, wind and wave action.
 - b. **Biological Resources:** A biological resource is a substance or object required by an organism for normal growth, maintenance, and reproduction. Resources can be consumed by one organism and, as a result, become unavailable to another organism. Further it can be divided into wild life and Natural Vegetation.
2. **Non-Renewable Resources:** These occur over a very long geological time. Minerals and fossil fuels are examples of such resources. These resources take millions of years in their formation. Some of the resources like metals are recyclable and some like fossil fuels cannot

be recycled and get exhausted with their use. Further it can be divided into Recyclable and Non-Recyclable resources.

Recyclable materials include many kinds of glass, paper, and cardboard, metal, plastic, tires, textiles, and electronics.

Non-recyclable waste will end up at the dumping ground to be buried. It does not contain any of the recyclable waste because of prior sorting out. For Ex: disposable plates, cups, spray bottles, unusable clothing and bottles.

Wildlife traditionally refers to undomesticated animal species, but has come to include all plants, fungi, and other organisms that grow or live wild in an area without being introduced by humans. Wildlife can be found in all ecosystems.

Natural vegetation is plants that have not been grown by humans. It doesn't need help from humans and gets whatever it needs from its natural environment. Some types of natural vegetation are Forests, tundra, grass lands and rainforests.

Human Resources

The resource, that resides in the knowledge, skills, and motivation of the people. Human resource is the least mobile of the four factors of production, and (under right conditions) it improves with age and experience, which no other resource can do. It is therefore regarded as the scarcest and most crucial productive resource that creates the largest and longest lasting advantages for an organization. It can be divided into 1. Structures and institution2. Quality and Quantity

As **structures** or mechanisms of social order, they govern the behaviour of a set of individuals within a given community. **Institutions** are identified with a social purpose, transcending individuals and intentions by mediating the rules that govern living behaviour.

C. On the Basis of Ownership

Individual Resources: These are also owned privately by individuals. Many farmers own land which is allotted to them by government against the payment of revenue. In villages there are people with land ownership but there are many who are landless. Urban people own plots, houses and other property. Plantation, pasture lands, ponds, water in wells etc. are some of the examples of resources ownership by individuals. Make a list of resources owned by your household.

Community Owned Resources: There are resources which are accessible to all the members of the community. Village commons (grazing grounds, burial grounds, village ponds, etc.) public parks, picnic spot, playgrounds in urban areas are de facto accessible to all the people living there.

National Resources: Technically, all the resources belong to the nation. The country has legal powers to acquire even private property for public good. You might have seen roads, canals, railways being constructed on fields owned by some individuals. Urban Development Authorities get empowered by the government to acquire land. All the minerals, water resources, forests, wildlife, land within the political boundaries and oceanic area up to 12 nautical miles (19.2 km) from the coast termed as territorial water and resources therein belong to the nation.

International Resources: There are international institutions which regulate some resources. The oceanic resources beyond 200 km of the Exclusive Economic Zone belong to open ocean and no individual country can utilise these without the concurrence of international institutions.

D. On the Basis of the Status of Development

Potential Resources: Resources which are found in a region, but have not been utilised. For example, the western parts of India particularly Rajasthan and Gujarat have enormous potential for the development of wind and solar energy, but so far these have not been developed properly.

Developed Resources: Resources which are, surveyed and their quality and quantity have been determined for utilisation. The development of resources depends on technology and level of their feasibility.

Stock: Materials in the environment which have the potential to satisfy human needs but human beings do not have the appropriate technology to access these, are included among stock. For example, water is a compound of two inflammable gases; hydrogen and oxygen, which can be used as a rich source of energy. But we do not have the required technical 'know-how' to use them for this purpose. Hence, it can be considered as stock.

Reserves: are the subset of the stock, which can be put into use with the help of existing technical 'know-how' but their use has not been started. These can be used for meeting future requirements. River water can be used for generating hydroelectric power but presently, it is being utilised only to a limited extent. Thus, the water in the dams, forests etc., is a reserve which can be used in the future.

An equitable distribution of resources has become essential for a sustained quality of life and global peace. If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger. Therefore, resource planning is essential for sustainable existence of all forms of life. Sustainable existence is a component of sustainable development.

3.1 Programmes Related to Environmental Protection

Introduction:

Man is both creature and moulders of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and complicated evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale.

Environmental protection refers to any measure that is taken to conserve, maintain or preserve the state of the environment. Protection of the environment can be done through reducing pollutants or anything that leads to its degradation. Conservation of the environment aims at keeping it safe and healthy. It aims at the reduction of overusing the natural resources. It is the taking care of all the components that make up the environment.

Preserving is also used hand in hand with the term conserving. Environmental preservation refers practices that do not alter the environment. It aims at keeping the environment unchanged so as to leave it intact. Protection of the environment can also mean that the environmental practices that the human race treats in are sustainable to help avoid damaging or harming the ecosystem. Some of the recent programmes were discussed in detail below:

3.2 SWACHHBHARAT ABHIYAN

Government of India initiated the Central Rural Sanitation Programme (CRSP) in 1986 primarily with the objective of improving the quality of life of the rural people and also to provide privacy and dignity to women. From 1999, a “demand driven” approach under the “Total Sanitation Campaign” (TSC) emphasized more on Information, Education and Communication (IEC), Human Resource Development (HRD), Capacity Development activities to increase awareness among the rural masses and generation of demand for sanitary facilities. This enhanced people’s capacity to choose appropriate options through alternate delivery mechanisms as per their economic condition. Financial incentives were provided to Below Poverty Line (BPL) households for construction and usage of individual household latrines (IHHL). The “Nirmal Bharat Abhiyan” (NBA) the successor programme of the TSC was launched w.e.f. 1.4.2012. The objective was to accelerate the sanitation coverage in the rural areas so as to comprehensively cover the rural community through renewed strategies and saturation approach. Nirmal Bharat Abhiyan (NBA) envisaged

covering the entire community for saturated outcomes with a view to create Nirmal Gram Panchayats.

Under NBA, the incentives for IHHLs were increased and further focussed support was obtained from MNREGA. However there were implementation difficulties in convergence of NBA with MNREGA as funding from different sources created delays at the implementation mechanism. To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014. The Mission Coordinator was given to the Secretary, Ministry of Drinking Water and Sanitation (MDWS) with two Sub Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission (Urban), which aims to achieve Swachh Bharat by 2019, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi, which in rural areas shall mean improving the levels of cleanliness in rural areas through Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitised. The Mission shall strive for this by removing the difficulties that were hindering the progress, including partial funding for Individual Household Latrines from MNREGS, and focusing on critical issues affecting outcomes.

Swachh Bharat Abhiyan (SBA) (or Swachh Bharat Mission (SBM) or Clean India Mission in English) is a campaign in India that aims to clean up the streets, roads and infrastructure of India's cities, smaller towns, and rural areas. The objectives of Swachh Bharat include eliminating open defecation through the construction of household-owned and community-owned toilets and establishing an accountable mechanism of monitoring toilet use. Run by the Government of India, the mission aims to achieve an Open-Defecation Free (ODF) India by 2 October 2019, the 150th anniversary of the birth of Mahatma Gandhi, by constructing 12 million toilets in rural India at a projected cost of ₹1.96 lakh crore.

The campaign was officially launched on 2 October 2014 at Rajghat, New Delhi by Prime Minister Narendra Modi. It is India's largest cleanliness drive to date with 3 million government employees, school students, and college students from all parts of India participating in 4,041 statutory cities, towns and associated rural areas.

The main objectives of the Swachh Bharat Mission (SBM) are

- To bring about an improvement in the general quality of life in the rural areas, by promoting cleanliness, hygiene and eliminating open defecation.
- To accelerate sanitation coverage in rural areas to achieve the vision of Swachh Bharat by 2nd October 2019.

- To motivate Communities and Panchayati Raj Institutions to adopt sustainable sanitation practices and facilities through awareness creation and health education.
- To encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation.
- To develop where required, Community managed sanitation systems focusing on scientific Solid and Liquid Waste Management systems for overall cleanliness in the rural areas.

The Swachh Bharat Mission (Gramin) aims to

- a. promote cleanliness, hygiene and eliminate open defecation
- b. Accelerate sanitation coverage in rural areas
- c. Motivate communities and Panchayati Raj Institutions to adopt sustainable sanitation practices and facilities through awareness creation and health education
- d. Encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation and

The components of the mission are construction of individual household latrines and community sanitary complexes; Information, Education and Communication (IEC); start-up activity and capacity building; and solid and liquid waste management activities in Gram Panchayats.

The Swachh Bharat Mission (Urban) aims at

1. Elimination of open defecation
2. Eradication of manual scavenging.
3. Modern and scientific municipal solid waste management.
4. To effect behavioural change regarding healthy sanitation practices.
5. Generate awareness about sanitation and its linkage with public health.
6. Capacity augmentation of Urban Local Bodies and
7. To create an enabling environment for private sector participation in capital and operation and maintenance expenditure.

The components of the mission include construction of household toilets, community and public toilets; solid waste management; IEC & public awareness and capacity building.

3.3 Behaviour Change Communication (BCC) Strategy: Behaviour Change Communication needs to be undertaken in campaign mode. The communication has to be internalised by the people. Behaviour change is not limited to toilet usage but also refers to habit of avoiding littering, paying for use of public toilets and keeping the streets or places clean. All waste generators, either individual or companies, should ensure that the generated waste is processed with minimal effect on the environment. This can be achieved only

through collective effort and accountability towards the system. At the same time, dignity of labour and according respect to cleaning as occupation must also be recognised. Efforts for toilet construction and solid waste management can then only bring real outcomes i.e. toilet usage and over all cleanliness). The Sub-group recommends the following:

Toilet Construction and Promoting use

1. Toilet construction and Behaviour Change campaign have to be given equal priority as the success of an ODF programme will ideally be measured against the increase in toilet usage.
2. Effective investment in Information, Education and Communication (IEC) for BCC is necessary to improve understanding and awareness around sanitation. Studies indicate that world-wide almost 25 to 30% of funds have been used for BCC. There is a need to ensure effective funding and resource allocation to track efficacy of spending vis-à-vis successful targeting, since data shows that States with lower rates of OD spend more money on BCC. The proportion of funds for BCC may be increased uniformly, in both urban and rural areas, to about 25% of the total funds and Central Government may fund the BCC for the programme.
3. Involve political and social/thought leaders in conveying the message of sanitation as they have a wide reach and influence. Social leaders and celebrities may be involved in campaign on pro bono basis leading to cost saving in the IEC Campaign.
4. Involve electronic and print media to spread the message of cleanliness and sanitation on voluntary basis.
5. A database needs to be created which captures toilet usage by all households. Periodic and systematic collection of data will help in framing the strategy for the behaviour change campaign and also enable to undertake mid-course corrections.
6. A professional agency needs to be involved both at the central and State level to design the strategy, mode of implementation and to monitor and evaluate the progress of the campaign as partnerships with UNICEF and WHO were crucial in the success of campaign like the Pulse Polio campaign.
7. It is imperative that specific, contextualised and target-based behaviour change communication strategies are evolved.

To lead to effective behaviour change, communication should focus on the following points which address social and cultural concerns:

- i. Social norms around open defecation.
- ii. Lack of aspiration in owning a toilet.
- iii. Misinformation surrounding use and cleaning of latrine pits.

- iv. Lack of targeting of male-users.
- v. Anybody contesting an election for local bodies must have an individual household toilet.
- vi. It has been observed that effective communication design, gain-framed and loss-framed messages have different success rates depending on a number of factors, including the health outcomes.
- vii. In making decisions regarding messaging contents, it may be useful to conduct trials to see if people who show a preference for open-defecation are influenced by gain or loss framed messages in the context of their health, or their families' health. For example, "Shauchalayjao, sehatbachao" vs. "Shauchalaynajaoge, sehatnabachapaoge"
- viii. Personalised messaging could be used as a powerful tool to promote behaviour change. In this context, personalised text messages like SMS could be explored to communicate the benefits of good sanitation behaviour.
- ix. Extensive media campaign in the form of electronic, web and print to be used for conveying messages related to sanitation, importance of segregation of waste and general cleanliness.
- x. Campaign should also focus on encouraging the people to pay for usage of public toilets for their sustainability.
- xi. Cleaning occupations must be seen as dignified work and widely respected.

In 2017, the national sanitation coverage rose to 65% from 42% in 2014 before the start of the campaign. It was 57.56% in 2016. Five states, 149 districts and 2.08 lakh villages were declared Open Defecation Free (ODF) till August 2017. The cities and towns which have been declared ODF stood at 22 per cent and the urban wards which have achieved 100 per cent door-to-door solid waste collection stood at 50 per cent. The number of Swachhagrahi volunteers working across urban local bodies rose to 20,000, and those working in rural India rose to more than a lakh. The number of schools with separate toilet facilities for girls rose from

0.4 million (37 per cent) to almost one million (91 per cent). As per an independent survey released by Quality Council of India in August 2017, overall national rural "household access to toilet" coverage increased to 62.45 per cent and usage of 91.29 per cent, with Haryana topping the national ranking with 99 per cent of households in rural areas covered and usage of 100 per cent. Between 2014 and 2015, 8 million toilets were constructed under the program. As of 27 October 2016, 56 districts in India were ODF.

3.4 OPEN DEFECATION

There is a direct relationship between sanitation, health, and human wellbeing. Improper disposal of human excreta, lack of personal and food hygiene and lack of scientific solid and liquid waste management have been some of the major causes of many diseases which have a significant direct and indirect cost to the society and nations. More than half of India's 250-million odd households do not have access to toilets close to places where they live. To add to this, community toilets at railway stations, in markets, parks, schools and so on are also woefully inadequate and, moreover, very poorly maintained. Lack of sanitation causes a tremendous disease burden for the poor, especially poor infants and young children.

Globally, due to inadequate and unsafe drinking water, poor sanitation and unhygienic practices, diarrhoea has emerged as one of the leading causes of child deaths under age of five, claiming nearly 11 percent of total deaths in the age group

1. Further it has been reported that a 10% increase in open defecation is associated with 0.7% increase in both stunting and severe stunting in children
2. However, studies indicate that sanitation behaviour is not motivated by health concerns because open defecation is generally not recognised in rural India as a threat to health.

On 1 April 1999, the Government of India restructured the Comprehensive Rural Sanitation Programme and launched the Total Sanitation Campaign (TSC) which was later (on 1 April 2012) renamed "Nirmal Bharat Abhiyan" by then Prime Minister Manmohan Singh. A limited randomized study of eighty villages in rural (Madhya Pradesh) showed that the TSC programme did modestly increase the number of households with latrines, and had a small effect in reducing open defecation. However, there was no improvement in the health of children."

The earlier "Nirmal Bharat Abhiyan" rural sanitation program was hampered by the unrealistic approach. Consequently, Nirmal Bharat Abhiyan was restructured by Cabinet approval on 24 September 2014 as Swachh Bharat Abhiyan.

Open defecation (OD) is the human practice of defecating outside in the open. In lieu of toilets, people use fields, bushes, forests, open bodies of water or other open space. The practice is common where sanitation infrastructure is not available. About, 892 million people or 12 percent of the global population practice open defecation.

The term 'open defecation' is used in literature about water, sanitation, and hygiene (WASH). OD can pollute the environment and cause health problems. High levels of open

defecation are linked to high child mortality, poor nutrition, poverty, and large disparities between rich and poor.

Ending OD is an indicator being used to measure progress toward the sustainable development goals. Extreme poverty and lack of sanitation are statistically linked. Therefore, eliminating OD is thought to be an important part of the effort to eliminate poverty.

People may prefer open defecation based on traditional cultural practices or lack of access to toilets, or both. Even if toilets are available, behaviour change efforts may still be needed to promote the use of toilets.

3.5 Haritha Andhra Pradesh- Vanam-Manam Programme

Haritha Andhra Pradesh, people's participation, prakritipilusthondi, vanam-manam programme launch on 29 July 2016. About 26 percent of the total geographical area of Andhra Pradesh State has tree cover, of which forests are spread over an area of 36,915 square kilometres, about 23 percent of the total geographical area, and the tree-cover outside the forests is about 4,243 square km, which is around 3 percent of the total geographical area. However, substantial part of the forest area is degraded and the overall trend indicates declining tree cover.

In this background, the Government, after a critical review of all aspects of the matter, has decided to launch Mission Haritha Andhra Pradesh (MHAP) with a goal to achieve tree cover over 50 percent of the total geographical area of the State by bringing an additional 40 lakh hectares of land under tree cover by 2029. This would entail bringing about 4 lakh hectares of land under tree cover every year, apart from improving the quality of tree cover in the degraded forest areas through density improvement using appropriate species. The Government has decided to plant at least one crore saplings across the State on the launch day and sustain the plantation drive throughout the rainy season.

Vanam-Manam Programme:

Hon'ble Chief Minister of Andhra Pradesh will launch Mission Haritha Andhra Pradesh and initiate the implementation of Vanam-Manam Programme on 29 July 2016. It has been decided that more one Crore seedlings will be planted on 29 July 2016 on pre-identified vacant Government lands, Degraded Forest lands, Endowment lands, Schools, colleges and Universities, Residential schools and Hostels, Lands surrounding industries and SEZs (Special Economic Zones), vacant Railway lands, Endowments lands, Housing Colonies, Homesteads, Roads, Canals, Bunds of Farm lands. It is expected that on average 20,000-25,000 saplings will be planted in every Mandal depending the availability of plantation area, using appropriate plant species.

People's Participation-Prakriti Pilusthondi:

The goals of Mission Haritha Andhra Pradesh to be implemented through Vanam-Manam programme would be realised only through universal citizen participation. Each and every citizen of Andhra Pradesh across the social, economic, demographic, geographic, gender and political spectrum ought to become partners in this programme that would benefit not only the State but also the nation and the entire world through eco-regeneration. The Vanam-Manam programme is a truly initiate. Apart from its impact on environment and climate change, the programme is an effort to strengthen the bond between the nature and people. Therefore, effective and sustained mobilisation of all citizens through massive public information campaign is critical not only for the initial launch function on 29 July, but for sustaining the momentum for the next fifteen years and beyond.

The activities that would be taken up with immediate effect and sustained after launch of the Mission on 29 July would include widespread dissemination of information to the citizens through print and electronic media, FM Radio, Film theatres, town-hall and street level meetings. To create awareness amongst school and college students and to secure their proactive participation, essay writing, painting, quiz and elocution competitions shall be organised. In addition, Green Run, Cycle Rallies and Eco walks on different days shall be organised. Likewise, lecturers and panel discussions shall be organised on climate change concerns, environment and biodiversity conservation issues. Screening films and documentaries on forests and wildlife conservation in various schools, colleges, universities and theatres could be integral part of the campaign.

The Headmasters of schools, principals of colleges and Vice-chancellors of Universities, persons in charge of the Residential schools and Hostels shall ensure cent percent participation of teachers/ faculty and students in promotion of awareness regarding the Mission/Programme and its impact on environment/ climate change and ensure proactive participation in plantation and protection of the planted saplings.

Vanam-Manam Programme implementation (MHAP):

The participation of religious and social leaders and civil society institutions, community institutions, self-help groups must be secured in spreading awareness disseminating information on the Mission/programme.

Programme Implementation:

The government directs that Micro-level plantation plans should be prepared for each and every village/ULB covering vacant lands, institutions, industries, roads, canals bunds, degraded forest areas, homesteads. The Departments of Forest and Horticulture shall ensure

production and delivery of appropriate plant material as decided by the District Collector. The plan should include measures for plantation, protection, watering and maintenance of the plants for not less than four to five years. Only species appropriate to the area should be chosen for plantation. Planting shall be done only after adequate preparation, duly ensuring all essential safeguards for security and maintenance of plants.

The programme shall be implemented as people's programme and government's role is to facilitate and support the people's initiative. Every plant must have 'guardian' who shall take responsibility for protection, watering, application of manure and proper nourishment to the plant. The Tree guardian could be an individual or a group of individuals and may be responsible for one or more plants. In institutions, the head of the institution shall assign responsibility for the maintenance of plants to the staff/students of the institution.

Every citizen of Andhra Pradesh shall be involved in the plantation programme implementation. Active participation of people's representatives, government officials, academicians, NGOs School children, college students, members of DWCRA Groups, SHGs and VSSs, media representatives, proactive involvement of Industries and corporate enterprises, peppermills, CII, FICCI, temples, churches, mosques and other faith based institutions, etc. shall be secured.

After the launch of the programme on 29 July, the plantation will continue throughout the rainy season. Thereafter all measures for protection and watering will continue along with preparatory activities for the 2017 plantation season. The delivery of saplings required for planting on the launch day shall start with immediate effect, duly ensuring that they are carefully maintained at the site until plantation. Care must be taken to ensure plants do not suffer physical damage/'transport shock' during transit from nursery to the planting site. All plants should be developed for geo-tagging is available on the **FMIS** platform. Separate institutions will be issued in this regard.

The District Collectors are hereby instructed taken immediate measures to ensure successful launch of mission Haritha Andhra Pradesh and its effective implementation. The principal chief conservator of Forest (PCCF) and commissioner Horticulture are requested to instruct all field officials of the department to provide proactive support for effective implementation of the programme. The secretary/ commissioner of Education and Welfare Departments are requested to issue instructions to all the institutions under their control. All Secretaries to government and Head of Departments (HODs) are requested to instruct the officials/ autonomous institutions/ public sector enterprises under their control to participate

vigorously in successful launch and implementation of mission Haritha Andhra Pradesh/vanam-manam programme.

3.6 NEERU CHETTU

The Vision of the Honorable Chief Minister of Andhra Pradesh is to prepare the state within 5 years is aimed to eradicate of poverty and reducing economic inequalities by better Water Conservation. Water Conservation Mission Under primary sector mission is one of the seven missions constituted for invigorating the growth engines with the main objective being poverty alleviation.

Water Conservation Mission has been constituted by involving relevant line departments. Two aspects of the Mission are:

1. Water Conservation, which would take into account the total rainfall, surface flow and the ground water and prepare a plan to make its optimum use by preventing wastage into the sea. The approach has to be from the ridge to the valley and the major departments to be involved in this exercise should be Irrigation, Forest, Rural Development and Ground Water.
2. Water Management, which would require making most efficient use of the conserved water for various sectors of state economy and the major departments involved in this exercise, would be agriculture, Animal Husbandry, Horticulture, Fisheries, Rural and Urban Water Supply etc.

OBJECTIVE

It is necessitated to increase the irrigated area thereby reducing the gap ayacut to increase the agricultural productivity and to make the farmers livelihood sustainable. The Government of A.P has constituted the following seven missions to focus on the activities which are critical for the social and economic growth of the State and require the inter-departmental coordination.

The Government of Andhra Pradesh has taken up Water Conservation Mission Neeru Chettu Sub-Mission under Primary Sector Mission with a vision to make the State a drought proof State and to eradicate the poverty and to reduce economic inequalities by better water conservation and sustainable management.

Neeru Chettu is interdepartmental convergence activity among water conserving departments viz., Irrigation, Rural Development, Ground water, Forest, **APSAC** and water utilizing departments viz., Agriculture, Horticulture, Fisheries, Animal Husbandry, **RWS**, Municipal Administration and Urban Development.

The present ground water table has gone below 1000 feet in certain parts of the state which is an alarming situation and drought prone. As a remedial measure to improve the ground water table, water conservation works are to be initiated immediately.

WHY NEERU-CHETTU

- Ground water levels are depleted to a depth of 1000 feet below ground level in most of the areas and water levels are to be stabilized and improved.
- Need to provide assured water supply to irrigation, drinking and industrial purposes.
- Need to provide the lifesaving irrigation to drought prone areas especially Rayalaseema Region by providing mobile sprinklers if required.
- Need to reduce the gap ayacut under Major, Medium and Minor irrigation projects by providing assured water up to tail end areas.
- Need for scientific management of water resources to ensure more crop per drop of water.
- Need for increasing the overall green cover in the State and ensure 33% of the forest cover against the current forest cover of 23%.

4.1 DEFORESTATION

Introduction:

The extent of forest in relation to the total geographical area of a country is considered as an important indicator of environmental safety and purity of life of the people of that country. The extent and type of forests are important factors in determining rainfall, prevention of floods, prevention of soil erosion, availability of firewood for cooking, availability of timber for housing and availability of wood for industrial purposes. Forests also make available minor forest products such as tendu leaves, honey, tamarind etc. which mean, there is a great need to develop and protect forests in the world. Forest are the main source of livelihood for several tribal's even today.

India has a big landmass of 329 million hectares. But due to heavy population pressure, expanding industrialization, illegal cutting of forests and uncontrolled grazing the area under forest continues to decline. The per capita forestland in India is only 0.09 hectare against the world average of one hectare. The National Forest Policy (1952) of India recommended that 33.3 per cent of the country geographical area has to be brought under forest. India's forest cover, however, at present stands at 19.52 per cent of the suggested levels even this limited extent of forestland in India does not have thick growth of trees with complete canopy.

Deforestation:

Deforestation is the conversion of forested areas into non-forest land use such as arable land; pasture land, urban use, logged area or wasteland. Generally, the removal or destruction of significant areas of forest cover has resulted in a degraded environment with reduced bio-diversity.

4.2 Causes of Deforestation:

1. **Population growth:** One of the main causes for deforestation is overpopulation in cities and developing countries. Population is continually growing in the third world. Population growth and increasing per capita demands for forest products are increasing pressures for forest exploitation and the conversion of forestlands to agriculture and other form of development, such as mining and fossil fuel extraction.
2. **Hydroelectric projects and Dams.** Hydroelectric projects, dams, reservoirs submerge large forest tracts. They uproot thousands of forest dwellers from their area of residence much before the construction of a dam. A lot of land is cleared for providing residence for the workers for which wood and other forest products are used up. While constructing huge dams vast area of forests and human settlements have been destroyed. It leads to social problems e.g.: the dams being constructed across the rivers Narmada and Ganga .
3. **Quarrying and mining:** In forested and hilly areas mining and quarrying are harmful. They spoil vegetation over large areas due to mine dust, ore and mine wastes.
4. **Wild Fire:** A wild fire, also known as a wild land fire, vegetation fire, grass fire, bush fire or hill fire is an uncontrolled fire often occurring in wild land areas, but which can also consume houses or agricultural resources. Common causes are lightening, human carelessness, Arson and volcano eruption. Heat waves, droughts and cyclical climate changes can also have a dramatic effect on the risk of wildfires.
5. **The role of the Military:** Weapon imports constitute one important socio-economic and thus ecological burden in many countries. War and violence themselves place a major direct and indirect burden upon forests. Opening up the forest and stimulating migration of people from the centre of the country to these isolated areas serves a strategic purpose. Oil and mineral exploitation within the nation is strategically important, even one has to attract foreign companies with conditions, which allows all profits to flow out of the country.
6. **Globalization:** Globalization in many countries has lead to deforestation as many industries and factories are build which emit carbon dioxide which affect the trees and forest. India and china are a big example. China being a big market for producing and supplying many products in various parts of the world for which trees and forest are used to produce product.

7. **Urbanization:** Urbanization also leads to deforestation as the country develops the cutting down of trees for the use of building materials, furniture, paper products and material used for highway and roads. Forests are also cleared in order to accommodate expanding urban areas. They are cut down in order to create land for grazing cattle and for growing crops. Trees are also cut down in developing countries to be used as firewood or turned into charcoal, which are used for cooking and heating purposes.

4.3 Afforestation:

In the early periods of civilizations, large parts of our country were covered with forests. The increase of the population of our country has led to the shrinking of forest area. The forests which purify air have been cut down and new cities and industries have been established in their place. The cutting of the forests causes what is called "The Green House Effect". It results in the heating of the earth's surface or global warming which has serious consequences for life on this planet. As a result coming generations are likely to suffer from incurable diseases. And what is extreme, even the existence of human kind might be in danger. Afforestation is the only measure that can be taken to avoid these disastrous havocs.

We know that Chipko Movements was started by Shri Sunderlal Bahuguna to stop indiscriminate felling of trees in the Himalayas. But an all-out effort is needed. We can't thrust this responsibility only on the government or on the public institutions or on any particular person. It is the duty of all and all must work together to make it a success. A planned government effort is needed in every state. The government must invest in the afforestation of hilly and desert areas. It must raise green belts in areas which are subject to rapid erosion.

But at the same time awareness among the common people is greatly needed. Steps must be taken to create massive people's movement with involvement of women to achieve the objectives and minimise pressure on existing forests. People as a whole must be motivated to regard the planting and protection of trees as social duty. Saplings are planted every year no doubt but in absence of proper care they die by the next monsoon. Who is to look after them? It is the general public, whose pious duty is to water and save every plant growing on the land in their neighbourhood. Educational institutions can play a key role in this regard. They can impress in the younger generation the need for planting trees. There are many social organisation who should come forward and promote common people for plantation. These organisations should also help the government so that it may implement its various programmes on conservation of forests successfully and rapidly. Our existence is

bound up with the trees and therefore trees must be planted especially on the road side and near railway tracks.

Forests are very important for us. It is unfortunate that we are ignoring its significance and are playing havoc with this one of the most vital aspects of nature. Hence, we must be aware of this fact and save trees to save our lives and our existence. We very often talk on environmental pollution, but do nothing in this regard. Let's take a pledge to plant trees in more and more numbers and promote others for this noble cause.

4.4 Social forestry

The National Commission on Agriculture, Government of India, first used the term 'social forestry' in 1976. It was then that India embarked upon a social forestry project with the aim of taking the pressure off the forests and making use of all unused and fallow land. Government forest areas that are close to human settlement and have been degraded over the years due to human activities needed to be afforested. Trees were to be planted in and around agricultural fields. Plantation of trees along railway lines and roadsides, and river and canal banks were carried out. They were planted in village common land, Government wasteland and Panchayat land.

Social forestry also aims at raising plantations by the common man so as to meet the growing demand for timber, fuel wood, fodder, etc., thereby reducing the pressure on the traditional forest area. This concept of village forests to meet the needs of the rural people is not new. It has existed through the centuries all over the country but it was now given a new character.

With the introduction of this scheme the government formally recognised the local communities' rights to forest resources, and is now encouraging rural participation in the management of natural resources. Through the social forestry scheme, the government has involved community participation, as part of a drive towards afforestation, and rehabilitating the degraded forest and common lands.

This need for a social forestry scheme was felt as India has a dominant rural population that still depends largely on fuel wood and other biomass for their cooking and heating. This demand for fuel wood will not come down but the area under forest will reduce further due to the growing population and increasing human activities. Yet the government managed the projects for five years then gave them over to the village panchayats (village council) to manage for themselves and generate products or revenue as they saw fit.

Social forestry scheme can be categorized into groups:

1. Farm forestry
2. Community forestry
3. Extension forestry and
4. Agro-forestry.

Farm Forestry: At present in almost all the countries where social forestry programmes have been taken up, both commercial and non-commercial farm forestry is being promoted in one form or the other. Individual farmers are being encouraged to plant trees on their own farmland to meet the domestic needs of the family. In many areas this tradition of growing trees on the farmland already exists. Non-commercial farm forestry is the main thrust of most of the social forestry projects in the country today. It is not always necessary that the farmer grows trees for fuel wood, but very often they are interested in growing trees without any economic motive. They may want it to provide shade for the agricultural crops; as wind shelters; soil conservation or to use wasteland.

Community Forestry: Another scheme taken up under the social forestry programme, is the raising of trees on community land and not on private land as in farm forestry. All these programmes aim to provide for the entire community and not for any individual. The government has the responsibility of providing seedlings, fertilizer but the community has to take responsibility of protecting the trees. Some communities manage the plantations sensibly and in a sustainable manner so that the village continues to benefit. Some others took advantage and sold the timber for a short-term individual profit. Common land being everyone's land is very easy to exploit. Over the last 20 years, large-scale planting of Eucalyptus, as a fast growing exotic, has occurred in India, making it a part of the drive to reforest the subcontinent, and create an adequate supply of timber for rural communities under the aegis of 'social forestry'.

Extension Forestry: Planting of trees on the sides of roads, canals and railways, along with planting on wastelands is known as 'extension' forestry, increasing the boundaries of forests. Under this project there has been creation of wood lots in the village common lands, government wastelands and panchayat lands.

Schemes for afforesting degraded government forests that are close to villages are being carried out all over the country.

Agro- Forestry : Planting of trees on and around agricultural boundaries, and on marginal, private lands, in combination with agricultural crops is known as agro-forestry.

Social forestry, schemes that have been started all over the country have made a considerable difference in overall forest cover in a short time.

4.5 Joint Forest Management:

National Forest Policy of 1988 suggested the programmed Joint Forest Management (JFM). The JFM is a strategy that aims at protection, rejuvenation and development of degraded forests with the help and participation of local communities, by the end of 1999, 20 States are implementing the JFM programme. The main assumptions of the programmes are

- 1) The forest department is failing to manage forests
- 2) People would like to exclude the bureaucratic control on forests
- 3) Community participation in the management of common property resources is essential.
- 4) Forest cannot be rejuvenated on its own and needs intervention from local communities.
- 5) Local community is having better skills and stake in sustainable use of forests.
- 6) People should have a role in taking up forest and village development activities.
- 7) All the sections of the community should be partners in the elected bodies managing the forest
- 8) People's participation remains half if the women of the community do not represent the bodies managing the forest
- 9) The programme can generate mutual respect between community foresters and forest
- 10) Benefit sharing under the programme is feasible both in short run and long run.

Working of Joint Forest Management:

The JFM is a strategy that does not transfer ownership of forests from State to local communities but organises forest management with people's participation in limited forest tracts. The programme primarily has four important components. The components are

1. Formation of Village Forest Committees (VFC)
2. Preparation of Micro Plan
3. Undertaking forest development activities.
4. Sharing of Economic Benefits.

Formation of VFC: Under JFM programme initially the forest staff will establish a working relationship with the community (or villagers) adjacent to degraded forests. The people of the community are explained the concept of JFM and its working so as to motivate the people in forest protection and development. The support of local Non-Governmental Organisation (NGO) will also be enlisted for the purpose. As a next step, the villagers are requested and helped to form into a VFC. Members of this committee consist of two members each (one man and one woman) from all the households of the village. All the members of the VFC are members of General Body of VFC. The General Body of VFC elects a President, Secretary

and Executive in a democratic manner. These elected members are meant to help running the day-to-day activities in forest protection and development.

Preparation of Micro Plan: The VFC and forest staff will prepare a working document called 'Micro Plan' jointly. The NGO would also be involved in the preparation of the Plan. The staff of the forest department will prepare Micro Plan by conducting a Participatory Rural Appraisal (PRA) with the General Body of the VFC. In the preparation of Micro Plan care is taken to identify the immediate needs of the forest and people based on the priorities of people and forest and availability of funds. The Micro Plan covers measures that help eco-regeneration. Soil and Water conservation measures, plantations, measures that help rejuvenation of old rootstocks and fire protection are very important items of Micro Plan. The forest department approves the Micro Plan and necessary funds will be kept at the disposal of the VFC.

Under taking Forest Development Activities: Each of the VFC will be assigned a piece of degraded forestlands. Normally, the extent of such assigned degraded forest will be about 300 hectares. The forest development activities primarily start with undertaking soil and water conservation activities in the forestland assigned to the VFC. The soil and water conservation activities taken up are: digging of contour trenches, construction of checkdams, rock-fill dams, earthen dams and mud dams. Later pits are dug and plantations are taken up in vacant places. The varieties of saplings to be planted are normally decided by the VFC. In a part of the assigned are (about 5.0 per cent), a fodder plot will also be developed to meet the fodder requirements of the cattle of the community. The other forest development activities undertaken under the programme include singling, bush clearing and laying of fire lines.

Sharing of Economic Benefits: The main economic benefits in implementing the JFM programme come from various sources. The main benefits are

1. The community is provided with a 'Village Development Fund' to meet its immediate needs such as repairs to roads for improving drinking water sources and repair of school and community buildings
2. The sharing of economic benefits by the community starts with the implementation of forest development activities. The needy would be provided employment and income through activities like digging of contour trenches, construction of check dams, rock-fill dams, earthen dams and mud dams pit digging and plantations
3. The usufructs like grass, forest fruits, singling waste and tendu leaves will be shared among the VFC members and

4. Once the trees planted in the adopted forest come of age they will be cut and sold in the market. The members of the VFC will share with forest department the income generated through sale of this wood, bamboo and other forest products.

Benefits of Joint Forest Management:

- A. Environmental Benefits:** The major environmental benefits from JFM programme are
1. JFM reduces the deforestation and helps improving the health of forests
 2. Smuggling of forest produce declines and helps in vacating the encroached forestlands
 3. People's participation in forest development activities helps natural regeneration and growth of secondary forests.
 4. The old rootstocks respond favourably due to community's favourable treatment of forest plants. and
 5. The survival rate of plantations under VFC is far higher as compared to plantations in other programmes.
- B. Social Benefits:** Major Social Benefits from the implementation of JFM programme are
1. All members of the community come together in planning, execution and monitoring of the activities of JFM. That brings in the motivation for 'Self- Help' to improve the social and environmental conditions of the community
 2. One women member from each household joins as members of the General Body of the VFC. They participate in discussions in the preparation of 'Micro Plan' its implementation and monitoring. The brings in confidence among women members to participate on other 'Self- Help' activities.
 3. Women members are formed into "Self- Help Groups' (SHGs). Through SHGs, activities like savings, issue of loans and repayment of loans are taken up and
 4. Economically viable activities are taken up either by groups or by individual woman of VFCs.

4.6 ENVIRONMENT PROTECTION ACTS AND LAWS

In 1972, a National Council of Environment Planning and Co-ordination was set-up at the Department of Science and Technology. Another committee was set-up in 1980 for reviewing the existing legislations and administrative machinery for environmental protection and for recommending ideas to strengthen the existing laws and environmental agencies in India. In 1980, a separate Department of Environment was set-up which was upgraded to full-fledged Ministry of Environment and Forests in 1985.

Ministry of Environment and Forests (MoEF) of Government of India serves as the

Nodal agency for the planning, promotion, making of environment laws and their enforcement in India. Following are the other important agencies which help the MoEF in carrying out environment related activities:

- a. Central Pollution Control Board
- b. State Pollution Control Boards
- c. State Departments of Environment
- d. Union Territories (UT) Environmental Committees
- e. The Forest Survey of India
- f. The Wildlife Institute of India
- g. The National Afforestation and Eco-development Board
- h. The Botanical and Zoological Survey of India, etc.

ENVIRONMENTAL LAWS

Major environmental laws dealing with protection of environment can be divided into following categories

- A. Water pollution
- B. Air pollution
- C. Environment protection
- D. Public liability insurance
- E. National environment appellate authority
- F. National environment tribunal
- G. Animal welfare
- H. Wildlife
- I. Forest conservation
- J. Biodiversity
- K. Indian forest service

MAJOR ENVIRONMENTAL ACTS.

- I. The water (prevention and control of pollution) act, 1974
- II. The water (prevention and control of pollution) cess act, 1977
- III. The air (prevention and control of pollution) act, 1981
- IV. The environment (protection) act, 1986
- V. The hazardous wastes (management and handling) rules, 1989 & 2000.
- VI. The manufacture, storage and import of hazardous chemical rules, 1989 & 2000.
- VII. Public liability insurance act, 1991.
- VIII. The national environment tribunal act, 1995.

- IX. The chemical accidents (emergency planning, preparedness and response rules, 1996.
- X. The biomedical wastes (management and handling) rules, 1998.
- XI. Municipal wastes (process and disposal) draft rules, 1999.
- XII. The recycled plastic manufacture and usage rules, 1999.
- XIII. The fly ash notification, 1999.
- XIV. The batteries (management and handling (draft) rules, 2000.

4.7 DUTIES OF INDIAN CITIZEN

Legislations alone are not the remedy for environmental management, it is the responsibility of all the citizens to strive to protect the environment for the present and future generations since it is the fundamental duty of citizens to protect and conserve the environment as enshrined in our Constitution.

Virtually, environmental legislation is essentially a social legislation since environmental degradation affects all of us. The criminal nature of pollution offences have to be viewed seriously. Environmental legislation provides the framework for punitive action against the offenders.

Conservation, recycle, and reuse are the current trends observed in the control of environmental pollution. Even though there may be law regarding these aspects scattered in different Acts of Indian legislation, there is a need for comprehensive Resource Conservation and Recovery Act today. It is not always necessary that Environmental degradation or danger should occur to implement the law. One should always take steps before such happenings.

The problem of environmental degradation is a complex one which requires multi-dimensional approach. There is dearth of environmental protection laws, but we need a firm hand to implement them. Environmental education can play an important role in negating the adverse impacts of pollution.

Short Answer Type Questions

1. What is Environment?
2. Define Air Pollution?
3. Define Water Pollution?
4. What is meant by Soil Pollution?
5. Define Noise Pollution
6. Write some Non-Renewable Resources?
7. Write about Swachh Bharat?
8. Write about Open Defecation Free?
9. Define Afforestation?
10. Write about Neeru – Chettu?

Long Answer Type Questions

1. Explain briefly Different Types of Pollution?
2. Write about Pollution Controlling Measures?
3. Write about Renewable and Non-Renewable Resources?
4. Discuss briefly about Swachh Bharat Mission?
5. Explain various occupational hazards?
6. Explain the Causes of Deforestation?
7. Write about Different Environmental Protection Programmes?

Unit – III

Rural Development

1. Poverty
2. Unemployment
3. Rural Industries- Credit Facilities
4. Panchayati Raj System

Introduction

Rural development has always been an important issue in all discussions pertaining to economic development, especially of developing countries, throughout the world. In the developing countries and some formerly communist societies, rural mass comprise a substantial majority of the population. Millions of rural people have escaped poverty as a result of rural development in many Asian countries; a large majority of rural people continue to suffer from persistent poverty. The socio-economic disparities between rural and urban areas are widening and creating tremendous pressure on the social and economic fabric of many developing Asian economies. These factors, among many others, tend to highlight the importance of rural development. The policy makers in most of the developing economies recognize this importance and have been implementing a host of programs and measures to achieve rural development objectives. While some of these countries have achieved impressive results, others have failed to make a significant dent in the problem of persistent rural underdevelopment

Rural - Is an area, where the people are engaged in primary industry in the sense that they produce things directly for the first time in cooperation with nature as stated by Srivastava (1961).

Rural areas are sparsely settled places away from the influence of large cities and towns. Such areas are distinct from more intensively settled urban and suburban areas, and also from unsettled lands such as outback or wilderness. People live in village, on farms and in other isolated houses.

Rural areas can have an agricultural character, though many rural areas are characterized by an economy based on logging, mining, oil and gas exploration, or tourism. Lifestyles in rural areas are different than those in urban areas, mainly because limited services are available. Governmental services like law enforcement, schools, fire departments, and libraries may be distant, limited in scope, or unavailable. Utilities like water, sewer, street lighting, and garbage collection may not be present. Public transport is sometimes absent or very limited; people use their own vehicles, walk or ride an animal.

A society or community can be classified as rural based on the criteria of lower population density, less social differentiation, less social and spatial mobility, slow rate of social change, etc. Agriculture would be the major occupation of rural area.

Development: It refers to growth, evolution, stage of inducement or progress. This progress or growth is gradual and had sequential phases. Always there is increasing differentiation. It also refers to the overall movement towards greater efficiency and complex situations.

Rural development designates the utilization of approaches and techniques under one single programme, which rally upon local communities as units of action. It provides a large umbrella under which all the people engaged in the work of community organizations, community progress and community relation.

Rural Development (RD) is a process, which aims at improving the wellbeing and self-realization of people living outside the urbanized areas through collective process.

According to Agarwal (1989), rural development is a strategy designed to improve the economic and social life of rural poor.

The United Nations defines Rural Development as:

Rural Development is a process of change, by which the efforts of the people themselves are united, those of government authorities to improve their economic, social and cultural conditions of communities in to the life of the nation and to enable them to contribute fully to national programme.

Rural Development is a process of bringing change among rural community from the traditional way of living to progressive way of living. It is also expressed as a movement for progress.

Scope and Importance of Rural Development:

Rural development is a dynamic process, which is mainly concerned with the rural areas. These include agricultural growth, putting up of economic and social infrastructure, fair wages as also housing and house sites for the landless, village planning, public health, education and functional literacy, communication etc.

Rural development is a national necessity and has considerable importance in India because of the following reasons.

1. About three-fourth of India's population live in rural areas, thus rural development is needed develop nation as whole.
2. Nearly half of the country's national income is derived from agriculture, which is major occupation of rural India.
3. Around seventy per cent of Indian population gets employment through agriculture.
4. Bulks of raw materials for industries come from agriculture and rural sector.
5. Increase in industrial population can be justified only in rural population's motivation and increasing the purchasing power to buy industrial goods.
6. Growing disparity between the urban elite and the rural poor can lead to political instability.

The main objective of the rural development programme is to raise the economic and social level of the rural people.

The specific objectives are:

1. To develop farm, home, public service and village community.
2. To bring improvement in producing of crops and animals living condition.
3. To improve health and education condition etc. improvement of the rural people.
4. To improve villagers with their own efforts.
5. To improve village communication.

Need and Importance of rural development

Rural development is a national necessity and has considerable importance in India because of the following reasons.

1. To develop rural area as whole in terms of culture, society, economy, technology and health.
2. To develop living standard of rural mass.
3. To develop rural youths, children and women.
4. To develop and empower human resource of rural area in terms of their psychology, skill, knowledge, attitude and other abilities.
5. To develop infrastructure facility of rural area.
6. To provide minimum facility to rural mass in terms of drinking water, education, transport, electricity and communication.
7. To develop rural institutions like panchayat, cooperatives, post, banking and credit.
8. To provide financial assist to develop the artisans in the rural areas, farmers and agrarian unskilled labor, small and big rural entrepreneurs to improve their economy.
9. To develop rural industries through the development of handicrafts, small scaled industries, village industries, rural crafts, cottage industries and other related economic operations in the rural sector.
10. To develop agriculture, animal husbandry and other agricultural related areas.
11. To restore uncultivated land, provide irrigation facilities and motivate farmers to adopt improved seed, fertilizers, package of practices of crop cultivation and soil conservation methods.
12. To develop entertainment and recreational facility for rural mass.
13. To develop leadership quality of rural area.
14. To improve rural marketing facility.
15. To minimise gap between the urban and rural in terms of facilities availed.

16. To improve rural peoples participation in the development of state and nation as whole.
17. To improve scopes of employment for rural mass.
18. For the sustainable development of rural area.
19. To eliminate rural poverty.
20. To solve the problems faced by the rural mass for their development.

Problems in Rural Development

I. People related:

1. Traditional way of thinking.
2. Poor understanding.
3. Low level of education to understand developmental efforts and new technology.
4. Deprived psychology and scientific orientation.
5. Lack of confidence.
6. Poor awareness.
7. Low level of education.
8. Existence of unfelt needs.
9. Personal ego.

II. Agricultural related problems:

1. Lack of expected awareness, knowledge, skill and attitude.
2. Unavailability of inputs.
3. Poor marketing facility.
4. Insufficient extension staff and services.
5. Multidimensional tasks to extension personnel.
6. Small size of land holding.
7. Division of land.
8. Unwillingness to work and stay in rural areas.

III. Infrastructure related problems:

Poor infrastructure facilities like water, electricity, transport, educational institutions, communication, health, storage facility etc.

IV. Economic problems:

1. Unfavourable economic condition to adopt high cost technology.
2. High cost of inputs.
3. Underprivileged rural industries.

V. Social and Cultural problems:

1. Cultural norms and traditions

2. Conflict within and between groups, castes, religions, regions, languages.

VI. Leadership related problems:

1. Leadership among the hands of inactive and incompetent people.
2. Mollified interest of leaders.
3. Biased political will.

VII. Administrative problems:

1. Earlier, majority of the programmes were planning based on top to bottom approach and were target oriented.
2. Political interference.
3. Lack of motivation and interest.
4. Unwillingness to work in rural area.
5. Improper utilization of budget.

1.1 Poverty

Since independence, India followed the mixed economy framework by combining the advantages of the market economic system with those of the planned economic system. India has taken in the last five and a half decades and the outcome of some policies with relation to the various developmental indicators. Providing minimum basic needs to the people and reduction of poverty have been the major aims of independent India. The pattern of development that the successive five year plans envisaged laid emphasis on the upliftment of the poorest of the poor, integrating the poor into the mainstream and achieving a minimum standard of living for all. While addressing the Constituent Assembly in 1947, Jawaharlal Nehru had said, “This achievement (Independence) is but a step, an opening of opportunity, to the great triumphs and achievements that await us... the ending of poverty and ignorance and disease and inequality of opportunity.”

Poverty is a state or condition in which a person or community lacks the financial resources and essentials to enjoy a minimum standard of life and well-being that's considered acceptable in society.

The Poverty Line: Now let us examine how to determine the poverty line. There are many ways of measuring poverty. One way is to determine it by the monetary value (per capita expenditure) of the minimum calorie intake that was estimated at 2,400 calories for a rural person and 2,100 for a person in the urban area. Based on this, the poverty line was defined for rural areas as consumption worth ₹ 328 per person a month and for urban areas it was ₹ 454. Though the government uses Monthly Per Capita Expenditure (MPCE) as proxy for income of households to identify the poor.

Poverty Line refers to the cut-off level of annual income of the households. Poverty line is estimated separately for Rural and Urban areas. The Poverty line is estimated on the basis of the following factors.

- A. Minimum subsistence level of consumption.
- B. The estimated cost of minimum nutritional diet.
- C. Per capita monthly consumption expenditure.

Poverty is a great curse on humanity. Poverty can be defined as a social phenomenon in which a section of the society is unable to fulfil even its basic necessities of life. When a substantial segment of a society is deprived of the minimum level of living and continues at bare subsistence level, that society is said to be plagued with mass poverty. In India the generally accepted definition of poverty emphasizes minimum level of living rather than a reasonable level of living. In India about 230 millions comprising 17.59 per cent population are below poverty line during 2013. To understand the problem of poverty better; we may distinguish between Absolute Poverty and Relative Poverty.

Absolute Poverty: Absolute Poverty is a person means that his income of consumption expenditure is so meager that he lives below the minimum subsistence level. Because of his Absolute Poverty condition, he is not able to maintain his health and efficiency and in fact he may be starving.

Relative Poverty: Relative Poverty merely indicates the large inequalities of income. Those who are in the lower income groups receive less than those in the higher income groups. The people with lower incomes are relatively poor compared with those with higher income, even though they may be living above the minimum level of subsistence.

According to the Planning Commission 2007, the per capita monthly expenditure of a person is Rs. 356 in rural and Rs 538.6 in urban areas is called poverty line. If the private health and educational expenditure considered the rural poverty line increase from Rs 356 to Rs. 392, the urban poverty line increases from Rs539 to Rs. 623.

1.2 Causes of Poverty

Poverty cannot be attributed to any single set of causes. It is a complex phenomenon and as such is the outcome of interaction of diverse factors, economic and non-economic.

1. Underdevelopment: The root cause of poverty is the underdevelopment of Indian economy. Dandekar and Rath have argued that feasible and unprofitable farms with little capacity for capital accumulation have been responsible for rural poverty in India. Small and scattered holdings, lack of adequate inputs lack of credit facilities and insecure tenancy system are all responsible for backwardness of Indian agriculture which causes rural poverty.

Industrial development has failed to make any dent on poverty. It is due to the fact highly capital-intensive industrialization has been associated with the increasing capital-output ratio and decreasing labour-capital ratio. Moreover, employment and income generation for unskilled labour force have been minimal. So the industrial sector also is a cause for poverty.

2. Unemployment and Low Levels of Wage: Poverty is caused by under employment or unemployment or coupled with low rates of wages. This is because supply of labour is more than that of demand for labour. Due to shortage of Capital, the industrial sector is not in a position to absorb more number of people. This causes poverty.

3. Population Explosion: In India population has increased from 361.09 million in 1951 to 1210.19 millions in 2011. The population growth during 60 years is more than three and a half times. Due to scarce capital and low level of technology, it is not possible to provide sufficient goods services to the fast growing population. Rapid growth of population is another important cause for the prevailing poverty in the country. It is obvious that when a certain income has to be divided among too many people, the per capita income is bound to be low which in turn causes poverty.

4. Inequality in Income Distribution: The relative poverty is to be attributed to inequality in the distribution of National Income most of the agricultural labourers are in a state of poverty because; they have less than one hectare land to cultivate. Likewise, inequality in the ownership of industrial and commercial capital is one of the reasons of urban poverty in India.

5. Low Availability of Essential: Another important cause for poverty in India is the low availability of essential commodities. The country is not able to produce sufficient goods and services as needed by the rapid growing population. The consumer goods shortage is responsible for low level of standard of living. There is a wide disparity in the consumption levels of the top rich and the bottom poor.

6. Inflation: Continuous rise in prices is another cause of poverty. When the prices rise, the purchasing power of money falls and it leads to poverty of the lower middle and poorer sections of the society. Inflation affects the living standards of the people having low incomes.

7. Failure of Five Year Plans: The main objective of the planning is to provide minimum level of living to all its citizens. It was felt that growth rate achieved during the five decades of planning would not be sufficient to remove poverty.

8. Social Factors: Economic development depends not only on available resources but also on social factors. Indian people lack of initiative and resourcefulness. In short, dogmatic and

fatalistic attitude is responsible for inertia, lack of initiative and dynamism. Thus, Indian social institutions and attitudes hamper economic progress and are responsible for perpetuating poverty. The caste system and joint family system and the laws of inheritance are a great obstacle to economic progress.

9. Political Factors: Being under foreign rule, India was exploited under the British regime. Since independence the other political factors have adversely affected the economic progress. We have political leaders who have placed self before service and who do not hesitate to enrich themselves at the cost of the country. The India administration is known to be corrupt and inefficient. The legislators would not pass laws which may help the poor. Sometimes they may hit their interest.

10. Institutional Factors: There are certain institutional factors operative in rural areas as well as urban areas having a strong bearing on ownership, management and work. Semi-feudalism is an institutional factor responsible for rural poverty. The Social and Political institutions in rural areas have not allowed the land reforms and technological reforms to make a dent on rural poverty. The government is providing agricultural inputs like electricity, seeds, fertilizers and credit facilities at subsidized prices to the farmers. But these facilities are not catering the needs of poor farmers having small holdings and also the tenants. The institutional rigidities have not allowed equitable sharing of public goods such as education and health.

Thus, all factors, economic, social and political have contributed to perpetuate poverty in India.

1.3 Effects of poverty

1. **Illiteracy:** Poor people constitutes greater share of illiterate population. Education becomes extremely difficult when people are deprived of basic necessities of life.
2. **Child Labour:** In India, a large number of young boys and girls are engaged in child labour.
3. **Nutrition and diet:** Poverty is the leading cause of insufficient diet and inadequate nutrition. The resources of poor people are very limited, and its effect can be seen in their diet.
4. **Poor living condition and Housing problems:** They don't get proper living conditions. They have to fight the hardship of poverty to secure food, clothes and shelter. A large number of poor families live in houses with one room only.
5. **Unemployment:** Poor people move from villages to towns and from one town to another in search of employment/work. Since, they are mostly illiterate and un-skilled, there is

very few employment opportunities open for them. Due to unemployment, many poor people are forced to live an unfulfilled life.

6. **Hygiene and sanitation:** These people have little knowledge about hygiene and proper sanitation system. They are not aware of the harmful consequences of not maintaining proper hygiene. The government is taking initiatives to make available clean and safe water, and proper sanitation system to them.
7. **Feminization of poverty:** Women are the worst victims of poverty. Poverty affects greater number of women than men. The total of poor women outnumbers the total population of poor men. The causes include low income, gender-inequality, etc. They are deprived of proper-diet, medicines and health treatment.
8. **Social tensions:** Poverty is often characterized with income disparity and unequal distribution of national wealth between the rich and the poor. Concentrations of wealth in the hands of few rich people lead to social disturbances and revolts. Fair or even distribution of wealth leads an overall improvement in general standard of living of people.

1.4 Controlling Measures:

Several measures can be undertaken to stop or eradicate poverty in India. Some of them are discussed below:

1. **Increase in per capita food production:** The rate of growth of production of food grains as a whole has barely kept ahead of population growth. An increase in per capita food production would ensure steady supply and stable price. An examination of the different components of food grain output is very revealing. Superior food grains, i.e., wheat and rice have done perceptibly better than the coarse grains, and wheat has done very significantly better. It is true that the Green Revolution strategy, particularly in relation to wheat has been very successful. However, there is much that needs to be done.
2. **Agricultural and land reforms:** In Indian conditions, radical socio-economic changes are required to ensure the self-reliant, long-term growth of the economy. These changes should ensure reforms of the land tenure system helpful to the poor and middle peasants, liberate them from the hard grip of the moneylenders, ensure supply of agricultural inputs to working farmers, widen irrigation facilities and help a quicker advance of agro-industries.
3. **Increase in production of essential items:** In the industrial sphere, units manufacturing luxury consumer items must be made to refashion their patterns of production in terms of export potential and the limited range of internal consumption potentialities, and use the

rest of the productive capacity towards producing low-cost essential commodities like inexpensive textiles, bulbs, tube lights, transistors, shoes, cycles, etc.

- 4. Tackle the problem of income disparity:** To bring about this change in our private sector production mix, however, exhortations will be self-defeating, since production thus conceived, is much less profitable per individual commodity produced. Apart from considerations of social justice, even purely in terms of economic development, glaring income disparities have to be quickly tackled.
- 5. Ceiling on maximum income:** A ceiling on maximum individual incomes has to be defined and strictly enforced, whether an individual is in a job, profession or business. Individual incomes above the ceiling should be impounded for the building up of a national development fund by the Government. This would ensure, firstly, substantial financial resources for the Government to make planned investments and secondly, drastically reduce internal demand leaving them largely for export.
- 6. Tackle the problem of black money:** The black money menace, of course, has to be frontally attacked at all levels along with these measures. This is urgent to bring about a balance between the available goods and services and money in circulation in short to fight the inflationary pressures on the economy; to mobilize maximum public finance for developmental activities and to eradicate the chances of corruption, market manipulation and conspicuous consumption.
- 7. Massive investment in public sector:** A massive investment and expansion programme in the public sector is required. This expansion has to embrace not only infrastructural areas like power, energy and so on but also the key and consumer sectors of the industry along with the commercial and distributive agencies. This expansion has become urgent to safeguard the working people from the vagaries of hoarding and price manipulation of the traders.
- 8. Education:** Illiteracy is a major national problem and a major cause for poverty. Illiterate people living in villages and small towns find it hard to get employment. Around 51 percent of rural families are engaged in casual labour jobs, while another 30 percent is engaged in agriculture. Education will empower them to engage in better jobs, which in turn would help them come above the poverty line. In this regard, women education is also considered very important. Educated women can make better earnings and support the family. Educated mothers have great influence in the academic progress of the child. It is rightly said that, “The Hand That Rocks the Cradle Rules the World”. Hence, educated

mothers can monitor the academic performance of their children and help the country to eradicate illiteracy and poverty.

9. Skill development: Most industries engage skilled labours. There is a decline in demand for un-skilled labours in most factories and mills. In such a situation, there is a need to stress on development of skills for specific trade, so that these modern industries can get technically skilled labours. Establishment of Vocational Education and Training (VET) institutes is a big step towards the eradication of poverty from our country.

10. Check on population growth: Due to massive increase in population, the demand for basic necessities such as housing, food and shelter is at its peak. The resources are limited. The growth in demand for essential commodities far exceeds the supply of these commodities leading to a situation of price-rise (inflation). Awareness campaigns explaining the benefits of controlling the population growth should be widely circulated.

11. Women empowerment: Women (and girls) forms around 50 percent of the world population. Since ages, they have been treated as a burden to the society. They were deprived of equal opportunity for education, food, nutrition, and economic participation leading to the situation of 'Feminization of poor'. Women empowerment and education would strengthen them to bring economic benefits both at individual and national level. The government and social organisations are taking significant steps towards creating awareness regarding the importance of education of girl-child.

2.1 Unemployment:

If the word demands a definition, "unemployment", may be elaborated as a state of not finding work by an individual who is fit and willing to work. It is usually measured in percentage; the number of individuals without work out of the total "labour force" of the country or specific social groups. Labour force is the term collectively applied to the total number of individuals within the population who are willing and capable of doing work. Unemployment rate of a country is indicative of its socio-economic health.

Unemployment casts some short term ripples throughout the economy by reducing an individual's contribution in terms of services and taxes. The unemployed also does not possess the power of purchase, thus in effect contributing to bringing down demand of goods in the market and creating more unemployment. This vicious cycle creates a cascading effect throughout the economy and trickles down to different social strata. India currently (2016) has a population of about 1.3 billion. According to a recent United Nations Development Programme (UNDP) report, during the period of 1991 to 2013, Indian economy has experienced maximum growth and yet less than half number of Indians seeking jobs have

managed to land one during this period. State wise figures reveal that Tripura has the highest unemployment rate in the country at 19.7% while Gujarat has the lowest at 0.9% in 2015-2016. On the other hand, unemployment rate is higher among women at 8.7 percent versus 4.3% among men. Women unemployment rate is higher in the rural areas than in urban sectors of the country. Experts fear that at present, India is experiencing a jobless growth with not enough jobs being created for its working age population (15-64 years).

2.2 Types of Unemployment

The most accepted classification of Unemployment recognizes two broad types: Voluntary and Involuntary Unemployment.

Voluntary unemployment arises when an individual is not under any employment out of his own desire not to work. Could be from their total apprehension towards the concept itself, or it may be that an individual is unable to find work paying his desired wages and he doesn't want to settle.

Involuntary unemployment encompasses all those factors that prevent a physically fit individual willing to work from getting an appointment. According to John Maynard Keynes, "involuntary unemployment arises due to insufficiency of effective demand which can be solved by stepping up aggregate demand through government intervention". Involuntary Unemployment is further categorized into subheads;

- 1. Disguised:** This is a scenario when more people are employed in a job than is actually required for it. This is hallmark of developing economies where availability of labour is abundant. It is primarily a feature of the agricultural and unorganized sectors.
- 2. Cyclical:** This type of unemployment refers to the periodic cycle of unemployment associated with cyclical trends of growth in business. Unemployment is low when business cycles are at their peak and high when the gross economic output is low. Several external factors like wars, strikes and political disturbances, natural calamities that affect business cycle are also contributors to cyclical unemployment.
- 3. Technological:** This type of unemployment is either generated following the introduction of technologically advanced mechanization that renders manual labour redundant, or through inclusion of technology that the current labour force is ill-adapted to.
- 4. Seasonal:** In some industries production activities are season best and employment occurs only in peak seasons. Agro-based industries and tourism industries are examples of this form of unemployment.
- 5. Structural:** Such employment stems from any structural change in the economy that leads to decline of specific industries. Long term changes in the market conditions,

reorganization of the same, and sudden changes in the technological sector, creates a Skill Gap in the existing workers.

- 6. Educated:** This form of unemployment happens when people with advanced degrees are unable to procure an engagement that is suited to their level of training.
- 7. Regional:** Globalization and relocation of jobs also leads to unemployment as workers are often unable to move to the new location where the employers currently hold positions.
- 8. Casual:** Some occupations can only offer temporary employment to individuals and their engagements are subject to termination as soon as the demand subsides. Daily labourers who work on a day-to-day basis are example of such types of unemployment.
- 9. Frictional:** This type of unemployment happens when the labour is either transitioning between jobs or is trying to find a job more suited to their skill set. Friction is generally referred to the time, energy and cost that a person invests while searching for a new job.

2.3 Causes of Unemployment

Unemployment is a reason for alarming concern in India today. The root of the problem can be traced to a host of reasons that contributes collectively towards this problem.

1. Economic Growth without adequate employment opportunities: India's GDP projections for year 2017 is 7.5% but that growth does not currently translates into creating more employment opportunities for the labour force of the country. In a survey conducted among a sample of 1072 companies across the nation and across various sectors, during the financial year of 2014-2015 only 12,760 jobs were created compared to 188,371 jobs in the year 2013-2014. In the year 2016, India's rural unemployment rate stands at 7.15% whereas unemployment rate in urban areas stand at 9.62%.

2. Education: Although literacy rates have risen in the last few decades, there still remains a fundamental flaw in the education system in India. The curriculum is mostly theory-oriented and fails to provide vocational training required to match up with current economic environment. The degree-oriented system renders itself redundant when it comes to producing human resources adept at fitting into specific profiles within the economy.

3. Population growth: Rapid growth of population has often been labeled as the major reason for increasing unemployment in the country. In the last ten years (2006-2016), India's population has increased by 136.28 million and unemployment is at a 5 year high in the financial year of 2015-2016. Current survey data revealed that at the all-India level, 77% of families do not have a regular salaried person.

4. Faulty Employment planning: The five-year plans implemented by the government have not contributed proportionately towards generation of employment. The assumption was that

growth in economy will automatically generate enough employment. But in reality the scenario doesn't quite match up to the assumption and there have remained gaps between the required number of jobs and the actual numbers generated.

5. Drawback of Agriculture Infrastructure: According current statistics, agriculture remains the biggest employer in the country contributing to 51% employment. But ironically the sector contributes a meager 12-13% to the country's GDP. The problem of disguised unemployment has turned out the biggest contributor behind this deficit. Also the seasonal nature of employment in this sector builds up recurring cycles of unemployment for the rural population. Lack of proper irrigation infrastructures and outdated cultivation methods still used renders most of the agriculture land in India usable for cultivating just one crop a year. This is another contributing factor towards seasonal nature of unemployment in the sector.

6. Alternative opportunities: There has been a definite push towards providing the people employment by the agriculture-based industries with alternate methods of employment during the lull seasons. Skill-based trainings for their employment in other sectors are lacking till date.

7. Slow Industrialization: The industrial scenario in India is still slow to flourish. Agriculture still remains as the biggest employer in the country. People are not yet keen towards self-employment, especially in the rural sector, depending on existing employment opportunities.

8. Neglect of cottage industries: For landless people in rural areas of India, one of the major means of livelihood is the cottage industries like fabric and handicrafts. But these small-scale industries are adversely affected by larger more mechanized industries which out-compete them in productivity. As a consequence, it is becoming more and more difficult to sustain the cottage industries inciting loss of employment for many.

9. Lack of Investment: Inadequacy of capital investment persists heavily in India and that has been a key contributor in not generating enough industry that in turn provides employment to the labour force.

10. Immobility of Labour: One more factor that leads to unemployment is people not being interested to move for jobs. Responsibility and attachment to family, language barrier, religion and lack of transport are key contributing factors in this regard.

2.4 Solutions to Reduce Unemployment Rate

Collective efforts directed by the Government as well as citizens towards the following points might help alleviate the problem of unemployment in the country.

1. Increased Industrialization: One of the most sure-shot remedies of the unemployment situation in India is rapid industrialization. Increased number of industries translates effectively into increased number of employment opportunities. Due to the emphasis put on agriculture in our economy, industrialization still takes a backseat, with farmers not ready to give up land for establishing industries. They need to be encouraged with better incentives and guaranteed jobs for a member of the family in the newly established industry.

2. Emphasis on Vocational and Technical Training: The curriculum pursued in universities should be altered to focus more on practical aspects of learning. More institutions need to be established that offer vocational courses that will translate directly into relevant jobs.

3. Encouraging Self-employment: Self-employment should be encouraged more with introduction of liability free loans and government assistance for funding. Incubation centers need to be promoted to cultivate original business ideas that will be financially viable.

4. Improved Infrastructure in Agriculture: Time has come for the entire agricultural infrastructure in the country to undergo a serious overhaul. Better irrigation facilities, better farming equipment, dissemination of knowledge regarding multiple crop rotation and crop management should be focused on. This will lead to year round increased production of crops, generating employment throughout the year.

5. Inviting Larger Capital Investments: Although India's economic market is seeing increased investments from overseas investors owing to its cheap labour costs; a lot more is still need to bridge the gap of unemployment. Government as well as leading business houses of the country should seek to invite more foreign collaboration and capital investment in every sector.

6. Focused Policy Implementation: Subsequent policies have focused on the issues like poverty and unemployment, but the implementation leaves a lot to be desired. Schemes like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and Rajiv Gandhi Swavlamban Rozgar Yojna are examples of the initiatives that the government has undertaken to address the unemployment problem. The recent Make in India initiative is another such step that has heart in the right place. The government should seek to streamline its implementation strategies so that the benefit from such schemes may be maximized.

2.5 Socio Economic Developmental Programmes

These programmes essentially aim at generating incremental incomes for the poor. This means a direct transfer of additional purchasing power into the hands of people living below the poverty line. It is also an attempt to alleviate the problem of almost negligible

“trickle down” from economic growth to the bottom rungs of society because of structural constraints. India has implemented a number of Socio Economic Development programmes for poverty alleviation in the last three decades.

2.6 National Social Assistance Programme (NSAP)

Introduction

The National Social Assistance Programme (NSAP) is a welfare programme being administered by the Ministry of Rural Development. This programme is being implemented in rural areas as well as urban areas. NSAP represents a significant step towards the fulfilment of the Directive Principles of State Policy enshrined in the Constitution of India which enjoin upon the State to undertake within its means a number of welfare measures. These are intended to secure for the citizens adequate means of livelihood, raise the standard of living, improve public health, provide free and compulsory education for children etc. In particular, Article 41 of the Constitution of India directs the State to provide public assistance to its citizens in case of unemployment, old age, sickness and disablement and in other cases of undeserved want within the limit of its economic capacity and development. It is in accordance with these noble principles that the Government of India on 15th August 1995 included the National Social Assistance Programme in the Central Budget for 1995-96. The Prime Minister in his broadcast to the Nation on 28th July 1995 announced that the programme will come into effect from 15th August 1995. Accordingly the Govt. of India launched NSAP as a Centrally Sponsored Scheme w.e.f 15th August 1995 towards fulfilment of these principles. The National Social Assistance Programme (NSAP) then comprised of National Old Age Pension Scheme (NOAPS), National Family Benefit Scheme (NFBS) and National Maternity Benefit Scheme (NMBS). These programmes were meant for providing social assistance benefit to the aged, the BPL households in the case of death of the primary breadwinner and for maternity. These programmes were aimed to ensure minimum national standards in addition to the benefits that the States were then providing or would provide in future. The scale of benefit and eligibility for various schemes of NSAP when first started were as follows:

(i) National Old Age Pension Scheme (NOAPS): ₹ 75 per month is provided per beneficiary for destitute above 65 years. The scheme covered destitute having little or no regular means of subsistence from his / her own sources of income or through financial support from family members or other sources. In order to determine destitution, the criteria, if any, currently in force in the State/ UT Governments were adapted. The Government of India reserved the right to review these criteria and suggest appropriate revised criteria.

(ii) National Family Benefit Scheme (NFBS): A grant of ₹ 5000 in case of death due to natural causes and ₹ 10,000 in case of accidental death of the “primary breadwinner” is provided to the bereaved household under this scheme. The primary breadwinner as specified in the scheme, whether male or female, had to be a member of the household whose earning contributed substantially to the total household income. The death of such a primary breadwinner occurring whilst he or she is in the age group of 18 to 64 years i.e., more than 18 years of age and less than 65 years of age, makes the family eligible to receive grants under the scheme.

(iii) National Maternity Benefit Scheme (NMBS): Under the scheme, ₹ 300 per-pregnancy up to the first two live births is provided. The beneficiary should belong to a household Below the Poverty Line (BPL) according to the criteria prescribed by Government of India. In 1998, the amount of benefit under NFBS was raised to ₹ 10,000 in case of death due to natural causes as well as accidental causes. The assistance under the National Maternity Benefit Scheme which was at ₹ 300/-, was increased to ₹ 500/- per pregnancy.

2.7 MGREGS

A majority of the poor in rural areas of the country depend mainly on the wages they earn through unskilled, casual, manual labour. They are often on threshold levels of subsistence, and are vulnerable to the possibility of sinking from transient to chronic poverty. Inadequate labour demand or unpredictable crises that may be general in nature, like natural disaster or personal like ill-health, all adversely impact their employment opportunities. In a context of poverty & unemployment, workfare programmes have been important interventions in developed as well as developing countries for many years. These programmes typically provide unskilled manual workers with short-term employment on public works such as, irrigation infrastructure, reforestation, soil conservation and road construction. The rationale for workfare programmes rests on some basic considerations. The programmes provide income transfers to poor households during critical times and also enable consumption smoothing, especially during slack agricultural seasons or years. In countries with high unemployment rates, transfer benefits from workfare programmes can prevent poverty from worsening, particularly during lean periods. Durable assets that these programmes may create have the potential to generate second-round employment benefits as needed infrastructure is developed.

The National Rural Employment Guarantee Act (NREGA) enacted on 7th September, 2005 is a landmark legislation which empowers the rural population with the legal right to demand work. One can see the NREGA as a shift from supply side to a demand side

approach. The Act aims at enhancing livelihood security of households in rural areas of the Country by providing at least 100 days of guaranteed wage employment in a financial year to every household which has adult members who volunteer to do unskilled manual work. On February 2, 2006 with great hope and hype, the NREGA came into force, in its first phase, covering 200 districts across the Country. The second phase beginning 2007 – 08, covered an additional 130 districts totaling to 330. In these districts, the earlier wage employment programmes like the National Food for Work Programme (NFFWP) and Sampoorna Grameen Rozgar Yojana (SGRY) were merged with NREGA. The other 266 districts have been notified on 28th September, 2007 where the NREGA came into force w.e.f. 1st April, 2008. Thus fulfilling the commitment of the UPA Government and was implemented in all the districts of the Country. This is the largest ever public employment programme visualized in human history in rural areas over the last 60 years in India. The National Rural Employment Guarantee Scheme (NREGS) was renamed as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) on October 2, 2009.

Salient Features of the Act

Salient features of the Act are summarized below:

- a) Adult members of a rural household may apply for employment if they are willing to do unskilled manual work.
- b) Such a household will have to apply for registration to the local Gram Panchayat, in writing, or orally.
- c) The Gram Panchayat after due verification will issue a Job Card to the household as a whole. The Job Card will bear the photograph of all adult members of the household willing to work under NREGA. The Job Card with photograph is free of cost.
- d) A Job Card holding household may submit a written application for employment to the gram Panchayat, stating the time and duration for which work is sought. The minimum days of employment have to be fifteen.
- e) The Gram Panchayat will issue a dated receipt of the written application for employment, against which the guarantee of providing employment within 15 days operates
- f) Employment will be given within 15 days of application for work by an employment seeker.
- g) If employment is not provided within 15 days, daily unemployment allowance, in cash has to be paid. Liability of payment of unemployment allowance is of the States.
- h) At least one-third of persons to whom work is allotted work have to be women.

- i) Wages are to be paid according to minimum wages as prescribed under the Minimum Wages Act 1948 for agricultural labourers in the State, unless the Centre notifies a wage rate which will not be less than ₹. 60/ per day
- j) Disbursement of wages has to be done on weekly basis and not beyond a fortnight.
- k) Panchayat Raj Institutions [PRIs] have a principal role in planning and implementation.
- l) Each district has to prepare a shelf of projects. The selected works to provide employment are to be selected from the list of permissible works. The different categories of permissible works are as follows:
 - Water Conservation.
 - Drought Proofing (including plantation and afforestation).
 - Flood Protection Land Development.
 - Minor Irrigation, horticulture and land development on the land of SC/ST/ -BPL/IAY and land reform beneficiaries.
 - Rural connectivity

The shelf of projects has to be prepared on the basis of priority assigned by Gram Sabha. At least 50% of works have to be allotted to Gram Panchayats for execution. A 60:40 wage and material ratio has to be maintained. Contractors and use of labour displacing machinery is prohibited.

Funding The Central Government bears the costs on the following items:

1. The entire cost of wages of unskilled manual workers.
2. 75% of the cost of material, wages of skilled and semi-skilled workers.
3. Administrative expenses as may be determined by the Central Government, which will include inter alia, the salary and the allowances of the Programme Officer and his supporting staff, work site facilities.
4. Expenses of the National Employment Guarantee Council.

The State Government bears the costs on the following items:

5. 25% of the cost of material, wages of skilled and semi-skilled workers.
6. Unemployment allowance payable in case the State Government cannot provide wage employment on time.
7. Administrative expenses of the State Employment Guarantee Council.

Districts have dedicated accounts for NREGA funds. They have submitted their proposals based on clearly delineated guidelines so that funds may be distributed efficiently at each

level, and adequate funds may be available to respond to demand. Under NREGA, fund releases are based on an appraisal of both financial and physical indicators of outcomes.

2.8 CHANDRANNA BHIMA YOJANA SCHEME

Andhra Pradesh government is launching flagship scheme Chandranna BhimaYojana on October 2, under which ₹.5 lakh insurance cover would be provided to workers in the unorganised sector. An official statement here today said the government is launching the scheme to provide insurance cover to the 1.50 crore workers in the unorganised sector in the state. The premium for the insurance scheme is only ₹.15, to be paid by the worker. The Insurance of ₹ 5 lakh will be paid if the insured worker is killed or suffered permanent disability in accident, ₹.3.63 lakh would be disbursed in case of partial disability and ₹.30,000 for natural death. The Chandranna Bhima Yojana is the conglomeration of Aam Admi BhimaYojana and Pradhanamantri SurakshaYogana schemes. The workers in the age of above 18 years and below 70 years are eligible to avail the scheme.

Highest number of 15 lakh workers enrolled their names for the scheme in East Godavari district followed 12 lakh in Anantapuram district.

2.9 NTR BHAROSA NEW PENSIONER SCHEME FOR ANDHRA PRADESH

The poverty level in Andhra Pradesh is very high and government is trying to improve the living status of poor people. To complete this target government of Andhra Pradesh is dedicated to safe dignified life to all the poor and helpless people who have no resources for their living. Government make their devotion towards people particularly towards the old and unwell people.

The state government of Andhra Pradesh wants to satisfy the minimum needs of its people, by doing so it strongly believes that the people of Andhra Pradesh may live their life happily. In order to fulfil the AP state poor people, state government introduced this NTR Bharosa Pension Scheme. In the NTR Bharosa pension scheme helps poor people in difficult situation faced by the poor families because of the finance.

Under this scheme, the state government of Andhra Pradesh about to provide financial aid by the name of pension to the poor and elderly people who are all the resident of Andhra Pradesh, in order to make this scheme as an effective one, the state government announced certain criteria by which the eligible people will be sorted.

S.No	Things Need to Know about Andhra Pradesh Pension Scheme	Detailed Information
1	Scheme Name	NTR Bharosa Pension Scheme
2	State Which Introduced this Pension Scheme	State Government of Andhra Pradesh
3	Who Announced about this pension Scheme	AP state Rural Development Minister Mr. K Mrinalini
4	Estimated Number Beneficiaries under this pension scheme	Around 40.5 Lakh
5	Allotted funds for this pension scheme	Around ₹. 577 Crore
6	Beneficiaries validation will be carried through	Aadhaar-enabled payment system
7	Official website for gaining more information about the pension scheme	http://ntrbharosa.ap.gov.in/

Details about the latest amendment in NTR Bharosa Pension scheme

In recent time, the state government of Andhra Pradesh made some slight changes in the existing NTR Bharosa Pension scheme, under this recent revision the pension amount which are provided earlier on monthly basis has been raised from ₹.200/- to ₹.1000/-.The list of rightful beneficiaries are listed in the below listed table.

Types of pension covered under this Andhra Pradesh NTR Bharosa Pension Scheme	1. Old Age Pension 2. Weavers Pension 3. Widow Pension 4. Disabled Pension 5. Toddy Tappers
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In addition to that, the amount for the People with Disabilities up to 40% to 79% permanent and partial form of disability has been increase from ₹.500/- to ₹.1000/- per month. Government announced ₹.1500/ pension per month for the people who have 80% and above disability. This new pension scheme benefit will be implemented to people benefits from next years, however, the pension is in exists from 2nd October, 2014 onwards.

Also, the rightful People can easily apply for this pension scheme on this website without any cost. Also using the Pension ID or Aadhaar Card Number one can also check the status of their application whether it is approved or not.

The recently announced changes in the existing NTR Bharosa New Pension scheme would be beneficial for all poor people who are eligible to avail the financial aid from the Andhra Pradesh state government.

2.10 PradhanMantri Gram Sadak Yojana (PMGSY)

Launched in December 2000 as a 100 per cent CSS, PMGSY aims to provide all-weather connectivity to all the eligible unconnected rural habitations. Bharat Nirman, envisages connectivity by 2009 to all the habitations with a population of 1000 or more in the plains, and of 500 or more in the hilly, desert and tribal areas. The systematic upgradation of the existing rural road network also is an integral component of the scheme, funded mainly from the accruals of diesel cess in the Central Road Fund, with support of the multilateral funding agencies and the domestic financial institutions. Up to December 2005, with an expenditure of Rs.12,049 crore, a total length of 82,718 km. of road works had been completed.

2.11 Indira AwaasYojana (IAY)

IAY aims to provide dwelling units, free of cost, to the Scheduled Castes (SCs), Scheduled Tribes (STs), and freed bonded labourers, and also the non-SC/ST BPL families in rural areas. It is funded on a cost-sharing basis in the rates of 75:25 between the Centre and the States. Under IAY, the ceiling on construction assistance is Rs.25,000/- per unit in the plains and Rs.27,500/- for hilly/difficult areas; and Rs. 12,500/- on upgradation of unserviceable kutch house to pucca/semi pucca house for all areas. Up to January 30, 2006, about 138 lakh houses had been constructed/upgraded with an expenditure of Rs.25,208 crore.

2.12 Swarnjayanti Gram SwarozgarYojana (SGSY)

SGSY, launched in April, 1999 after restructuring the Integrated Rural Development Programme and allied schemes, is the only self-employment programme for the rural poor. The objective is to bring the self-employed above the poverty line by providing them income-generating assets through bank credit and Government subsidy. Up to November 2005, the Centre and States, sharing the costs on 75:25 basis, had allocated Rs.8,067 crore, of which Rs. 6,980 crore had been utilized to assist 62.75 lakh self-employed.

2.13 SampoornaGrameenRozgarYojana (SGRY)

SGRY, launched on September 25, 2001 to provide additional wage employment in the rural areas, has a cash and food grains component, and the Centre bears 75 per cent and 100 per cent of the cost of the two with the balance borne by the

States/UTs. In 2004-05, 82.23 crore persondays were generated with the Centre releasing Rs. 4,496 crore as cash component and about 50 lakh tonnes of foodgrains to the States/UTs. Besides, under the special component of the SGRY, with the States/UTs meeting the cash components, Centre released 26 lakh tonnes of foodgrains to the 13 calamity affected States. In 2005-06 up to November, 2005, the number of persondays generated under SGRY was 48.75 crore, while the Centre's contributions in terms of the cash and foodgrains components up to January, 2006 were Rs. 4651 crore and 35 lakh tonnes, respectively. Under the special component, about 11.65 lakh tonnes of foodgrains have been released to the 11 calamity-hit States in the current year

2.14 National Food for Work Programme (NFFWP)

The NFFWP was launched as a CSS in November 2004 in the 150 most backward districts to generate additional supplementary wage employment with food security. States receive food grains under NFFWP free of cost. The focus of the programme is on works relating to water conservation, drought proofing (including afforestation /tree plantation), land development, flood-control/protection (including drainage in waterlogged areas), and rural connectivity in terms of all-weather roads. In 2004-05, allocation of Rs 2,020 crore and 20 lakh tonnes of food grains generated 7.85 crore person days of employment. In 2005-06, of the allocation of Rs 4,500 crore and 15 lakh tonnes of food grains (Revised), Rs.2,219 crore and 11.58 lakh metric tonnes of food grains had been released up to January 27, 2006. About 17.03 lakh persondays were generated up to December 2005.

2.15 DPAP, DDP and IWDP

Drought Prone Areas Programme (DPAP) was launched in 1973-74 to tackle the special problems faced by those areas constantly affected by severe drought conditions. Desert Development Programme (DDP) was launched in 1977-78 to mitigate the adverse effects of desertification. Integrated Wastelands Development

Programme (IWDP) has been under implementation since 1989-90 for the development of wastelands/ degraded lands. The basis of implementation has been shifted from sectoral to watershed basis from April 1995. For 2005-06, Rs.353 crore, Rs.268 crore and Rs.485 crore have been allocated for DPAP, DDP and IWDP, respectively. So far in 2005-06 up to October, 2005, 3000 new projects covering 15 lakh ha., 2000 new projects covering 10 lakh ha. and 340 new projects covering 16 lakh ha. have been sanctioned under DPAP, DDP and IWDP, respectively.

2.16 SwarnaJayantiShahariRozgarYojana (SJSRY)

In December 1997, the Urban Self-Employment Programme (USEP) and the Urban Wage Employment Programme (UWEP), which are the two special components of the SJSRY, substituted for various programmes operated earlier for urban poverty alleviation. The SJSRY is funded on a 75:25 basis between the Centre and the States. In 2003-04, the central allocation of Rs. 94.50 crore plus Rs. 10.50 crore for North-Eastern Region including Sikkim was fully utilized. Even 2004-05 saw the release of the entire budgetary allocation of Rs. 122.00 crore. In 2005-06, out of an allocation of Rs. 160.00 crore, Rs. 84.52 crore had been utilized until November 30, 2005.

2.17 ValmikiAmbedkarAwasYojana (VAMBAY)

VAMBAY, launched in December 2001, facilitates the construction and up-gradation of dwelling units for the slum dwellers, and provides a healthy and enabling urban environment through community toilets under Nirmal Bharat Abhiyan, a component of the Scheme. The Central Government provides a subsidy of 50 per cent, with the balance provided by the State Government. Since its inception and up-to December, 31 2005, Rs. 866.16 crore had been released as Central subsidy for the construction/up gradation of 4,11,478 dwelling units and 64,247 toilet seats under the Scheme. For 2005-06, out of the tentative Central allocation of Rs. 249 crore, up to December 31, 2005, an amount of Rs.96.4 crore had been released covering 60,335 dwelling units and 381 toilet seats.

2.18 Development of Women and Children in Rural Areas (DWCRA)

In addition to these national-level programmes (past and present) undertaken by the federal Government, several NGOs and voluntary associations have initiated micro-level training with or without outside assistance. These programmes, using the methods of non-formal education, have proved to be very popular, especially amongst women and children who either dropped out of school or never attended in the first place. The programmes have emphasized the development of income-earning capacities and self-sufficiency on the part of their beneficiaries.

2.19 DIGITAL INDIA

Digital India is a campaign launched by the Government of India on 1st of July, 2015 in order to transform India into a complete digital country. It is an initiative planned to digitally empower Indian society by integrating the government departments and leading companies (national or international level). The main purpose of digitizing this country is to

make available all the government services at easy reach to the citizens of India. There are three key vision areas of this programme which are:

Digital infrastructure all through the country is like a utility to the Indian people as it will make available high speed internet delivering all the government services with ease and fast. It will provide lifelong, unique, online and authenticable digital identity to the citizens. It will make easy access to any online services like handling bank account, financial management, safe and secure cyber-space, education, distance learning, etc.

High demand of good governance and online services will make available all the services in real time through digitization. Digitally transformed services will also promote people for doing online business by making financial transactions easy, electronic and cashless.

Digital empowerment of Indian people will really make possible of digital literacy through universally accessible digital resources. It will enable people to submit required documents or certificates online and not physically in the schools, colleges, offices or any organization.

Digital India programme has been implemented by the government of India to ensure following aims of this initiative:

- To ensure the broadband highways.
- To ensure the universal access to mobile phones.
- To facilitate people with high speed internet.
- To bring e-Governance by reforming government through digitization.
- To bring e-Kranti through electronic delivery of services.
- To make available online information for all.
- To ensure more IT jobs.

Startup India and Standup India

Startup India campaign is an effective action plan which has intent to promote bank financing for start-up ventures to increase entrepreneurship and encourage start-ups with jobs creation. The campaign was first declared by Prime Minister Narendra Modi in his 15 August, address from the Red Fort. It is dedicated on to restrict role of States in policy domain and to get rid of "license raj" and interruptions like in land permissions, foreign investment proposal, environmental clearances. It was organized by Department of Industrial Policy and Promotion (DIPP). Narendra Modi in his speech recognized that Indians have ideas and capability, all the need is a little push.

"Start Up India" is a revolutionary scheme that has been started to help the people who wish to start their own business. These people have ideas and capability, so the government

will give them support to make sure they can implement their ideas and grow. Success of this scheme will eventually make India, a better economy and a strong nation.

A start-up is an entity that is headquartered in India which was opened less than five years ago and have an annual turnover less than ₹25 crore (US\$3.7 million). The government has already launched PMMY, the MUDRA Bank, a new institution set up for development and refinancing activities relating to micro units with a refinance Fund of ₹200 billion (US\$3.0 billion).

2.20 Skill India

Skill India is a campaign launched by Prime Minister Narendra Modi on 15 July 2015 which aim to train over 40 crore (400 million) people in India in different skills by 2022. It includes various initiatives of the government like "National Skill Development Mission", "National Policy for Skill Development and Entrepreneurship, 2015", "PradhanMantri Kaushal Vikas Yojana (PMKVY)" and the "Skill Loan scheme".

To rapidly scale up skill development efforts in India, by creating an end-to-end, outcome-focused implementation framework, which aligns demands of the employers for a well-trained skilled workforce with aspirations of Indian citizens for sustainable livelihoods.

NATIONAL SKILL DEVELOPMENT MISSION

1. Introduction

- a) Skills and knowledge are the driving forces of economic growth and social development for any country.
- b) India currently faces a severe shortage of well-trained, skilled workers. It is estimated that only 2.3 % of the workforce in India has undergone formal skill training as compared to 68% in the UK, 75% in Germany, 52% in USA, 80% in Japan and 96% in South Korea. Large sections of the educated workforce have little or no job skills, making them largely unemployable. Therefore, India must focus on scaling up skill training efforts to meet the demands of employers and drive economic growth.
- c) India's annual skilling capacity was estimated at approximately 7 million during the period 2013-2014. Apart from meeting its own demand, India has the potential to provide a skilled workforce to fill the expected shortfall in the ageing developed world.
- d) India is one of the youngest nations in the world, with more than 54% of the total population below 25 years of age and over 62% of the population in the working age group (15-59 years). The country's population pyramid is expected to bulge across the 15-59 age group over the next decade. This demographic advantage is predicted to

last only until 2040. India therefore has a very narrow time frame to harness its demographic dividend and to overcome its skill shortages.

- e) The enormity of India's skilling challenge is further aggravated by the fact that skill training efforts cut across multiple sectors and require the involvement of diverse stakeholders such as: multiple government departments at the centre and state levels, private training providers, educational and training institutions, employers, industry associations, assessment and certification bodies and trainees. All these stakeholders need to align their work together in order to achieve the target of 'Skill India'.
- f) The Ministry of Skill Development and Entrepreneurship (earlier Department of Skill Development and Entrepreneurship, first created in July 2014) was set up in November 2014 to drive the 'Skill India' agenda in a 'Mission Mode' in order to converge existing skill training initiatives and combine scale and quality of skilling efforts, with speed.
- g) The Ministry, therefore, proposes to launch the NATIONAL SKILL DEVELOPMENT MISSION (NMSD - known henceforth as, the Mission), which will provide the overall institutional framework to rapidly implement and scale up skill development efforts across India.
- h) The vision, objectives and design of the Mission, draw on the lessons learnt from the implementation of skill development efforts over the past decade. It seeks to provide the institutional capacity to train a minimum of 300 million skilled people by the year 2022.
- i) This Framework for Implementation will provide strategic direction to State governments and establish a clear line of action to enable India to achieve its skilling targets.
- j) This document goes on to outline the overall vision and objectives of the Mission. It then articulates the Mission's institutional structure (at the national, state and district levels), outlines its strategy (by focusing on the launch of seven core sub-missions) and provides a brief on the financial model.

3.1 MSME (Micro, Small and Medium Enterprises):

Introduction

Micro, small and medium enterprises (MSMEs) in India and abroad have demonstrated considerable strength and resilience in maintaining a consistent rate of growth and employment generation during the global recession and economic slowdown. Indian economy during the recent years has shown an appreciable growth performance by

contributing to creation of livelihood opportunities to millions of people, in enhancing the export potential and in increasing the overall economic growth of the country. Prompt and appropriate fiscal stimulus, effective monetary policy and huge capital inflows were greatly instrumental in the bounce back situation of the economy. As a catalyst for socio-economic transformation of the country, the MSME sector is extremely crucial in addressing the national objectives of bridging the rural-urban divide, reducing poverty and generating employment to the teeming millions. It is therefore, essential that India adopts a suitable policy framework that provides the required impetus to seize the opportunities and create an enabling business environment in order to keep the momentum of growth and holistic development. It is equally important that the MSME sector must address the infrastructural deficiencies and is well empowered to meet the emerging challenges for its sustainable growth and survival in a globally competitive order.

Definition

Micro, Small and Medium Enterprises are generally defined in terms of the investment in the plant, machinery and/or equipment, the number of people employed and annual turnover. In India the MSMEs are defined just according to the amount of investment ceiling for Plant, Machinery or Equipment:-

Enterprises	Micro	Small	Medium	Remarks
Manufacturing Sector	Up to Rs.25 lakh	Above Rs.25 lakh- up to Rs.5 crore	Above Rs.5 crore up to Rs.10 crore	Investment in plant & machinery
Service Sector	Up to Rs.10 lakh	Above Rs.10 lakhs up to Rs.2 crore	Above Rs.2 crore- up to Rs.5 crore	Investment in equipment

The employment criterion was dropped because the employment trends keep changing seasonally; hence it is difficult to base the definition on them. Also, classification according to number of people employed gives owners the incentive to limit employment to remain within Small and Medium Enterprises. Another reason for dropping this criterion is the possible discrimination between labour intensive and techno sophistication (Dr. P. Uma, 2013). But the Indian definition does not take into account annual turnover or variable costs too and bases the definition solely on fixed costs. This implies that a micro enterprise that initially invested 20 lakh but had a turnover of 10 crore and increased its number of employees by 50% will remain a micro enterprise if it chooses not to reinvest in the plant and machinery. This acts a drawback of the Indian definition of MSMEs. Many researchers also

argue that the investment ceilings are too low as compared to other countries. ‘The cap on plant and machinery for the purpose of classifying the units as MSMEs does not encourage Indian MSMEs to move up the value chain. With such low level of investment ceiling, Indian MSMEs are either expanding laterally or engaging themselves in low-tech/low-value products. Since the manufacturing operations are capital intensive, investment ceiling for treatment of medium enterprises may be raised at least in the capital intensive sectors, benchmarking with such ceiling on investment in other countries’ (EXIM Bank, Strategic Development of MSMEs, 2012).

The enactment of Micro, Small & Medium Enterprises Development (MSMED) Act, in 2006 by the Government of India (GOI) gave a legal basis and framework to the micro, small and medium enterprises by defining and classifying these enterprisers on a uniform basis. This classification covers industries both under manufacturing and service sector and the above limits are excluding the cost of land, building and other specified items.

The growth and development of MSME sector in our country has been consistent and remarkable over the preceding decades. Statistics show that the number of such enterprises has increased from about 1.1 crore in 2001-02 to 4.1 crore units in 2009-10 and again to 4.48 crore enterprises in 2014-15. The MSMEs produce more than 7,500 products and also contribute to about 35% of the India’s exports. MSMEs contribute 8% of the country’s GDP, 45% of the manufactured output and 40% of exports (Prime Minister’s Task Force on MSME, 2010). The Government of India has introduced several major policy initiatives for support and promotion of micro, small & medium enterprises in the country. These include; establishment of Small Industries Development Bank of India (SIDBI) in 1990 for promotion and financing of MSME sector, Credit Guarantee Fund Trust of Micro and Small Enterprises (CGTMSE) was in 2000 to offer credit facilities to eligible borrowers and the Prime Minister’s Employment Generation Programme (PMEGP) in 2008 to generate employment opportunities in rural and urban areas through new self-employment ventures / projects / micro enterprises.

Micro, Small and Medium Enterprises constitute the backbone of an economy in maintaining an appreciable growth rate and in generating employment opportunities. This sector has been regarded as engine of economic growth and social development in many developed and developing countries. Contribution of MSMEs to the Indian economy in terms of employment generation, containing regional disparities, fostering equitable economic growth and enhancing export potential of the country has been quite phenomenal. Despite some infrastructural deficiencies and challenges like flow of institutional credit and

inadequate market linkages, this sector has registered remarkable success with regard to increase in number, quantum of investment, scale of production and overall contribution to national GDP.

3.2 Rural Industries

Rural industries play an important role in the economic development of our country. They have constituted a major element in the Indian economy since times immemorial. The India rural industries flourished to a great extent till the advent of British rule in India. They have severe competition from cheap machine made product of British industries. As a result our village industries and handicrafts slipped into a great depression. After attaining independence the government of India had given utmost importance to the survival of the village industries, as they are the chief means of livelihood for large number of people rural areas.

Definition: Industry that is established in a revenue village constituting below 20000 populations and the capital of which is not more than Rs. 50000 is called village industry.

Advantages of Rural Industries: Rural industries have many advantages which are explained below.

- 1. Employment Generation:** As village and small scale industries being labour-intensive, more employment could be provided through their development. They can solve the problems of seasonal unemployment and disguised unemployment in agriculture sector.
- 2. Capital formation:** In India capita is very scarce. The optimum use of available capital resources in terms of employment and productivity must, therefore, become one of the main goals of our economic planning cottage industries, which are established with limited capital and returns are quick helps in formation of capital.
- 3. Reducing Inequalities in Income:** Village and small scale industries raise then income of the rural people by providing employment opportunities to them. They create wealth in rural areas by producing goods and services and thereby reducing the inequalities in wealth and income of the people.
- 4. Reducing regional Disparities:** Cottage and village industries play an important role in reducing the regional disparities in the county. They spread all over the country and operating using the local materials and men. On the other hand, large scale industries tend to concentrate in some specified areas, which lead to concentration of economic power in some regions.

5. Promotion of Exports: As there is very much demand in foreign countries for the products of our village industries particularly for handicrafts, they can be exported and valuable foreign exchange can be earned.

6. Other benefits: Rural industrialization leads to the development of rural areas their by lessening the disproportionate growth in large cities, reducing the growth of slums, social tensions, exploitation and atmospheric pollution. Rural industries will strive to build up village republics and human resourced. Rural industrialization provides ample scope for the promotion of artistic achievement and creativity that has been suppressed in rural areas.

3.3 MUDRA LOAN SCHEME

Brief background for introduction of MUDRA Loan Scheme by Govt. of India

As per NSSO survey (2013), there are around 5.77 crore small/micro units in the country, engaging around 12 crore people, mostly individual proprietorship/Own Account Enterprises. Over 60% of units are owned by persons belonging to Scheduled Caste, Scheduled Tribe or Other Backward Classes. Most of these units are outside the formal banking system, and hence are forced to borrow from informal sources or use their limited owned funds. MUDRA Loan Scheme has been proposed to bridge this gap. MUDRA Loan Scheme will aim to increase the confidence of the aspiring young person to become first generation entrepreneurs as also of existing small businesses to expand their activities.

Brief details of the Product

MUDRA loans are extended by banks, NBFCs, MFIs and other eligible financial intermediaries as notified by MUDRA Ltd. The Pradhan Mantri MUDRA Yojana (PMMY) announced by the Hon'ble Prime Minister on 8th April 2015, envisages providing MUDRA loan, up to ` 10 lakh, to income generating micro enterprises engaged in manufacturing, trading and services sectors. The overdraft amount of ` 5000 sanctioned under PMJDY has been also classified as MUDRA loans under Prime Minister MUDRA Yojana (PMMY). The MUDRA loans are extended under following three categories :

- ❖ Loans upto ` 50,000/- (Shishu)
- ❖ Loans from ` 50,001 to ` 5 lakh (Kishore)
- ❖ Loans from ` 5,00,001/- to ` 10 lakh (Tarun)

More focus would be given to Shishu.

Accordingly, all advances granted on or after 8th April 2015 falling under the above category are classified as MUDRA loans under the PMMY. The application forms for such loans shall also carry the name “Pradhan Mantri MUDRA Yojana”.

Eligible borrowers: Individuals; Proprietary concern; Partnership Firm; Private Ltd Company; Public Company.

Any other legal forms. The applicant should not be defaulter to any bank or financial institution and should have a satisfactory credit track record. The individual borrowers may be required to possess the necessary skills/experience/ knowledge to undertake the proposed activity. The need for educational qualification, if any, need to be assessed based on the nature of the proposed activity, and its requirement.

Purpose of Assistance/Nature of assistance.

Need based term loan/OD limit/composite loan to eligible borrowers for acquiring capital assets and/or working capital/marketing related requirements. The MUDRA loans are provided for income generating small business activity in manufacturing, processing, service sector or trading. The Project cost is decided based on business plan and the investment proposed. MUDRA loan is not for consumption/personal needs. For the purpose of working capital limit, MUDRA has launched a new product called “MUDRA Card”, which is a Debit card issued on RuPay platform, and provides hassle free credit in a flexible manner.

Amount of assistance

Upto to 10 lakh in three categories viz. Shishu, Kishore and Tarun.

Margin/Promoters Contribution

Margin/Promoters Contribution is as per the policy framework of the bank, based on overall guidelines of RBI in this regard. Banks may not insist for margin for Shishu loans.

Interest rate

Interest rates are to be charged as per the policy decision of the bank. However, the interest rate charged to ultimate borrowers shall be reasonable. Scheduled Commercial Banks, RRBs and Cooperative Banks wishing to avail of refinance from MUDRA will have to peg their interest rates, as advised by MUDRA Ltd., from time to time.

Processing charges.

Banks may consider charging of upfront fee as per their internal guidelines. The upfront fee/processing charges for Shishu loans are waived by most banks.

Security

A. First charge on all assets created out of the loan extended to the borrower and the assets which are directly associated with the business/project for which credit has been extended.

B. **DPN** (wherever applicable).

C. **CGTMSE** (wherever felt desirable)/MUDRA Guarantee cover (as and when introduced).

In terms of RBI guidelines issued vide Master Circular on lending to MSME Sector (para 4.2)

dated July 01, 2014, in respect of loans upto ` 10 lakh, banks are mandated not to accept collateral security in the case of loans upto ` 10 lakh extended to units in the Micro Small Enterprises (MSE) Sector. Banks are required to encourage their branch level functionaries to avail of the Credit Guarantee Scheme cover, wherever felt desirable.

Tenor of Assistance

Based on the economic life of the assets created and also the cash flow generated. However, MUDRA's refinance assistance will be for a maximum tenor of 36 months which will also be aligned to terms of allotment of MUDRA funds by RBI from time to time.

Repayment

Term Loan: - To be repaid in suitable instalments with suitable moratorium period as per cash flow of the business.

OD & CC Limit: Repayable on demand. Renewal and Annual Review as per internal guidelines of the Bank. 12. Availability of the loan Mudra loan under PMMY is available at all bank branches across the country. Mudra loan is also issued by NBFCs / MFIs who are engaged in financing for micro enterprises in small business activities.

3.4 NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD)

Reserve Bank of India (RBI) combined diverse functions and duties including rural credit. RBI could not devote sufficient attention to the details of complex credit problems of integrated rural development in the midst of its multifarious and growing responsibilities in various other fields. This was the problem of RBI until 1981. In order to rectify this problem, National Bank for Agriculture and Rural Development (NABARD) was established in July 1982 on basis of the recommendations of the Sivaraman Committee (1978). Since then, NABARD has taken over and decentralized the RBI's functions in the sphere of rural credit for the promotion of agriculture, small scale industries, Cottage and village industries, handicrafts and other rural crafts and allied economic activities in rural areas.

The NABARD, the apex bank has been envisaged as an organizational device to provide undivided attention, forceful direction and a pointed focus to the credit problems arising out of an integrated approach to rural development. On its establishment, NABARD has taken over from the RBI its refinancing functions in relation to State Co-operative Banks and Regional Rural Banks. The Bank is now the Co-ordinating agency in relation to the Central Government, planning Commission, State governments and institutions at all India and State levels engaged in giving effect to the various policies and programmes relating to rural credit.

As a development bank for the rural sector, NABARD will have special responsibility to ensure that the training facilities for the bank staff engaged in rural lending are adequate. To the extent that the training schemes are sponsored and financed by the Agricultural Refinance and Development Corporation (ARDC), these will automatically stand transferred to NABARD. This is a field in which the RBI should continue to take active interest and take the necessary measures to strengthen the efforts of NABARD at improving and expanding the training facilities for project and programme lending.

The NABARD was established on 12th July, 1982 as an outcome of amalgamation of past of Agricultural Credit Department of the Reserve Bank and whole of Agricultural Refinance and Development Corporation. The NABARD has a share capital of Rs. 100 crores to start with and the amount is to be raised to Rs 500 crores. The NABARD is empowered to borrow from the Government. It can also borrow foreign currency.

Functions of NABARD

The functions performed by NABARD can be divided into three groups.

- a. Distribution of credit
- b. Development functions; and
- c. Regulatory functions.

a. Distribution of credit

1. It provides short term facilities to state Co-operative banks, Regional Rural Banks and other financial institutions approved by the Reserve Bank of India.
2. It provides long term facilities for investment in – minor irrigation, land development, soil conservation, dairy development, poultry farming, pig and sheep rearing, farm mechanisation, afforestation, fish farming, storage and market yard, agricultural operations through aeroplane, biogas and other alternative sources of energy, silk production, bee-keeping, cattle driven carts, compost equipment, pump set etc
3. Production and marketing of handicraft goods produced by small industries and village and cottage industries, craftsmen and artisans. These short term loans are provided for a period ranging up to 15 months.

b. Developmental Functions

1. Co-ordination of rural credit institutions;
2. Providing facilities for research in agricultural and rural development activities out of its research and development fund.
3. Developing specialisation for solving the problems relating to agriculture and rural development efforts.

c. Regulatory Functions

1. It undertakes inspection of regional rural banks and of Cooperative banks except the primary agricultural credit societies, apex co-operative marketing federations, state handloom weaving societies etc.,
2. Applications for opening of a branch by the regional rural bank as Co-operative bank other than the primary agricultural credit societies, are to be submitted to the Reserve Bank of India through the NABARD; and
3. The NABARD is empowered to obtain any information or statement from the Co-operative banks and the regional rural banks that it may deem necessary.

Objectives of NABARD

The NABARD is an apex development bank which provides help for agricultural and rural development. It has been established with the following objectives:

1. To give undivided attention and purposeful direction to integrated rural development;
2. To act as a centre piece for the entire rural credit system at the national level;
3. To act as a provider of supplemental funding to rural credit institutions;
4. To arrange for investment Credit to small industries, village and cottage industries, handicrafts and other rural Crafts, artisans and farmers.
5. To improve the credit distribution system by institution building, rehabilitation of credit institutions and training of bank personnel;
6. To provide refinance facilities to State Land Development Banks (SLDBs), State Co-operative Banks, (SCBs), Regional Rural Banks (RRBs) and Commercial Banks (CBs) for development purposes in rural areas;
7. To Co-ordinate the working of different agencies engaged in development work in rural areas at the regional level, and to have liaison with Government of India, RBI, State Government and other policy making institutions at the national level; and
8. To inspect, monitor and evaluate projects getting refinance from the NABARD

3.5 REGIONAL RURAL BANKS

The Regional Rural Banks (RRBs) came into being under the 20-Point Economic Programme launched in 1975. Earlier, the Banking Commission, appointed by the Government to study the structure of banking development in India, mooted the idea of setting up RRBs in its report in 1972. The Government reviewed the recommendations of the Banking Commission, and appointed the Narasimham Study Group on July 1, 1975. It submitted the report in just 30 days and favoured the setting up of RRBs.

The RRBs were established with a view a developing the rural economy by providing for the purpose of development of agriculture, trade, commerce, industry and other productive activities in the rural areas, credit and other facilities, particularly to the small and marginal farmers, agricultural labourers, artisans, small entrepreneurs and for matters connected therewith and incidental thereto.

The RRBs are somewhere in between the public sector banks and the co-operative structure. They combine in themselves the characteristics of both these institutions and are expected to play a supporting role in districts where the credit gap is very large and the cooperative structure is weak. In setting up RRBs, certain norms have to be observed. These are:

- ❖ Areas should be relatively backward or tribal;
- ❖ RRBs are to be set-up in areas where the co-operative banks are not active;
- ❖ There should not be any commercial bank in the area; and
- ❖ The area should have a real potentiality for development break through with the flow of credit.

While recommending the setting up of RRBs, the Working Group on Rural Banks appointed by the Government in 1975 opined that each RRB combines in itself the “local feel and familiarity with rural problems which the co-operative possessed and the degree of business organization, ability to mobilize deposits, access to central money markets and a modernized outlook which the commercial banks have”.

Functions of RRBs

A rural bank was described as “ a primary banking institution set-up to serve a compact group of villages generally working as a cooperative bank, or as a subsidiary of a commercial bank”, and its object would be “to provide at one place the special type of credit and banking facilities and related services needed by agriculturists and other rural producers”.

The functions of RRBs are:

1. To mobilize local savings;
2. To provide short-term and medium-term credit for agricultural and other purposes on its own and long-term credit as agents of the Land Development Banks;
3. To implement programmes of supervised credit tailored to the needs of individual farmers;
4. To provide various ancillary banking services to local people;
5. To set-up and medium godowns.

3.6 THE LEAD BANK SCHEME

The institutional credit available should be not only adequate, but it should reach all regions, sectors and sections in due proportions. In other words, the services of the banking sector should be shared by all. Special efforts are needed to achieve this objective.

In 1967, the Gadgil Study Group suggested the adoption of area approach to banking development under which commercial banks would be assigned particular districts where they were to act as pacesetters, providing integrated banking facilities. In August 1969, the Reserve Bank of India (RBI) had appointed a Committee of Bankers under the chairmanship of F.K.F. Nariman which made specific recommendation for setting up lead banks, for each of the underdeveloped districts. Accordingly, the lead bank scheme was introduced in December, 1969.

The RBI allotted various districts in the country, other than metropolitan centres and Union Territories Delhi, Chandigarh and Goa, Daman and Diu, to the public sector banks and three private sector banks. The lead banks would take the lead in surveying the potential for banking development, extending credit facilities after locating viable and potentially viable propositions and mobilising deposits out of rising levels of income.

Scope and Objectives

Over the years, the lead bank scheme has undergone a distinctive transformation and attained qualitative dimensions. The lead banks were expected to:

- i. Carry out impressionistic surveys of the districts concerned;
- ii. Identify growth centres for opening branches;
- iii. Locate credit gaps;
- iv. Formulate suitable schemes for growth; and
- v. Prepare district credit plans to meet the credit requirements of the district in a manner in collaboration with other financial institutions at the district level.

The major objectives of the lead bank scheme are:

1. To specify suitable areas for branch expansion;
2. To formulate a phased programme for expanding the branch offices with the object of providing banking facilities to the entire area covered.
3. To earmark the potential area for promoting agriculture and small scale industries schemes inducing local entrepreneurs;
4. To assess the major constraints on the development of the district and to induce the appropriate agencies for taking up the follow-up remedial action; and

5. To experiment with financial schemes which can help in mobilizing deposits and promoting investment among the local people.

4.1 Panchayat Raj Syatem

The first organized effort to solve the problem of rural India was made through the Community Development Programme in the year 1952 and National Extension Service in 1953. On the completion of first five years of the CDP, the planning Commission appointed a high-ranking study committee headed by Balwant Rai Mehta, Chief Minister of Gujarat. This team pointed out both positive results and inadequacies in the implementation of the programme. This committee recommended Panchayati Raj.

The study team made a significant recommendation with implementation of a programme. According to it there should be effective administrative decentralization for the implementation of the programme. The decentralized administration was to be placed under the control of selected and integrated local self-government system ordinarily of 3 levels bodies from village level to block level and then to district level. This democratic decentralized system was named as “Panchayat Raj”. The state of Madras tried this as a pilot project as early as 1957. In 1958, Andhra Pradesh state had twenty such pilot projects. Based on the success in these it was the state of Rajasthan which became the pioneer to bring the whole state under democratic decentralization on October 2, 1959. It was implemented in Gujarat on April 1, 1963.

4.2 Functions of Panchayat Raj:

The Balwantrai Mehta Committee envisaged that the Panchayati Raj system should comprise Gram Panchayat at the village level, Panchayat Samithi at the block level and Zilla Parishad at the district level. This system was started in 1956 in Andhra Pradesh. The functions of gram panchayats could be broadly divided into town categories viz.

1. Obligatory functions
2. Discriminatory functions.

1. Obligatory Functions: the important obligatory functions include

1. Maintenance and improvement of public roads, drains and street lights.
2. Maintenance and improvement of Maintenance and improvement of public latrines and burial grounds.
3. Registration of births and deaths.
4. Prevention of epidemic diseases.
5. Maintenance of health and sanitation.
6. Supply of drinking water, management and care of common grazing lands.

7. Organization of melas and fairs.

2. Discriminatory Functions: the discriminatory functions includes

1. Plantation of trees.
2. Improving the breeds of cattle.
3. Development of cooperation, land reforms, veterinary and medical facilities.
4. Maintaining libraries and reading rooms.
5. Constructions of bridges, culverts and rest houses and promotion of rural industries.

Some explanations:

- 1. Panch:** An assembly of elders who settled the disputes within the limit of caste/customs.
- 2. Panchayat:** An assembly of elected persons of the village. Village bodies were the lines of contact with higher authorities on matters affecting to the village.
- 3. Democracy:** The word Democracy derived from Greek language Democ means the people and Cracy means rule of. It is leading of the people by the people, for the people.
- 4. Decentralization:** Devolution of central authority among local units close to the area served.
- 5. Democratic decentralization:** means where authority develops by the process on people's institution and act as local self-government.

4.3 Specific Objectives:

1. Assistance to the economically weaker sections of the community.
2. Cohesion and cooperative self-help in the community.
3. Development of cooperative institutions.
4. Development of local resources including the utilization of manpower.
5. Production in agriculture as the highest priority in planning.
6. Progressive dispersal of authority and initiative both vertically and horizontally with special emphasis on the role of voluntary organizations.
7. Promotion of rural industries.
8. Understanding and harmony between the peoples representatives and people servants through comprehensive training/education and a clear dividing line of duties and responsibilities.

Philosophy of Panchayat Raj

The philosophy of Panchayat Raj is deeply steeped in tradition and culture of rural India and is by no means a new concept. Panchayati Raj Provided a system of self-governance at the village level. Panchayati Raj Institutions is the grass-roots units of self-government have been declared as the vehicles of socio-economic transformation in rural

India. Effective and meaningful functioning of these bodies would depend on active involvement, contribution and participation of its citizens both male and female. The aim of every village being a republic and panchayats having powers has been translated into reality with the introduction of the three-tier Panchayati Raj system to enlist people's participation in rural reconstruction.

Three tiers (levels) of Panchayat Raj:

The Gram Panchayat: Gram Panchayat is the primary unit of Panchayati Raj Institutions or local self-government. In other words it can be said that the first formal democratic institution under the directive principle in the Indian constitution is the Gram Panchayat. It is a cabinet of the village elders, directly elected by the adult citizens of the village.

Gram Panchayats are constituted considering their income, population and area. There is a provision for reservation of seats for women and Scheduled Castes and Scheduled Tribes. The panchayat has tenure of five years and is directly elected. It has income through taxes to perform its functions.

The main functions of Village Panchayat are:

1. Preparation of Annual Plans for the development of the village Panchayat area.
2. Preparation of Annual Budget of Village Panchayat.
3. Mobilization of relief in natural calamities.
4. Removal of encroachments on public properties.
5. Organizing voluntary labours and contribution for community works.
6. Maintenance of essential statistics of villages.
7. Such other development works as may be entrusted.
8. Service such as promotion of education, health, agriculture, etc.
9. Representative function, where the main role is to voice and represent the opinion;
10. Regulatory and administrative functions, which consists of regulating the conduct of individuals and institutions and also collection of taxes.

Sources of income of village panchayat

1. Share in land revenue.
2. Local tax.
3. Revenue earned from the settlement of shops, fisheries, etc
4. House taxes & other taxes as specified in Panchayati Raj Act.
5. Fees for providing amenities, cess, tolls.
6. Contribution and grants.
7. Fine and penalties.

Taluka/block Panchayat: It is also known as PanchayatSamiti or Panchayat Union. This is the second tier of the administration at Taluka or Block level. It is headed by Taluka President. Block Development Officer is appointed by the Government. He functions as the leader of the Block.

The main functions of the PanchayatSamitis are planning, execution and supervision of all developmental programmes in the Block. It also supervises the works of Gram Panchayats within its Jurisdiction. It has to instill among people within its jurisdiction a spirit of self-help and initiative and work for raising the standard of living. It has to support for the implementation of development programmes. It has the welfare and development activities in the fields of agriculture, animal husbandry, health, sanitation, elementary education, cottage industries and social. It has to use the village housing project funds and loans.

Zilla Panchayat: It is also known as District Development Council or Zilla Parishad. This is the third tier of Panchayat Raj functioning at district level. It is headed by Panchayat Union Chairman. District Collector leads the work with the help of District Development Officers.

Functions:

1. It works as advisory body for blocks.
2. It approves budget and plan of blocks.
3. It allots funds to the blocks.
4. It approves budget and plan of blocks. It allots funds to the blocks.
5. Secondary education is the responsibility of this council.
6. It should advise Government in all matters relating to rural development in the district.
7. It has to review the results achieved under various items in all the blocks.

Some special features of Democratic Decentralization:

1. The sanctioning powers of most of the works and schemes are with panchayatSamitis and standing committees.
2. Most of the functions are implemented and performed by administrative control of the PanchayatSamitis. Thus, there is a single agency at Block level for all development programmes.
3. The power and functions of the District Boards are allocated among the parishads and the samitis, which are within the reach of rural people.
4. Panchayatsamitis have all the technical assistance required at the block level itself.
5. Elementary education is the sole responsibility of the panchayatsamitis.
6. Rural medical institutions in the Block are under the administrative control of the panchayatsamitis.

7. Members of the panchayatsamitis the right to inspect institutions or works in the Block with a view to ensure efficient working and execution and draw the attention of the executive to any defects.
8. The responsibility for maintenance of minor irrigation works.
9. Panchayatsamitis provide financial and technical assistance and supervision to panchayats.
10. Block plans are made based on village plans, district plans based on block plans and state are made based on district plans. This way plans are made truly based on needs of the people.
11. The panchayatsamitis are given power to levy surcharges on taxes levied by the panchayats. This will help the panchayatsamitis to build up their resources.
12. The main functions of the popular institutions are planning and execution of all schemes of rural development on the twin principles of self-help and mutual cooperation.

Panchayat Raj system gave significant progress in the fields of primary and secondary education, communication, agricultural extension, cooperation, health, etc. People could get drinking water. In some places people had protected water supply, Village streets, electric light provision, village sanitation, etc., had enough resources. Rural awakening was brought up among rural people; as a result villagers became conscious of their rights and improved their standard of living.

Short Answer Type Questions

1. Define Poverty?
2. Mention Different types of Poverty?
3. Write about Poverty Line?
4. Define Unemployment?
5. Define Rural Industry?
6. Write about RRBs?
7. Write about Lead Bank Scheme?
8. What is Panchayati Raj?

Long Answer Type Questions

1. Explain the Causes of Rural Poverty?
2. Write about National Social Assistance Programme?
3. Briefly explain different types of Unemployment?
4. Explain briefly Employment and Income generation Programmes?
5. Write about Micro Small and Medium Enterprises?
6. Explain the functions of NABARD?
7. Write about Functions of Panchayati Raj System?

Unit – IV

INFORMATION AND COMMUNICATION TOOLS

1. Computer
2. Internet Tools
3. Cash Less and Card Less Transactions
4. Social Media and Impact

1.1 Introduction: Today, almost all of us in the world make use of computers in one way or the other. It finds applications in various fields of engineering, medicine, commercial, research and others. Not only in these sophisticated areas, but also in our daily lives, computers have become indispensable. They are present everywhere, in all the devices that we use daily like cars, games, washing machines, microwaves etc.

The term Computer is derived from “compute” which means to calculate we are familiar with calculations in our day-to-day life .We apply mathematical operations like addition, subtraction, multiplication etc., and many other formulae for calculations. Simple calculations take less time, but complex calculations take much longer time. Another factor is accuracy in calculations. So man, explored with the idea to develop a machine which can perform this type of arithmetic calculations faster, and with full accuracy. This gave birth to a machine called “computer”.

What is a Computer?

You have already experienced the impact of computer in our day-to-day life. Reservation of tickets in Air Lines and Railways, payment of telephone and electricity bills, deposits and withdrawals of money from banks, Business data processing, Medical diagnosis, Weather forecasting etc., But as you will see later it does much more than that. It can be compared to a magic box, which serves different purpose to different people.

Computer: It is an electronic device which processes given data to derive the required and useful information. During the processing the computer has to perform various functions like receives data (input) processes data (process) produces output (information) stores results (storage).

1.2 Evolution of Computer:

The evolution of computer started from 16th century and resulted in the form that we see today. The present day computer, however, has also undergone rapid change during the last fifty years. This period during which the evolution of computer took place, can be divided into five distinct phases, basic of the type of switching circuits known as

Generations of Computers

First Generation: Vacuum Tubes

The first generation of computers are used vacuum tubes for circuitry and magnetic drums for memory and were often enormous, taking up entire rooms. These computers were very expensive to operate and in addition to using a great deal of electricity, the first computers generated a lot of heat, which was often the cause of malfunctions.

First generation computers relied on machine language, the lowest-level programming language understood by computers, to perform operations, and they could only solve one problem at a time. It would take operators days or even weeks to set-up a new problem. Input was based on punched cards and paper tape, and output was displayed on printouts.

Second Generation: Transistors

The world would see transistors replace vacuum tubes in the second generation of computers. The transistor was invented at Bell Labs in 1947 but did not see widespread use in computers until the late 1950s. The transistor was far superior to the vacuum tube, allowing computers to become smaller, faster, cheaper, more energy-efficient and more reliable than their first-generation predecessors. Though the transistor still generated a great deal of heat that subjected the computer to damage, it was a vast improvement over the vacuum tube. Second-generation computers still relied on punched cards for input and printouts for output.

Third Generation: Integrated Circuits

The development of the integrated circuit was the hallmark of the third generation of computers. Transistors were miniaturized and placed on silicon chips, called semiconductors, which drastically increased the speed and efficiency of computers. Instead of punched cards and printouts, users interacted with third generation computers through keyboards and monitors and interfaced with an operating system, which allowed the device to run many different applications at one time with a central program that monitored the memory. Computers for the first time became accessible to a mass audience because they were smaller and cheaper than their predecessors.

Fourth Generation: Microprocessors

The microprocessor brought the fourth generation of computers, as thousands of integrated circuits were built onto a single silicon chip. What in the first generation filled an entire room could now fit in the palm of the hand. The Intel 4004 chip, developed in 1971, located all the components of the computer from the central processing unit and memory to input/output controls—on a single chip. In 1981 IBM introduced its first computer for the home user, and in 1984 Apple introduced the Macintosh. Microprocessors also moved out of the realm of desktop computers and into many areas of life as more and more everyday products began to use microprocessors. As these small computers became more powerful, they could be linked together to form networks, which eventually led to the development of the Internet. Fourth generation computers also saw the development of GUIs, the mouse and handheld devices.

Fifth Generation: Artificial Intelligence

Fifth generation computing devices, based on artificial intelligence, are still in development, though there are some applications, such as voice recognition, that are being used today. The use of parallel processing and superconductors is helping to make artificial intelligence a reality. Quantum computation and molecular and nanotechnology will radically change the face of computers in years to come. The goal of fifth-generation computing is to develop devices that respond to natural language input and are capable of learning and self-organization.

1.3 Characteristics of Computers

1. **Speed:** Computers work at an incredible speed. A powerful computer is capable of performing about 3-4 million simple instructions per second.
2. **Accuracy:** In addition to being fast, computers are also accurate. Errors that may occur can almost always be attributed to human error (inaccurate data, poorly designed system or faulty instructions/programs written by the programmer)
3. **Diligence:** Unlike human beings, computers are highly consistent. They do not suffer from human traits of boredom and tiredness resulting in lack of concentration. Computers, therefore, are better than human beings in performing voluminous and repetitive jobs.
4. **Versatility:** Computers are versatile machines and are capable of performing any task as long as it can be broken down into a series of logical steps. The presence of computers can be seen in almost every sphere – Railway/Air reservation, Banks, Hotels, Weather forecasting and many more.
5. **Storage Capacity:** Today's computers can store large volumes of data. A piece of information once recorded (or stored) in the computer, can never be forgotten and can be retrieved almost instantaneously.
6. **Reliability:** The output generated by the computer is very reliable. But it is reliable only when the data, which is passing as input to the computer and the program, which gives instructions are correct and reliable.
7. **Automation:** once the instructions fed into computer it works automatically without any human intervention until the completion of execution of program or meets logical instructions to terminate the job.

1.4 Classification of computer:

The computers are classified into various types depends on their purpose, operation and size.

Classification of computers:

In general computers are classified into major categories based on:

- (A) According to the purpose of the computer
- (B) According to the operation of computer
- (C) According to the size of computer

(A) Based on Purpose:

1. General Purpose Computers.
2. Special Purpose Computer.

1. General Purpose Computers: These computers are theoretically used for any type of application. These computers can be used in solving a business problem and also used to solve mathematical equation with same accuracy and consistency. Most of computers now are general purpose digital computers. All the P.C's which have become household affair.

2. Special Purpose Computer: These digital computers are designed, made and used for any specific job. These are usually used for those purposes which are critical and need great accuracy and response like Satellite launching, weather forecasting etc.

(B) Based on Operation:

In this class they are categorized as analog, digital and hybrid computers

1. Analog Computers: these are almost extinct today. These are different from a digital computer because an analog computer can perform several mathematical operations simultaneously. It uses continuous variables for mathematical operations and utilizes mechanical or electrical energy.

2. Digital Computers: They use digital circuits and are designed to operate on two states, namely bits 0 and 1. They are analogous to states ON and OFF. Data on these computers is represented as a series of 0s and 1s. Digital computers are suitable for complex computation and have higher processing speeds. They are programmable. Digital computers are either general purpose computers or special purpose ones. General purpose computers, as their name suggests, are designed for specific types of data processing while special purpose computers are meant for general use.

3. Hybrid Computers: These computers are a combination of both digital and analog computers. In these computers, the digital segment performs process control by conversion of analog signals to digital ones.

(C) Based on Size:

In this category the computers are classified as follows:

1. Super Computers: The highly calculation –intensive tasks can be effectively performed by means of super computers. Quantum physics, mechanics, whether forecasting and molecular theory are best studied by means of super computers. Their ability of parallel processing and their well-designed memory hierarchy give the super computer, large transaction processing powers.

Ex: PARAM developed in India.

2. Servers: They are computers designed to provide services to client machines in a computer network. They have larger storage capacities and power full processors. Running on them are programmes that's serve client request and allocate resources like memory and time to client machines. Usually they are very large in size, as they have large processors and many hard drives. They are designed to be fail – safe and resistant to crash.

3. Mainframe Computers: Large organizations use mainframes for highly critical applications such as bulk data processing and ERP. Most of the mainframe computers have capacities to host multiple operating systems and operate as a number of virtual machines. They can substitute for several small servers.

4. Wearable Computers: A record – setting step in the evolution of computers was the creation of wearable computers. These computers can be worn on the body and are often used in the study of behaviour modelling and human health. Military and health professionals have in corporate wearable computers in to their daily routine, as a part of such studies. When the user's hands and sensory organs are engaged in other activities, wearable computers are of great help in tracking human actions. Wearable computers do not have to be turned on and off and remain in operation without user intervention.

5. Mini Computers: In terms of size and processing capacity mini computers lie in between mainframe and microcomputers. Mini computers are also called mid-range systems or work stations. The term began to be popularly used in the 1960s to refer to relatively smaller third generation computers. They took up the space that would be needed for a refrigerator or two and used transistor and core memory technologies. The 12 bits **PDP 8** mini computers of the digital equipment corporation was the first successful mini computers

6. Microcomputer: A computer with a microprocessor and its central processing units is known as a microcomputer. They do not occupy space as much as mainframes do. When supplemented with a keyboard and mouse, microcomputers can be called personal computer .A monitor, a keyboard and other similar input-output devices, computer memory in the form of RAM and a power supply unit come packaged in a microcomputer. These computers can fit on desks or tables and prove to be choice for single-user tasks.

7. Desktops: A desktop is intended to be used on a single location. The spare parts of a desktop computer are readily available at relatively lower costs. Power consumption is not as critical as that in laptops. Desktops are widely popular for daily use in the workplace and households.

8. Laptops: Similar in operation to desktops and laptop computers are miniaturized and optimized for mobile use. Laptops run on a single battery or an external adapter that charges the computer batteries. They are enabled with an inbuilt keyboard, touch pad acting as a mouse and a liquid crystal display. Their portability and capacity to operate on battery power have proven to be of great help to mobile users.

9. Notebooks: They fall in the category of laptops, but are inexpensive and relatively smaller in size. They had a smaller feature set and lesser capacities in comparison to regular laptops, at the time they came into the market. But with passing time, notebooks too began featuring almost everything that laptops had. By the end of 2008, notebooks had begun to overtake laptops in terms of market share and sales.

Tablet computer: Tablet is mobile computers that are very handy to use. They use the touch screen technology. Tablets come with an onscreen keyboard or use a stylus or a digital pen. Apple's iPod redefined the class of tablet computers.

1.5 Input-Output Devices:

An input device is a hardware or peripheral device used to send data to a computer. An input device allows users to communicate or feed instruction or data to the computer for processing, display, storage and /or transmission. Ex: keyboard, mouse, scanner, OMR, MICR etc.,

An output device is any device used to send data from a computer to another device or user. Most computer data output i.e. meant for humans is in the form of audio or video. Thus, most output device used by humans in this categories ex: monitor, speakers, projector, headphones and printers.

Input Devices:

An input device presents data to the processing unit in a machine-readable form. Although the keyboard is a common input device for a small computer, a system may also support various other input devices such as Optical Character Recognition (OCR), Magnetic Ink Character Recognition (MICR), Mark sense reader etc.,

Key Board:

The keyboard is very much like a standard typewriter keyboard with a few additional keys. The basic QWERTY layout of characters is maintained to make it easy for

the trained typist to use the system. The additional keys are included to perform certain special function such as loading a program, edition a text, etc. These are known as function keys that vary in number from system to system.

Optical Character Recognition (OCR):

Often abbreviated as OCR, optical character recognition involves reading text from paper and translating the image into a form that the computer can manipulate. An OCR system enables you to take or a magazine article and feed it directly into an electronic computer file.

Magnetic Ink Character Recognition (MICR):

An MICR can identify characters printed with a special ink that contain particles of magnetic material. This device particularly finds applications in banking industry. Since the MICR system can recognise only certain character styles, the characters have to be accurately formed.

Optical Mark Recognition (OMR):

Optical mark recognition, also called mark sense reader, is a technology where an OMR device senses the presence or absence of a mark. Such as pencil mark. OMR is widely used in tests such as aptitude tests.

Bar Code Reader:

These devices are generally available in super markets, bookshops, etc. Bar-code readers are photoelectric scanners that read the bar codes or vertical zebra striped marks, printed on product containers. Supermarkets use a bar code system called the Universal Product Code (UPC) The bar code identifies the product to the supermarkets computer which has a description and the latest price of the product. The computer automatically tells the point of sales (POS) terminal what the price is.

Digitizing Tablet:

This is input device that enables you to enter drawings and sketches into a computer. A digitizing tablet consists of an electronic tablet and a cursor or pen. A cursor (also called a puck) is similar to a mouse, except that it has a window with cross hairs for pinpoint placement, and it can have as many as 16 buttons. A pen (also called a stylus) looks like a simple ball point pen but uses an electronic head instead of ink. The tablet contains electronic field that enables it to detect movement of the cursor or pen and translate the movements into digital signals that it sends to the computer. Digitizing tables are also called digitizers, graphics tablet, touch tables or simply tables.

Scanner:

Scanner is an input device that can read text or illustrations printed on paper and translate the information into a form that the computer can use. A scanner works by digitizing an image-dividing it into a grid of boxes and representing each box with either a zero or a one, depending on whether the box is filled in. The resulting matrix of bits, called a bit map, can then be stored in a file, displayed on a screen and manipulated by programs. Optical scanners do not distinguish text from illustrations; they represent all images as bit maps. Therefore, you cannot directly edit text that has been scanned. To edit text read by an optical scanner, you need an optical character recognition (OCR) system to translate the image into ASCII characters.

Mouse:

Mouse is a device that controls the movement of the cursor or pointer on a display screen. It is a small object you can roll along a hard and flat surface. As you move the mouse, the pointer on the display screen moves in the same direction.

Mouse contains at least one button and sometimes as many as three. Which have different functions depending on what program is running?

Light Pen:

Light pen is an input device that utilizes a light-sensitive detector to select objects on display screen.

Speech input device:

Speech or voice input devices convert a person's speech into digital form. These input devices, when combined with appropriate software, form voice recognition system. These systems enable users to operate microcomputers using voice commands.

Output Devices:

Output devices receive information from the CPU and present it to the user in the desired form. Output devices include display screen, loudspeakers, printers, plotters, etc.

Display Screen:

When a program is keyed in, the screen (which is similar to a television screen) displays the characters. The user can read the program line by line and make corrections before it is stored or printed on a printer. It is also possible to bring to the screen a portion of the program stored in the external storage for editing. Screen sizes differ from system. The standard size is 24 lines by 80 characters. Most systems have provision for scrolling. This facilitates the user to move the text vertically or horizontally on the screens thus bringing to

the screen the hidden text. Thus the user can scan through the entire file either to review or to select a particular portion.

Printer:

Printer is a device that prints text or illustrations on paper and in many cases on transparencies and other media. There are many different types of printers. In terms of the technology utilized, printers are classified viz. Inkjet Printer, Laser Printer, Line Printer, and Thermal Printer etc.

Plotter:

Plotter is a device that draws pictures on paper based on commands from a computer. Plotters differ from printers in that they draw lines using a pen. As a result, they can produce continuous lines, where as printers can only simulate lines by printing a closely spaced series of dots. Multicolour plotters use different –coloured pens to draw different colours.

In general, plotters are considerably more expensive than printers. They are used in engineering applications where precision is mandatory.

Sound Cards & Speakers:

An expansion board that enables a computer to manipulate and output sounds. Sounds cards are necessary for nearly all CD-RAMs and have become commonplace on Morden personal computers. Sound cards enable the computer to output sound through speakers connected to the board, to record sound input from a microphone connected to the computer, and manipulate sound stored on a disk.

Nearly all sound cards support **MIDI**, a standard for representing music electronically. In addition, most sound cards are sound Blaster-compatible, which means that they can process commands written for a sound Blaster card, the facto standard for PC sound.

3D-Audio:

3D audio is a technique for giving more depth to traditional stereo sound. Typically, 3D sound, or 3D audio, is produced by placing a device in a room with stereo speakers. The device dynamically analyses the sound coming from the speakers and sends feedback to the sound system so that it can readjust the sound to give the impression that the speakers are further apart.

3D audio device are particularly popular for improving computer audio where the speakers tend to be small and close together. There are a number of 3D audio devices that can be attached to a computers sound card.

1.6 Hardware and Software:

What is Hardware? The term hardware refers to the physical parts of the computer. Computer hardware is versatile-but it does depend on the computer program, we use. The key to the computer's versatility is memory one can think of memory as a temporary workspace. The computer's processor uses this workspace as a scratch pad during processing. Many people confuse memory with storage. Memory is temporary. When we turn off the computer, everything in the memory is lost. Storage is usually permanent. On most computers, storage also has far greater capacity than memory

Understanding the distinction between memory and storage is essential. Some programs keep their output in memory. One must transfer this information to a storage device, such as a disk drive, if one wants to keep the information permanently. If we switch off the computer without saving this information (transferring it to storage), the information is lost.

The key to the computer's precision is the fact that it represents data digitally. Computers use binary digits using a base 2 number system rather than a decimal (or base 10) number system. A binary digit, commonly called a bit, has a value of either 0(zero) or 1(one). Eight bits are grouped together to represent a character- a letter, number or special character. This group is called a byte. Many people use the terms character and byte to mean the same thing.

People talk about bytes when they talk about the capacity of computer memories and storage device. Because one byte can store only one character, these devices must be capable of storing thousands, millions, or even billions of bytes. To describe these large capacities, the terms kilobyte, (kb) megabyte (MB), and gigabyte (GB) are used. A kilobyte equals approximately 1024bytes, a megabyte equals approximately 1024 kilobytes and gigabyte equals approximately 1024 megabytes. The actual number of bytes in a megabyte is slightly higher because computer storage amounts are actually measured in base 2 number

What is Software?

As you know computer cannot do anything without instructions from the user. In order to do any specific jobs have to give a sequence of instructions to the computer. This set of instructions is called a computer program. Software refers to the set of computer programs, procedures that describe the programs, which increase the capabilities of the hardware. Software guides the computer at every step where to start and stop during a particular job. The process of software development is called programming

You should keep in mind that software and hardware are complementary to each. Both have to work together to produce meaningful result. Another important point you should know that producing software is difficult and expensive.

Software Types:

Computer software is normally classified into two broad categories.

- *Application software

- *System software

Application software:

Application software is a set of programs to carry out operations for a specific application. For example, payroll is an application software for an organization to produce pay slips as an output. Application software is useful for word processing, billing system, accounting, producing statistical report, analysis of numerous data in research, weather forecasting etc. In later modules you will learn about MS WORD, Excel, Power Point, etc. All these are application software's.

Another example of application software is programming language. Among the programming languages COBOL (Common Business Oriented Language) is more suitable for business application where's FORTRAN (Formula Translation) is useful for scientific application. We will discuss about languages in next section.

System Software:

You know that an instruction is a set of programs that has to be fed to the computer operation of computer system as a whole. When you switch on the computer the programs written in ROM is executed which activates different units of your computer and makes it ready for you to work on it. This set of program can or more program software. Therefore system software may be defined as a set of one or more programs designed to control the operation of computer system.

System software are general programs designed for performing tasks such as controlling all operations required to move data onto and out of the computer. It communication with printers, card reader, disk, tapes etc. Monitor the use of various hardware like memory, CPU etc. Also system software is essential for the development of applications software. System software allows application packages to be run on the computer with less time and effort. Remember that it is not possible to run application software without system software.

Development of system software is a complex task and it requires extensive knowledge of computer technology. Due to its complexity it is not developed in house.

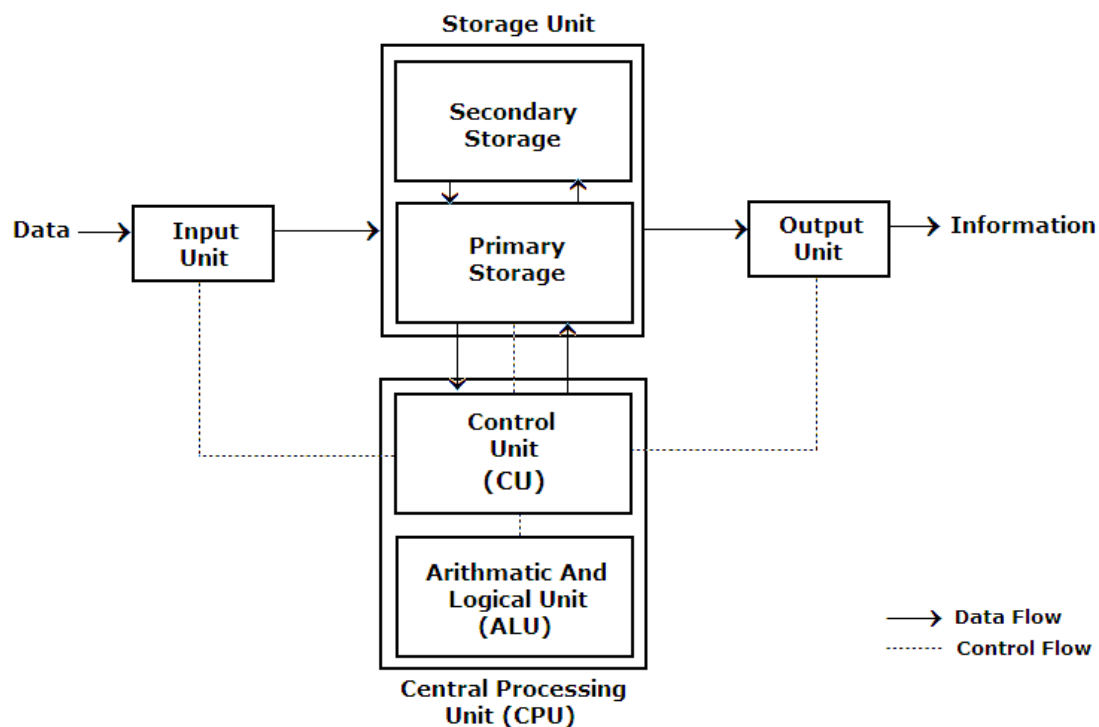
Computer manufactures build and supply this system software with the computer system. DOS, UNIX and WINDOWS are some of the widely used system software. Out of these UNIX and windows-NT are multi-user operating systems whereas DOS and WINDOWS are single- user systems.

1.7Block Diagram of Computer:

The computer mainly consists of the function input, process, output and storage. These functions were described in the manner of diagram as follows.

The Block diagram of computer consists mainly i.e.,

- Input unit
- CPU (Control unit, main memory and ALU)
- Output unit,
- Secondary Storage unit



1. Input: This is the process of entering data and programs in to the computer system. Therefore, the input unit takes data from us to the computer in an organized manner for processing through an input device such as keyboard, mouse, MICR, OCR, Etc.

2. Main memory: It is also known as internal memory. It is very fast in operation. It is used to store data has to be fed into the system before the actual processing starts. It contains a part of the operating system software, one or more execution programs being executed, the data being processed and required by the programs for execution, and processed data awaiting output.

3. Output: This is the process of producing results from the data for getting useful information. Similarly the output produced by the computer after processing must also be kept somewhere inside the computer before being given to you in human readable form through the screen or printer. Again the output is also stored inside the computer for further processing.

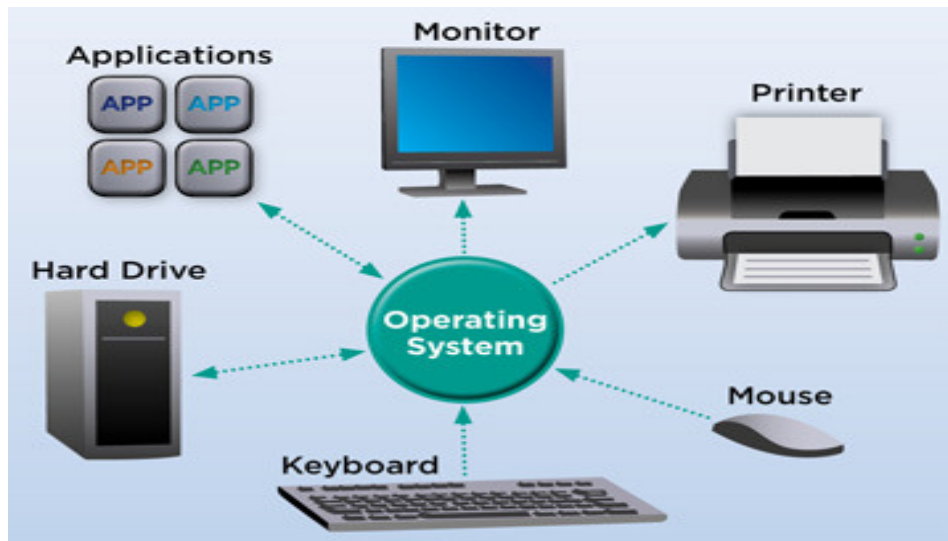
4. Control Unit (CU): The next component of computer is the control unit, which acts like the supervisor seeing that things are done in proper fashion. Control unit is responsible for co-coordinating various operations using time signal. The control unit determines the sequence in which computer programmes and instructions are executed. Things like processing of program stored in the main memory, interpretation of the instructions and issuing of signals for other units of the computer to execute them. It also acts as a switch board operator when several users access the computer simultaneously. There by it coordinates the activities of computers peripheral equipment as they perform the input and output.

5. Arithmetic logical unit (ALU): After you enter data through the input device it is stored in the primary storage. The actual processing of the data and instruction are performed by arithmetic logical unit. The major operations performed by the ALU are addition, subtraction, multiplication, division, logic and comparison. Data is transferred to ALU from storage unit when required. After processing the output is returned back to storage unit for further processing or getting stored.

6. Secondary storage: It is also known as auxiliary memory. It is closely linked with the main memory. Since main memory cannot be flooded with unwanted data at particular movement, same is stored in auxiliary memory from which desired data is fed to main memory as and when required by it. Thus secondary storage is used to hold mass of information i.e., system software, application programme, cinemas, games and data files. Obviously the capacity of secondary storage is very high compared to main memory. Auxiliary memory usually in the form of magnetic disk, magnetic tape, CDS, memory cards pen drives etc.

1.8 Operating System:

Operating system (OS) is to operate the computer. The operating system is a collection of programs that control the operation of all hardware and other resources in the computer system.



The basic functions of the Operating system are:

1. Assigning processors for performing tasks.
2. Allocating and managing memory and other storage area.
3. Command interpretation.
4. Handling job transaction.
5. Maintains internal clock.
6. Scheduling of various tasks.
7. Establishing and enforcing priorities for different jobs.
8. Co-ordinating and managing peripheral devices.
9. Input-output management.
10. Establishing data security and integrity.

2.1 INTERNET TOOLS

Introduction

The latest buzz word in computer world is 'Internet'. It has taken the entire world by surprise with its cutting edge technology to connect people and computers throughout the world. Using Internet, organizations all over the world can exchange data, people can communicate with each other in a faster and effective way, and researchers can gather

information in their respective areas of research. With the help of video conferencing over Internet, it has become possible that people can even see each other while communicating. Even one can do all his shopping sitting back at home. He does not bother to go to the crowded market place. Slowly shopkeepers are also opting for electronic commerce, which provides them greater reach and fastest way to do business over Internet. Don't get surprised, if you come to know that the Paanwalla in your locality has started selling his paan over Internet.

2.2 INTERNET – THE HISTORY

In 1969, the U.S. Defence Department funded a project to develop a network, which can withstand the bombing. Basically the idea was to develop a very secure network which can work even after a nuclear attack. This project was known as ARPANET. The proposed network was not supposed to have a central control – which would be an obvious target. Ten years of research brought Local Area Ethernet Networks (LANs) and workstations were developed to get connected to LAN. These workstations and LANs were then connected to the ARPANET. For next decade the ARPANET grew and its decentralized features helped its rapid expansion. Computers connected to ARPANET used to standard or rule to communicate with each other.

This standard used by ARPANET is known as NCP (National Control Protocol). Protocol is a network term used to indicate the standard used by a network for communication. But the passing time and rapid change in information technology suppressed NCP and brought TCP/IP (Transmission Control Protocol/ Internet Protocol) in to the world of networking. TCP converts messages into streams of packets at the source, and they are reassembled back into messages at the destination. IP handles the dispatch of these packets. It handles the addressing, and makes sure that a packet reaches its destination through multiple nodes and even across multiple networks with multiple standards. This flexibility of TCP/IP to handle multiple networks with multiple protocols encourages other networks to get connected to ARPANET. Slowly the ARPANET became a massive network of networks and now it is known as 'Internet'.

Why do people want to get connected to Internet? May be because of freedom it provides. The Internet is a rare example of a large democracy with no state of head, no official censors, no bosses, no board of directors. Nobody controls the Internet and in principle, any computer can speak to any other computer, as long as it obeys the technical rules of the TCP/IP protocol. This freedom of Internet helped it to move out of its

original base in military and research institutions, into elementary and high schools, colleges, public libraries, commercial sectors even into the shop of a vegetable vendor.

2.3 SERVICES OF INTERNET

(a) E-Mail (Electronic Mail)

E-mail or Electronic mail is a paperless method of sending messages, notes or letters from one person to another or even many people at the same time via Internet. E-mail is very fast compared to the normal post. E-mail messages usually take only few seconds to arrive at their destination. One can send messages anytime of the day or night and it will get delivered immediately. You need not to wait for the post office to open and you don't have to get worried about holidays. It works 24 hours a day and seven days a week.

What's more, the copy of the message you have sent will be available whenever you want to look at it even in the middle of the night. You have the privilege of sending something extra such as a file, graphics, images etc., along with your e-mail. The biggest advantage of using e-mail is that it is cheap, especially when sending messages to other states or countries and at the same time it can be delivered to a number of people around the world.

Though e-mail is faster and cheaper, it has many of the components of regular mail. It allows you to compose note, get the address of the recipient and send it. Once the mail is received and read, it can be forwarded, replied. One can even store it for later use, or delete. In e-mail even the sender can request for delivery receipt and read receipt from the recipient.

b. WORLD WIDE WEB (www)

WWW is the acronym for the World Wide Web. It is also commonly known as 'The Web'. The WWW is hypertext based information retrieval tool. One can easily surf the Web by jumping from one document to another using the links in those documents. These documents can be in many formats, such as text, graphics, animation, sound and latest is video. They may also be a combination of all these. All the information on Internet are presented to the user as a document to more popularly known as WebPage. All these Web Pages are link to each other or even to section within a Web Page. And these links are known as Hyper Links. The tool used to view these WebPages on Internet is known as Internet browser or simply browser.

It is a software program specifically was developed to extract formation on user request from the Internet and present the WebPage to the viewer. There are

several browsers available in the market. However the most popular are Internet Explorer from Microsoft and Netscape from Netscape Inc. The process of using browser to view information on Internet is known as Browsing or Surfing.

2.4 SEARCHING ON THE WEB

One of the most common problems all Internet users face is the fact that it can be quite difficult to find what you want on the Internet. There is no central “main menu” that users can access to navigate through the Internet. Although there might not be an official menu, there are several resources available – both on-line and off-line –that can make “surfing the net” easier. The Internet is a terrific resource. It contains hundreds of web sites dedicated to thousands of topics. There are some web sites, which are used to search information on the web. There are more than 2,500 search services presently on the Web.

Search services on the Internet come in two main flavours:

- 1) ‘search engine’ that index words or terms in Internet documents; and
- 2) ‘directories’ that classify Web documents or locations into an arbitrary subject classification scheme or taxonomy. Most search engines take one or more words entered by the user, search the contents of every Web page stored in their databases and display the result. Search engines tend to “index” (record by word) all of the terms on a given Web document. Or they may index all of the terms within the first few sentences, the Web site title, or the document’s metatags.

Internet directories are on-line Web sites that place Web page into one or more categories. Web pages are usually listed with a brief description and their URL. Depending on the Internet directory you are using, a search engine may also be available, as well as a Random URL link. Directories operate on a different principle. They require people to view the individual Web site and determine its placement into a subject classification scheme or taxonomy. Once done, certain keywords associated with those sites can be used for searching the directory’s data banks to find Web sites of interest some popular search engines are:-

- Google- <http://www.google.com>
- Infoseek- <http://guide.infoseek.com>
- Alta Vista – <http://www.altavista.digital.com>
- Lycos – <http://www.lycos.com>
- Yahoo! –<http://www.yahoo.com>

Your ability to find the information you seek on the Internet is a function of how precise your queries are and how effectively you use search services. Poor queries return poor results; good queries return great results.

2.5 YOU TUBE

YouTube is an American video-sharing website headquartered in San Bruno, California. The service was created by three former PayPal employees—Chad Hurley, Steve Chen, and Jawed Karim—in February 2005. YouTube now operates as one of Google's subsidiaries.

YouTube allows users to upload, view, rate, share, add to favorites, report, comment on videos, and subscribe to other users. It offers a wide variety of user-generated and corporate media videos. Available content includes video clips, TV show clips, music videos, short and documentary films, audio recordings, movie trailers, live streams, and other content such as video blogging, short original videos, and educational videos. Most of the content on YouTube is uploaded by individuals, but media corporations including CBS, the BBC, Vevo, and Hulu offer some of their material via YouTube as part of the YouTube partnership program. Unregistered users can only watch videos on the site, while registered users are permitted to upload an unlimited number of videos and add comments to videos. Videos deemed potentially inappropriate are available only to registered users affirming themselves to be at least 18 years old.

YouTube earns advertising revenue from Google AdSense, a program which targets ads according to site content and audience. The vast majority of its videos are free to view, but there are exceptions, including subscription-based premium channels, film rentals, as well as YouTube Red, a subscription service offering ad-free access to the website and access to exclusive content made in partnership with existing users. As of February 2017, there are more than 400 hours of content uploaded to YouTube each minute, and one billion hours of content are watched on YouTube every day. As of August 2017, the website is ranked as the second-most popular site in the world by Alexa Internet, a web traffic analysis company.

2.6 GOOGLE MAPS

Google Maps is a web mapping service developed by Google. It offers satellite imagery, street maps, 360° panoramic views of streets (Street View), real-time traffic conditions (Google Traffic), and route planning for traveling by foot, car, bicycle (in beta), or public transportation.

Google Maps began as a C++ desktop program designed by Lars and Jens Eilstrup Rasmussen at Where 2 Technologies. In October 2004, the company was acquired by Google, which converted it into a web application. After additional acquisitions of a geospatial data visualization company and a real time traffic analyzer, Google Maps was launched in February 2005. The service's front end utilizes JavaScript, XML, and Ajax. Google Maps offers an **API** that allows maps to be embedded on third-party websites, and offers a locator for urban businesses and other organizations in numerous countries around the world. Google Map Maker allowed users to collaboratively expand and update the service's mapping worldwide but was discontinued from March, 2017. However, crowd sourced contributions to Google Maps were not discontinued as the company announced those features will be transferred to Google's Local Guides program.

Google Maps' satellite view is a "top-down" or "birds eye" view; most of the high-resolution imagery of cities is aerial photography taken from aircraft flying at 800 to 1,500 feet (240 to 460 m), while most other imagery is from satellites. Much of the available satellite imagery is no more than three years old and is updated on a regular basis. Google Maps uses a close variant of the Mercator projection, and therefore cannot accurately show areas around the poles.

The current redesigned version of the desktop application was made available in 2013, alongside the "classic" (pre-2013) version. Google Maps for Android and iOS devices was released in September 2008 and features GPS turn-by-turn navigation along with dedicated parking assistance features. In August 2013, it was determined to be the world's most popular app for smartphones, with over 54% of global smartphone owners using it at least once. In 2012, Google reported having over 7100 employees and contractors directly working in mapping.

2.7 GOOGLE TRANSLATE:

Google Translate is a free multilingual machine translation service developed by Google, to translate text from one language into another. It offers a website interface, mobile apps for Android and iOS, and an API that helps developers build browser extensions and software applications. Google Translate supports over 100 languages at various levels and as of May 2017, serves over 500 million people daily.

Launched in April 2006 as a statistical machine translation service, it used United Nations and European Parliament transcripts to gather linguistic data. Rather than translating languages directly, it first translates text to English and then to the target language. During a translation, it looks for patterns in millions of documents to help decide on the best

translation. Its accuracy has been criticized and ridiculed on several occasions. In November 2016, Google announced that Google Translate would switch to a neural machine translation engine - Google Neural Machine Translation (GNMT) - which translates "whole sentences at a time, rather than just piece by piece. It uses this broader context to help it figure out the most relevant translation, which it then rearranges and adjusts to be more like a human speaking with proper grammar". Originally only enabled for a few languages in 2016, GNMT is gradually being used for more languages.

2.8 GOOGLE DRIVE:

Google Drive is a file storage and synchronization service developed by Google. Launched on April 24, 2012, Google Drive allows users to store files in the cloud, synchronize files across devices, and share files. In addition to a website, Google Drive offers apps with offline capabilities for Windows and macOS computers, and Android and iOS smartphones and tablets. Google Drive encompasses Google Docs, Sheets and Slides, an office suite that permits collaborative editing of documents, spreadsheets, presentations, drawings, forms, and more. Files created and edited through the office suite are saved in Google Drive.

Google Drive offers users 15 gigabytes of free storage, with 100 gigabytes, 1 terabyte, 2 terabytes, 10 terabytes, 20 terabytes, and 30 terabytes offered through optional paid plans. Files uploaded can be up to 5 terabytes in size. Users can change privacy settings for individual files and folders, including enabling sharing with other users or making content public. On the website, users can search for an image by describing its visuals, and use natural language to find specific files such as "find my budget spreadsheet from last December".

The website and Android app offer a Backups section to see what Android devices have data backed up to the service, and a completely modernized computer app released in July 2017 allows for backing up specific folders on the user's computer. A Quick Access feature can intelligently predict the files users need.

Google Drive is a key component of G Suite, Google's monthly subscription offering for businesses and organizations. As part of select G Suite plans, Drive offers unlimited storage, advanced file audit reporting, enhanced administration controls, and greater collaboration tools for teams.

Following the launch of the service, Google Drive privacy policy was heavily criticized by some members of the media. Google has one set of Terms of Service and Privacy Policy agreements that cover all of its services, meaning that the language in the

agreements grants the company broad rights to reproduce, use, and create derivative works from content stored on Google Drive. While the policies also confirm that users retain intellectual property rights, privacy advocates raised concerns that the licenses grant Google the rights to use the information and data to customize advertising and other services Google provides. In contrast, other members of the media noted that the agreements were no worse than those of competing cloud storage services, but that the competition uses "more artful language" in the agreements, and also stated that Google needs the rights in order to "move files around on its servers, cache your data, or make image thumbnails".

As of March 2017, Google Drive has 800 million active users, and as of September 2015, it has over one million organizational paying users. As of May 2017, there are over two trillion files stored on the service.

2.9 GOOGLE PHOTOS:

Google Photos is a photo sharing and storage service developed by Google. It was announced in May 2015 and spun out from Google+, the company's social network.

Google Photos gives users free, unlimited storage for photos up to 16 megapixels and videos up to 1080p resolution. The service automatically analyzes photos, identifying various visual features and subjects. Users can search for anything in photos, with the service returning results from three major categories: People, Places, and Things. Google Photos recognizes faces, grouping similar ones together; geographic landmarks (such as the Eiffel Tower); and subject matter, including birthdays, buildings, animals, food, and more. Google implements different forms of machine learning into the Photos service, particularly its recognition of photo contents, as well as enabling features that can automatically generate albums, animate similar photos into quick videos, surface past memories at significant times, and improve the quality of photos and videos. In May 2017, Google announced several updates to Google Photos, including reminders for and suggested sharing of photos, shared photo libraries between two users, and physical albums, with Photos automatically suggesting collections based on face, location, trip, or other distinction.

Google photos acts as a back up when photos are sent or in Google terms 'Shared'. This is just a common back up tool when photos are shared between social media or other platforms or apps.

Google Photos received critical acclaim after its decoupling from Google+ in 2015. Reviewers liked the updated Photos service for its recognition technology, search, apps, and loading times. Nevertheless, privacy concerns were raised, including Google's motivation for building the service, as well as its relationship to governments and possible laws requiring

Google to hand over a user's entire photo history. Google Photos has seen strong user adoption. It reached 100 million users after five months, 200 million after one year, and 500 million as of May 2017, with Google announcing that over 1.2 billion photos are uploaded to the service every day, with the grand total of all uploaded content measuring over 13.7 peta bytes of storage.

2.10 GMAIL

Gmail is a free, advertising-supported email service developed by Google. Users can access Gmail on the web and using third-party programs that synchronize email content through POP or IMAP protocols. Gmail started as a limited beta release on April 1, 2004, and ended its testing phase on July 7, 2009.

At launch, Gmail had an initial storage capacity offer of one gigabyte per user, a significantly higher amount than competitors offered at the time. Today, the service comes with 15 gigabytes of storage. Users can receive emails up to 50 megabytes in size, including attachments, while they can send emails up to 25 megabytes. In order to send larger files, users can insert files from Google Drive into the message. Gmail has a search-oriented interface and a "conversation view" similar to an Internet forum. The service is notable among website developers for its early adoption of Ajax.

Google's mail servers automatically scan emails for multiple purposes, including to filter spam and malware, and to add context-sensitive advertisements next to emails. This advertising practice has been significantly criticized by privacy advocates due to concerns over unlimited data retention, ease of monitoring by third parties, users of other email providers not having agreed to the policy upon sending emails to Gmail addresses, and the potential for Google to change its policies to further decrease privacy by combining information with other Google data usage. The company has been the subject of lawsuits concerning the issues. Google has stated that email users must "necessarily expect" their emails to be subject to automated processing, and claims that the service refrains from displaying ads next to potentially sensitive messages, such as those mentioning race, religion, sexual orientation, health, or financial statements. In June 2017, Google announced the upcoming end to the use of contextual Gmail content for advertising purposes, relying instead on data gathered from use of its other services.

As of July 2017, Gmail has 1.2 billion active users worldwide, citation needed and was the first app on the Google Play Store to hit one billion installations on Android devices. According to a 2014 estimate, 60% of mid-sized US companies, and 92% of startups, were using Gmail.

2.11 GOOGLE BOOKS

Google Books is a service from Google Inc. that searches the full text of books and magazines that Google has scanned, converted to text using optical character recognition (OCR), and stored in its digital database. Books are provided either by publishers and authors, through the Google Books Partner Program, or by Google's library partners, through the Library Project. Additionally, Google has partnered with a number of magazine publishers to digitize their archives.

The Publisher Program was first known as 'Google Print' when it was introduced at the Frankfurt Book Fair in October 2004. The Google Books Library Project, which scans works in the collections of library partners and adds them to the digital inventory, was announced in December 2004.

The Google Books initiative has been came for its potential to offer unprecedented access to what may become the largest online body of human knowledge and promoting the democratization of knowledge. But it has also been criticized for potential copyright violations, and lack of editing to correct the many errors introduced into the scanned texts by the OCR process.

As of October 2015, the number of scanned book titles was over 25 million, but the scanning process has slowed down in American academic libraries. Google estimated in 2010 that there were about 130 million distinct titles in the world, and stated that it intended to scan all of them.

2.12 GOOGLE EARTH

Google Earth is a computer program that renders a 3D representation of Earth based on satellite imagery. The program maps the Earth by superimposing satellite images, aerial photography, and GIS data on to a 3D globe, allowing users to see cities and landscapes from various angles. Users can explore the globe by entering addresses and coordinates, or by using a keyboard or mouse. The program can also be downloaded on a smartphone or tablet, using a touch screen or stylus to navigate. Users may use the program to add their own data using Keyhole Markup Language and upload them through various sources, such as forums or blogs. Google Earth is able to show various kinds of images overlaid on the surface of the earth and is also a Web Map Service client.

In addition to Earth navigation, Google Earth provides a series of other tools through the desktop application. Additional globes for the Moon and Mars are available, as well as a tool for viewing the night sky. A flight simulator game is also included. Other features allow users to view photos from various places uploaded to Panoramio, information provided by

Wikipedia on some locations, and Street View imagery. The web-based version of Google Earth also includes Voyager, a feature that periodically adds in-program tours, often presented by scientists and documentarians.

Google Earth has been viewed by some as a threat to privacy and national security, leading to the program being banned in multiple countries. Some countries have requested that certain areas be obscured in Google's satellite images, usually areas containing military facilities.

3.1 Card less and Cash less Transactions:

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. “Faceless, Paperless, Cashless” is one of professed role of Digital India.

The Digital India vision provides the intensified impetus for further momentum and progress for e-Governance and would promote inclusive growth that covers electronic services, products, devices, manufacturing and job opportunities. Governance and Services on demand is an important component in Digital India program and includes programs to offer seamlessly integrated, real time online services to citizens with platforms enabled for electronic & cashless financial transactions.

In this connection, the RBI and the Government are making several efforts to reduce the use of cash in the economy by promoting the digital/payment devices including prepaid instruments and cards. RBI's effort to encourage these new variety of payment and settlement facilities aims to achieve the goal of a ‘less cash’ society. Here, the term less cash society or cashless transaction economy indicate reducing the use of physical cash for payments. Instead of cash, digital payments are made to settle the payments.

Cashless transaction economy doesn't mean shortage of cash rather it indicates a culture of people settling transactions digitally. In a modern economy, money moves electronically. Hence, the spread of digital payment culture along with the expansion of infrastructure facilities is needed to achieve the goal.

On November 8th, government withdrawal of Rs 500 and Rs 1000 notes- two highest denominations in circulation. Main objectives were to fight counterfeit money and black money. The action has given tremendous boost to cashless transactions as card based and digital payments were not hindered when all high denomination cash transactions suffered because of absence of high denomination currencies.

3.2 Various modes Cashless and Cardless transaction:

There are several reasons why the government and the RBI brings up measures to promote cashless transaction economy. Besides convenience, digital transaction gives more scope for recording of transactions and in this way it is a first step against the spread of unaccounted money or black money. Secondly, the problem of counterfeit notes can also be avoided when payment is settled digitally.

As part of promoting cashless transactions and converting India into less-cash society, various modes of digital payments are available.

1. ATM
2. Net Banking
3. Mobile Banking
4. Mobile Apps

I. ATM (Automated Teller Machine):An automated teller machine (ATM) is an electronic banking outlet, which allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access most ATMs. The first ATM appeared in London in 1967 invented by a Scottish named John Shepherd-Barron, and in less than 50 years, ATMs spread around the globe.

There are two primary types of ATMs. Basic units allow customers to withdraw cash and receive reports of their account balances only. The more complex machines accept deposits, facilitate line of credit payments and report account information. To access the advanced features of the complex units, a user must be an account holder at the bank that operates the machine.

Using an ATM, customers can access their bank deposit or credit accounts in order to make a variety of transactions such as cash withdrawals, check balances, or credit mobile phones. If the currency being withdrawn from the ATM is different from that in which the bank account is denominated the money will be converted at an official exchange rate. Thus, ATMs often provide the best possible exchange rates for foreign travellers, and are widely used for this purpose.

BANKING CARDS (DEBIT / CREDIT / CASH / TRAVEL / OTHERS)

Banking cards offer consumers more security, convenience, and control than any other payment method. The wide variety of cards available – including credit, debit and prepaid – offers enormous flexibility, as well. These cards provide two factor authentication for secure payments e.g secure PIN and OTP. RuPay, Visa, MasterCard are some of the example of card payment systems. Payment cards give people the power to purchase items in

stores, on the Internet, through mail-order catalogues and over the telephone. They save both customers and merchants' time and money, and thus enable them for ease of transaction.

II. Net Banking:

Online banking allows a user to execute financial transactions via the internet. Online banking is also known as "internet banking" or "web banking." An online bank offers customers just about every service traditionally available through a local branch, including deposits, which is done online or through the mail, and online bill payment.

Different types of online financial transactions are:

National Electronic Fund Transfer (NEFT)

National Electronic Funds Transfer (NEFT) is a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals, firms and corporates can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country participating in the Scheme. Individuals, firms or corporates maintaining accounts with a bank branch can transfer funds using NEFT. Even such individuals who do not have a bank account (walk-in customers) can also deposit cash at the NEFT-enabled branches with instructions to transfer funds using NEFT. However, such cash remittances will be restricted to a maximum of Rs.50,000/- per transaction. NEFT, thus, facilitates originators or remitters to initiate funds transfer transactions even without having a bank account. Presently, NEFT operates in hourly batches - there are twelve settlements from 8 am to 7 pm on week days (Monday through Friday) and six settlements from 8 am to 1 pm on Saturdays.

Real Time Gross Settlement (RTGS)

RTGS is defined as the continuous (real-time) settlement of funds transfers individually on an order by order basis (without netting). 'Real Time' means the processing of instructions at the time they are received rather than at some later time; 'Gross Settlement' means the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis). Considering that the funds settlement takes place in the books of the Reserve Bank of India, the payments are final and irrevocable. The RTGS system is primarily meant for large value transactions. The minimum amount to be remitted through RTGS is 2 lakh. There is no upper ceiling for RTGS transactions. The RTGS service for customer's transactions is available to banks from 9.00 hours to 16.30 hours on week days and from 9.00 hours to 14:00 hours on Saturdays for settlement at the RBI end. However, the timings that the banks follow may vary depending on the customer timings of the bank branches.

Electronic Clearing System (ECS)

ECS is an alternative method for effecting payment transactions in respect of the utility-bill-payments such as telephone bills, electricity bills, insurance premia, card payments and loan repayments, etc., which would obviate the need for issuing and handling paper instruments and thereby facilitate improved customer service by banks / companies / corporations / government departments, etc., collecting / receiving the payments.

Immediate Payment Service (IMPS)

IMPS offers an instant, 24X7, interbank electronic fund transfer service through mobile phones. IMPS is an emphatic tool to transfer money instantly within banks across India through mobile, internet and ATM which is not only safe but also economical both in financial and non-financial perspectives.

Objectives of IMPS:

- To enable bank customers to use mobile instruments as a channel for accessing their banks accounts and remit funds
- Making payment simpler just with the mobile number of the beneficiary
- To sub-serve the goal of Reserve Bank of India (RBI) in electronification of retail payments
- To facilitate mobile payment systems already introduced in India with the Reserve Bank of India Mobile Payment Guidelines 2008 to be inter-operable across banks and mobile operators in a safe and secured manner
- To build the foundation for a full range of mobile based Banking services.

Advantages of Online Banking

Convenience is a major advantage of online banking. Basic banking transactions such as paying bills and transferring funds between accounts can easily be performed at times convenient to consumers. In effect, consumers can perform banking transactions 24 hours-a-day, seven-days a week. Online banking is fast and efficient. Funds can be transferred between accounts almost instantly, especially if the two accounts are held at the same banking institution. Banking accounts can be monitored more closely thanks to online banking. This allows consumers to keep their accounts safe. Around-the-clock access to banking information provides early detection of fraudulent activity that has the potential to cause financial or damage loss. Online banking allows for the opening and closing of fixed deposit and recurring deposit accounts that typically offer higher rates of interest

Disadvantages of Online Banking

For a beginner online banking customer, using systems for the first time may present challenges that prevent transactions from being processed. Although online banking security

is continually improving, such accounts are still vulnerable when it comes to hacking. Consumers are advised to use their data plans, rather than public Wi-Fi networks when using online banking, to prevent unauthorized access. Additionally, online banking is dependent on a reliable internet connection. Connectivity issues from time-to-time may make it difficult to determine if banking transactions have been successfully processed. On occasion, consumers may prefer face-to-face interactions for more complex banking issues.

III. Mobile banking:

Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct different types of financial transactions remotely using a mobile device such as a mobile phone or tablet. It uses software, usually called an app, provided by the banks or financial institution for the purpose. Each Bank provides its own mobile banking App for Android, Windows and iOS mobile platform(s).

Mobile Banking refers to provision of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank transactions, to administer accounts and to access customized information. After the launch of mobile banking in India, mobile banking transactions have seen some growth. Still mobile banking has a long way to go as, majority of customers prefer banking in traditional ways. The basic objective is to identify the advantages and limitations of mobile banking and the problems faced by customers in mobile banking. The banking sector reforms and introduction of e-banking has made very structural changes in service quality, managerial decisions, operational performance, profitability and productivity of the banks. There are various factors which have played vital role in the Indian banking sector for adoption of technology. So in order to run the mobile banking effectively, proper care has been taken care of and take adequate steps to improve the quality services.

Advantages of Mobile Banking

Time saving: Instead of allocating time to walk into a bank, you can check account balances, schedule and receive payments, transfer money and organise your accounts when you're on the go.

Convenient: The ability to access bank accounts, make payments, and even track investments regardless of where you are can be a big advantage. Do your banking at a time and place that suits you, instead of waiting in queues.

Secure: Generally, good mobile banking apps have a security guarantee or send you a SMS verification code you need to input to authorise a payment for added security. Mobile banking is said to be even more secure than online/internet banking.

Easy access to your finances: with the introduction of mobile banking, you are able to access your financial information even beyond the working hours. It helps to avail banking services even by making a call to the bank.

Increased efficiency: mobile banking functions are functional, efficient and competitive. It also helps in decongesting the banking halls and reduces the amount of paperwork for both the banker and the customer.

Fraud reduction: one very real advantage to implementing mobile banking. “Customers are being deputized in real time to watch their accounts.

It utilizes the mobile connectivity of telecom operators and therefore does not require an internet connection.

You can check your account balance, review recent transaction, transfer funds, pay bills, locate ATMs, deposit cheques, manage investments, etc.

Mobile banking is available round the clock 24/7/365, it is easy and convenient and an ideal choice for accessing financial services for most mobile phone owners in the rural areas.

Disadvantages of Mobile Banking

Mobile banking users are at risk of receiving fake SMS messages and scams. The loss of a person’s mobile device often means that criminals can gain access to your mobile banking PIN and other sensitive information. Modern mobile devices like Smartphone and tablets are better suited for mobile banking than old models of mobile phones and devices. Regular users of mobile banking over time can accumulate significant charges from their banks. Even though there are 1.5 billion computers on the Internet and 4.5 billion people using mobile phones, there’s currently no significant operating system supporting the mobile space. “Hackers want to do the least amount of work for the biggest gain..

Most mobile banking apps need an internet connection to be able to operate, so if you live in a rural area or experience problems with your internet connection, then you won’t be able to access your account. The same applies if your mobile phone runs out of battery.

Many phones aren’t yet compatible with anti-virus software. Most cell phones don’t come standard with anti-virus protection even if they have the capacity to browse the internet. Some phones aren’t even compatible with the anti-virus software available and there are known cases in which people were unable to put anti-virus software registered to them on corporate cell phones. Although identity thieves are still a few steps behind when it comes to learning to implement some of their most successful computer tricks (phishing, spamming, spreading viruses, account hacking, etc...) on a cell phone level, experts agree that is only a

matter of time and people shouldn't assume that anti-virus software isn't necessary for cell phones.

Some banks don't offer the same level of protection for cell phone banking that they do for online or in person transactions. Because the risks are still generally unknown some banks have been slow to make promises about what will or will not be covered when you use cell phone banking.

IV. MOBILE APPS / WALLETS

A mobile wallet is a way to carry cash in digital format. You can link your credit card or debit card information in mobile device to mobile wallet application or you can transfer money online to mobile wallet. Instead of using your physical plastic card to make purchases, you can pay with your smartphone, tablet, or smart watch. An individual's account is required to be linked to the digital wallet to load money in it. Most banks have their e-wallets and some private companies. E.g. Paytm, freecharge, mobikwik, oxigen, mruppee, airtel money, jio money, sbi buddy, itz cash, citrus pay, vodafone m-pesa, axis bank lime, icici pockets, speedpay etc.

4.1 SOCIAL MEDIA AND IMPACT

In this chapter we cover all aspects of social media with its positive and negative effect. Focus is on the particular field like business, education, society and youth. We describe how these media will affect society in a broad way and what are the ethical responsibilities of the users of these sites?

4.2 Social Media:

Social media is a platform for people to discuss their issues and opinions. Before knowing the aspects of social media people must have to know what is social media? Social media are computer tools that allow people to share or exchange information's, ideas, images, videos and even more with each other through a particular network.

Social Media is media for social interaction as a super-set beyond social communication. Social Media has brought individuals separated by geography and ideology to a common virtual platform. Online Social Networking Sites are among the most popular services these days where benefit of information is mutual. Users interact through various features of social networking sites making relationships, new friends, knowledge sharing, video sharing etc. Thus these features become the key in product buying decisions, Online shopping etc. SNS are serving good medium to connect students, and emails are considered important for communication, students view advertisements online and with the help of SNS online marketing gets influenced. The super-set of Social Media comprises of Social

networking sites, Educational material sharing Content sharing sites, User-sponsored blogs, Company sponsored websites, Business networking sites, Collaborative websites, , Social bookmarking and much more. It includes Internet forums, weblogs, social blogs, micro blogging, wikis, podcasts, photographs or pictures, video, rating and social bookmarking.

Social networking sites are not only popular for providing a platform for chatting, sharing scraps, videos, pictures etc. but also for discussing social issues. Earlier people supposed in keeping their data private but now they like going public and viewing wall posts, status updates, tweets and in fact every excitement of their lives. These sites provides employment, marketing, personal growth, sharing of information but the most prevalent hazard through often involves online individuals and also provide to be in touch with our dear ones on the other side it creates platform for many cybercrimes.

4.3 SOCIAL MEDIA IN INDIA:

Internet is still propagating in the roots of the Indian society. People are now becoming more aware of Internet and its benefits. Internet usage has now matured from the basic emails and search to upscale activities like e-ticketing, online banking, e-retailing and the ubiquitous Social Media. Social Media is really picking up new heights in India.

Now a day's social media has been the important part of one's life from shopping to electronic mails, education and business tool. Social media plays a vital role in transforming people's life style. Social media includes social networking sites and blogs where people can easily connect with each other. Since the emergence of these social networking sites like Twitter and Facebook as key tools for news, journalists and their organizations have performed a high-wire act. These sites have become a day to day routine for the people. Social media has been mainly defined to refer to "the many relatively inexpensive and widely accessible electronic tools that facilitate anyone to publish and access information collaborate on a common effort, or build relationship".

4.4IMPACT OF SOCIAL MEDIA ON VARIOUS FIELDS

a. Impact of Social Media on Education

As per the survey of previous research, 90% of college students use social networks. Technology has shown a rapid development by introducing small communication devices and we can use these small communication devices for accessing social networks any time anywhere, as these gadgets include pocket computers, laptops, iPads and even simple mobile phones (which support internet) etc. For the purpose of education social media has been used as an innovative way. Students should be taught to use this tool in a better way, in the

educational classes' media just being used for messaging or texting rather than they should learn to figure out how to use these media for good. Social media has increased the quality and rate of collaboration for students. With the help of social media students can easily communicate or share information quickly with each through various social sites like Facebook, Orkut, and Instagram etc. It is also important for students to do some practical work instead of doing paper work. They can also write blogs for Teachers as well as for themselves to enhance their knowledge skills. Social networking sites also conduct online examinations which play an important role to enhance the students' knowledge.

In the above table 1 it is clear that, internet usage for the respondents was for mailing and surfing the net with 33% and 26% respectively. Mainly two traditional reasons for using Internet i.e. Mailing and Surfing. In India, social networking sites are growing fast to gain popularity but it haven't reached the expectation of global scenario. Just 17% reported social networking sites as their principle reason for Internet usage. Alternating reactions were downloading internet content, purchasing online goods, studying and reading e-books.

Among the Indian youth 95.7% of the members are connected with the social media. These figures are increasing day by day. Whereas only 4.3% of members are not connected with the social media.

Positive Effect of Social Media on Education: Social media gives a way to the students to effectively reach each other in regards to class ventures, bunch assignments or for help on homework assignments.

- Many of the students who do not take an interest consistently in class might feel that they can express their thoughts easily on social media.
- Teachers may post on social media about class activities, school events, homework assignments which will be very useful to them.
- It is seen that social media marketing has been emerging in career option. Social media marketing prepares young workers to become successful marketers.
- The access of social media provides the opportunity for educators to teach good digital citizenship and the use of Internet for productivity.

Negative effect of Social Media on Education: The first concern about the negative effect comes to mind is the kind of distraction to the students present in the class. As teachers were not able to recognize who is paying attention in the classroom.

- One of the biggest breakdowns of social media in education is the privacy issues like posting personal information on online sites.

- In some of the scenario there were many inappropriate information posted which may lead the students to the wrong side.
- Because of social media students lose their ability to engage themselves for face to face communication.
- Many of the bloggers and writers post wrong information on social sites which leads the education system to failure.

b. Impact of Social Media on Youth

Nowadays social media has become a new set of cool tools for involving young peoples. Many young people's day to day life are woven by the social media. Youth are in conversation and communication with their friends and groups by using different media and devices every day. In past years it was seen that Youth are in touch with only friends and their groups in schools and colleges. But nowadays Youth are in contact not only with known friends but also with unknown people through social networking sites, instant messaging etc.

According to BBC news research of 2013 they discuss that 67% Facebook users are very common and well known social media portal consist of the youth and students, so these praise the fact that the youth and student have more focus and relation. Throughout the country teenagers frequently use the web, mobile phones, online games to communicate and gather information with each other.

Impact of social networking sites in the changing mindsets of youth on social issues:

Men spend more time as compared to women on social networking sites to review these social issues and yet women are very sensitive to issues like these existing in the world. The youth takes active participation and also raises their voices in order to express their opinions and views on social issues being discussed on these sites. Also, the findings state that even though the youth reciprocates to these events they still do not take up discussions beyond web and forget about them once they sign off. Thereby, these sites prove to be a boon to the youth in terms of spreading awareness about these issues that arise.

Positive Effects of Social Media on Youth:

- Social media helps Youth to stay connected with each other.
- Useful information can be exchanged over social networking sites.
- Social networking sites can allow teens to find support online that they may lack in traditional relationships, especially for teens.
- In a Critical Development period Youth also go for social networking sites for advice and information.
- Youth can look to social media for getting the answers related to their career objectives.

Negative Effects of Social Media on Youth:

- Today it's not clear that who the "strangers" are especially in the field of social media.
- Kidnapping, murder, robbery can be easily done by sharing details on social media.
- There are many cases registered in police station where adults target young children and lure them into meeting them.
- Mostly Youth waste lots of time on social sites like chatting which also effects their health.
- Some useless blogs influence youth extremely that they become violent and can take some inappropriate actions.

c. Impact of Social Media on Business

Social media is the new buzz area in marketing that includes business, organizations and brands which helps to create news, make friends, make connections and make followers. Business use social media to enhance an organization's performance in various ways such as to accomplish business objectives, increasing annual sales of the organization. Social media provides the benefit as a communication platform that facilitates two way communication between a company and their stock holders. Business can be promoted through various social networking sites. Many of the organization promotes their business by giving advertisement on the social media in order to attract maximum users or customers. Customers can connect and interact with business on a more personal level by using social media. If an organization has established a brand, social media may help this organization to develop the existing brand and give the business a voice. With the help of social media organization can make their strategy to promote their organization.

Social media used in various business functions. Some of them are:

Marketing: Marketing is one of the most important and common use of social media in business. It works because today every brand has a target section of online audience.

HR: Is great for identifying and engaging the talent directly. HR helps company to showcase their employee benefits and culture of the company to outside world.

Creative: it share enables art, copy and design teams to invent new ideas which is useful for company to achieve goal.

Operations/strategy: Many of the sites like LinkedIn helps the business by connecting with the experts who can share some strategic plans.

Business Development: Professional networking sites can be used to connect with the clients.

Positive Effect of Social Media on Business

- Social Media helps to better understand their audience by their likes and dislikes.
- It helps the business for promotional activities.
- Social networking sites helps to make new customers by providing useful facilities.
- Helps to enhance market insight and stretch out beyond your rivals with online networking.
- It also helps to increase awareness among brands and reach with little to no budget.

Negative Effect of Social Media on Business

- In business filed social media is not entirely risk free because many of the fans and followers are free to post their opinion on a particular organization; the negative comment can lead the organization to failure.
- Many of the large organization have fallen victim to the hackers.
- The wrong online brand strategy can doom a company, and put at a huge viral social disadvantage.
- Getting involved with Social Media is very time consuming. As an organization you should assign a person to always bolster your pages and profile with significant substance.
- Most companies have difficulty measuring the results of social media advertising.

d. Impact of Social Media on Society:

In today's fast moving world, there are so many burning issues around us which we need to think upon and act, it's an alarm for us to be aware about the society and current issues like abuse of human rights, education, unfavourable effects of global warming, wrong performance of political leaders, crime against women, corruption etc. need to be discussed openly with the society in an effort to do something about it and bring a revolution. Social Networking sites provide a platform for discussion on such issues. One such burning issue that has been unseen in today's picture is the impact of social networking sites in the varying attitude of the youth. This research has been conducted on youths between age group of 12-30 years with a view to know the level of consciousness on the community issues and how far social networking sites get up the today's youth in expressing their views on present and burning issues like corruption, human rights, education etc. Study was conducted on 100 people mostly through personal interaction, and collect questionnaire on various social sites.

Social media has grown rapidly because it serves various social needs. It has also grown because of the increasing importance of networking. Social networking sites (Facebook), micro blogging services (Twitter), content sharing sites (You Tube, Flickr) have introduced the opportunity for large scale online social participation. Barrack Obama was

perhaps the first leader who understood the importance of social media by leveraging it to mobilize the young and the old alike to go from an unknown Senator in 2004 to the most powerful man in the world four years later. Thanks to social media we no longer search for the news, the news finds us. Thanks to web technologies, voices previously excluded from conversations can now find a channel, and organise themselves with a far greater degree of influence than before. They can probe into the credentials of expert journalists and share emails which show how academia is every bit as politicised as the rest of the world.

Positive Effects of Social Media on Society

- Social Media helps to meet people they may not have met outside the social media forums.
- It also helps to share ideas beyond the geographical boundaries.
- It provides open opportunity for all writers and bloggers to connect with their clients.
- Another positive effect of social networking sites is it unite people on a huge platform for the achievement of specific goals. This brings positive change in the society.
- Social media provides awareness among society like campaigns, advertisement articles, promotions which helps the society to be up to date with the current information.

Negative Effects of Social Media on Society

One of the negative effects of social media is that it make people addicted. People spend lots of time in social networking sites which can divert the concentration and focus from the particular task.

- Social media can easily effect the kids, the reason is sometimes people shares photos, videos on media that contain violence and negative things which can affect the behavior of kids or teenagers.
- It also abuses the society by invading on people's privacy.
- Social lies like family ones also weaken as people spend more time connecting to new people.
- Some people use their images or videos in social sites that can encourage others to use it false fully.

Perhaps, like a coin with two sides, social networking sites also have in their own way adversely affected the youth. The target group prefers spending an abundant amount of time on these social networking sites on an average of more than 2 hours a day which keeps them away from their own purpose of existence and interacting with their own natural surroundings. Their social gatherings are hampered because surfing these social networking sites keep them more involved for which they are bound to ignore other significant social

events in their lives. Also, the credibility of these sites have not been clearly validated because the kind of information derived by the youth from these sites has a greater part of its inclination towards entertainment and updates from family and friends than general awareness and job related information. With reference to the expected outcome the study has diverted to a different angle wherein not only negative impacts have proven to exist through the usage of social networking sites but also the existence of positive impacts have occupied a place in one's life. The youth have determined their own boundaries and have set their own limits as to how and when to use social media irrespective of the positive and negative effects it imparts. The youth today is not only techno savvy and socially existent but also embody social consciousness.

4.5 Different Social Media Platforms:

a. Facebook:

Facebook is a social networking service launched on February 4, 2004. It was founded by Mark Zuckerberg with his college roommate and fellow Harvard University student Eduardo Saverin. The website's membership was initially limited by the founders to Harvard students, but was expanded to other colleges in the Boston area, the Ivy League, and gradually most universities in the United States and Canada, corporations, and by September 2006, to everyone with a valid email address along with an age requirement of being 13 and older.

Facebook Users Can find and add friends. Find and follow companies, entertainers, politicians, and more. Create rich profiles with information about their interests, job history, education, religion, politics, relationship status, location (past and present), and favorite music, movies, and companies. Create and share photo albums, event invitations, and basic blog posts. Share videos, links to online articles, photos, and more. Send instant messages and private messages and post public messages or messages to friends only.

Play online games and use other online applications or “apps” for short. Use privacy settings to control what information is shared with whom. “Check in” to physical places online by mapping their location in a tag in a status update. Donate to charity; sign online petitions. Create free pages for a company, business, or group. Find and join groups.

- Facebook is the most popular social network, in the U.S. and internationally.
- In October 2011, more than half of the world's Internet users (55 percent) engaged with Facebook.

- Around the world, approximately 3 in every 4 minutes spent on social networking sites were spent on Facebook and about 1 in every 7 minutes spent online took place on Facebook in 2011.

b. WhatsApp

More than 1 billion people in over 180 countries use WhatsApp to stay in touch with friends and family, anytime and anywhere. WhatsApp is free and offers simple, secure, reliable messaging and calling, available on phones all over the world.

WhatsApp started as an alternative to SMS. Our product now supports sending and receiving a variety of media: text, photos, videos, documents, and location, as well as voice and video calls. Our messages and calls are secured with end-to-end encryption, meaning that no third party including WhatsApp can read or listen to them. Behind every product decision is our desire to let people communicate anywhere in the world without barriers.

WhatsApp has the highest reach as compared to any other messaging platform today. WhatsApp has been slowly introducing some great features so that users can learn each feature properly. WhatsApp has been slowly introducing some great features so that users can learn each feature properly.

Undoubtedly the top messaging platform, WhatsApp today has more than a billion users who are actively sending messages and communicating over voice around the globe. The company was acquired by Facebook, and the messaging app is completely free to use. WhatsApp developers had initially released the phone number-based messaging app for simple communication; however, it took to the internet like a storm. The popularity of the free messaging app has got the developers to keep upgrading more and more features on WhatsApp. However, though the features are slowly coming into existence (compared to other popular apps who already have many of them included), on WhatsApp. Though users could say that other apps were already ahead of WhatsApp, a slow implementation works well in WhatsApp's favour. First—users get time to learn and use every feature as and when they are released. If you have all features already there, you may not remember half of them at use. And lastly, each feature is rolled out after thoroughly testing for efficiency, data saving and performance.

c. Twitter

Twitter, a microblogging service, has emerged as a new medium in spotlight through recent happenings, such as an American student jailed in Egypt and the US Airways plane crash on the Hudson river. Twitter users follow others or are followed. Unlike on most online

social networking sites, such as Facebook or MySpace, the relationship of following and being followed requires no reciprocation. A user can follow any other user, and the user being followed need not follow back. Being a follower on Twitter means that the user receives all the messages (called tweets) from those the user follows. Common practice of responding to a tweet has evolved into well-defined markup culture: RT stands for retweet, '@' followed by a user identifier address the user, and '#' followed by a word represents a hash tag. This well-defined markup vocabulary combined with a strict limit of 140 characters per posting conveniences users with brevity in expression. The retweet mechanism empowers users to spread information of their choice beyond the reach of the original tweet's followers

We have crawled the entire Twitter site and obtained 41.7 million user profiles, 1.47 billion social relations, 4,262 trending topics, and 106 million tweets. In its follower-following topology analysis we have found a non-power-law follower distribution, a short effective diameter, and low reciprocity, which all mark a deviation from known characteristics of human social networks. In order to identify influentials on Twitter, we have ranked users by the number of followers and by PageRank and found two rankings to be similar. Ranking by retweets differs from the previous two rankings, indicating a gap in influence inferred from the number of followers and that from the popularity of one's tweets. We have analyzed the tweets of top trending topics and reported on their temporal behaviour and user participation. We have classified the trending topics based on the active period and the tweets and show that the majority (over 85%) of topics are headline news or persistent news in nature. A closer look at retweets reveals that any retweeted tweet is to reach an average of 1,000 users no matter what the number of followers is of the original tweet. Once retweeted, a tweet gets retweeted almost instantly on next hops, signifying fast diffusion of information after the 1st retweet. To the best of our knowledge this work is the first quantitative study on the entire Twitter sphere and information diffusion on it.

d. Instagram

Instagram, a mobile photo (and video) capturing and sharing service, has quickly emerged as a new medium in spotlight in the recent years. It provides users an instantaneous way to capture and share their life moments with friends through a series of (filter manipulated) pictures and videos. Since its launch in October 2010, it has attracted more than 150 million active users, with an average of 55 million photos uploaded by users per day, and more than 16 billion photos shared so far (Instagram 2013). The extraordinary success of Instagram corroborates the recent Pew report which states that photos and videos have become the key social currencies online.

Instagram is a relatively new form of communication where users can easily share their updates by taking photos and tweaking them using filters. It has seen rapid growth in the number of users as well as uploads since it was launched in October 2010. In spite of the fact that it is the most popular photo capturing and sharing application, it has attracted relatively less attention from the research community. In this paper, we present both qualitative and quantitative analysis on Instagram. We use computer vision techniques to examine the photo content. Based on that, we identify the different types of active users on Instagram using clustering. Our results reveal several insights about Instagram which were never studied before, that include: 1) Eight popular photos categories, 2) Five distinct types of Instagram users in terms of their posted photos, and 3) A user's audience (number of followers) is independent of his/her shared photos on Instagram.

In addition to its photo capturing and manipulation functions, Instagram also provides similar social connectivity as Twitter that allows a user to follow any number of other users, called "friends". On the other hand, the users following a Instagram user are called "followers". Instagram's social network is asymmetric, meaning that if a user A follows B, B need not follow A back. Besides, users can set their privacy preferences such that their posted photos and videos are available only to the user's followers that require approval from the user to be his/her follower. By default, their images and videos are public which means they are visible to anyone using Instagram app or Instagram website. Users consume photos and videos mostly by viewing a core page showing a "stream" of the latest photos and videos from all their friends, listed in reverse chronological order. They can also favorite or comment on these posts. Such actions will appear in referenced user's "Updates" page so that users can keep track of "likes" and comments about their posts. Given these functions, we regard Instagram as a kind of social awareness stream (Naaman, Boase, and Lai 2010) like other social media platforms such as Facebook and Twitter.

e. Skype

Definition: Skype is a proprietary voice-over-Internet Protocol service and software application. The service allows users to communicate with peers by voice, video, and instant messaging over the Internet. Phone calls may be placed to recipients on the traditional telephone networks. Calls to other users within the Skype service are free of charge, while calls to landline telephones and mobile phones are charged via a debit-based user account system. Skype has also become popular for its additional features including file transfer, and videoconferencing. Skype has 663 million registered users as of September 2011.

Skype is an easy-to-use program that is free to download and allows free video calls to anywhere in the world when calling another Skype user. You can also call landlines and cell phones for a fee. It's a great way to stay in touch with family, friends, and colleagues around the world!

In order to make full use of Skype, you will need an internet connection and a computer with a microphone and web camera. Most new laptops and desktop monitors come with a camera built-in as well as an internal microphone (located on the computer). If your computer is lacking either of these features, they can be reasonably purchased. Even if your computer has an internal microphone, you may wish to purchase a headset for privacy purposes.

Short Answer Types Questions

1. Define Computer?
2. Write any Two Input – Output Devices?
3. What is Hardware?
4. Define is Software?
5. Define Cashless Transaction?
6. What is Net Banking?
7. Mention some Internet Tools?
8. Define Social Media?

Long Answer Type Questions

1. Briefly explain Characteristics of Computer?
2. Write about Block Diagram of the Computer?
3. Write about functions of Operating System?
4. Explain briefly about Internet Tools?
5. Briefly explain Cash Less and Card Less Transactions?
6. Discuss briefly the Impact of Social Media?
7. Write about different Social Media Platforms?

MODEL QUESTION PAPER
GENERAL FOUNDATION COURSE –I

1ST YEAR

Time:3hrs

Max.Marks:50

SECTION-A

10 x 2 = 20

Note: (i) Answer all questions.

(ii) Each question carries two marks.

- 1 Write about Early Marriages?
- 2 What is Yoga?
- 3 Define Self- Confidence?
- 4 What is Environment?
- 5 Write about Open Defecation Free?
- 6 Define Afforestation?
- 7 Define Poverty?
- 8 Define Rural Industry?
- 9 Define Computer?
- 10 What is Net Banking?

SECTION-B

5 x 6 = 30

Note: (i) Answer any **FIVE** questions.

(ii) Each question carries **SIX** marks.

- 11 Discuss briefly the Importance of Vocational Education?
- 12 Explain the Causes of Child Labour?
- 13 Explain briefly Different Types of Pollution?
- 14 Discuss briefly about Swachh Bharat Mission?
- 15 Briefly explain different types of Unemployment?
- 16 Explain the Function of NABARD?
- 17 Briefly explain Characteristics of Computer?
- 18 Explain briefly about Internet Tools?