S.Y.B.COM.
SEMESTER - IV (CBCS)

FOUNDATION COURSE - IV

SUBJECT CODE: UBCOMFSIV.6.1

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FOUNDATION COURSE

Semester IV

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Internal marks: 25   **External marks: 75**   **Total Marks: 100**

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Lectures: 45

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Module 1   Significant, contemporary Rights of Citizens   (12 lectures)

    A. Rights of Consumers-Violations of consumer rights and important provisions of the Consumer Protection Act, 2016; Other important laws to protect consumers; Consumer courts and consumer movements.   **(3 Lectures)**

    B. Right to Information- Genesis and relation with transparency and accountability; important provisions of the Right to Information Act, 2005; some success stories.
                                                                                          (3 Lectures)

    C. Protection of Citizens'/Public Interest-Public Interest Litigation, need and procedure to file a PIL; some landmark cases.   **(3 Lectures)**

    D. Citizens' Charters, Public Service Guarantee Acts.   **(3 Lectures)**

Module 2   Approaches to understanding Ecology   (11 lectures)

    A. Understanding approaches to ecology- Anthropocentrism, Biocentrism and Eco centrism, Ecofeminism and Deep Ecology.   **(3 Lectures)**

    B. Environmental Principles-1: the sustainability principle; the polluter pays principle; the precautionary principle.   **(4 Lectures)**

    C. Environmental Principles-2: the equity principle; human rights principles; the participation principle.   **(4 Lectures)**

Module 3   Science and Technology II   (11 lectures)

  Part A: Some Significant Modern Technologies, Features and Applications:
                                                                                          (7 Lectures)

    i. **Laser Technology**- Light Amplification by Stimulated Emission of Radiation; use of laser in remote sensing, GIS/GPS mapping, medical use.

    ii. **Satellite Technology**- various uses in satellite navigation systems, GPS, and imprecise climate and weather analyses.

    iii. **Information and Communication Technology**- convergence of various technologies like satellite, computer and digital in the information revolution of today's society.

    iv. **Biotechnology and Genetic engineering**- applied biology and uses in medicine, pharmaceuticals and agriculture; genetically modified plant, animal and human life.

    v. **Nanotechnology**- definition: the study, control and application of phenomena and materials at length scales below 100 nm; uses in medicine, military intelligence and consumer products.

Part B: Issues of Control, Access and Misuse of Technology.   (4 Lectures)

Module 4   Introduction to Competitive Examinations   (11 lectures)

Part A. Basic information on Competitive Examinations- the pattern, eligibility criteria and local centres: (4 Lectures)

    i.   Examinations conducted for entry into professional courses - Graduate Record Examinations (GRE), Graduate Management Admission Test GMAT), Common Admission Test (CAT) and Scholastic Aptitude Test (SAT).

    ii.   Examinations conducted for entry into jobs by Union Public Service Commission, Staff Selection Commission (SSC), State Public Service Commissions, Banking and Insurance sectors, and the National and State Eligibility Tests (NET / SET) for entry into teaching profession.

Part B.   Soft skills required for competitive examinations-   (7 Lectures)

    i.   Information on areas tested: Quantitative Ability, Data Interpretation, Verbal Ability and Logical Reasoning, Creativity and Lateral Thinking

    ii.   Motivation: Concept, Theories and Types of Motivation

    iii.   Goal-Setting: Types of Goals, SMART Goals, Stephen Covey's concept of human endowment

    iv.   Time Management: Effective Strategies for Time Management

    v.   Writing Skills: Paragraph Writing, Report Writing, Filing an application under the RTI Act, Consumer Grievance Letter.

Projects / Assignments (for Internal Assessment)

    i.   Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.

    ii.   Students should be given a list of possible topics - at least 3 from each Module at the beginning of the semester.

    iii.   The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.

    iv.   Students can work in groups of not more than 8 per topic.

    v.   Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester IV)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75   DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	**i.** Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules.	**a)** Total marks: 15 **b)** For 1 A, there will be 3 marks for each sub-question.

	ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 have to be attempted.	**c)** For 1 B there will be 15 marks without any break-up.	
2	Descriptive Question with internal option (A or B) on Module 1	15	
3	Descriptive Question with internal option (A or B) on Module 2	15	
4	Descriptive Question with internal option (A or B) on Module 3	15	
5	Descriptive Question with internal option (A or B) on Module 4	15	

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Module I

1A

SIGNIFICANT, CONTEMPORARY RIGHTS OF CITIZENS

A. Rights of Consumers

Unit Structure

1A.0 Objectives

1A.1 Introduction

1A.2 Consumer Protection Act

1A.3 Consumers and Indian Contract Act

1A.4 Consequences of Breach of Contract

1A.5 Consumers and the Sale of Goods Act1930

1A.6 Consumer and the Essential Commodities Act 1955

1A.7 Consumer and the Standards of Weights and Measures Act 1976

1A.8 Consumer and the Prevention of Food Adulteration Act 1954:

1A.9 Summary

1A.10 Unit End Questions

1A.0 OBJECTIVES

The modern world is known as the age of consumers. In India, the awareness of consumer rights is moderately low. This unit deals with the consumers' rights and to aware the students about the filling of complaints etc. This unit not only covers the details of the Consumer Protection Act but also discusses the various allied laws like the Contract act, etc.

1A.1 INTRODUCTION

The Consumer Protection Act was passed in the year 1986 in India. Indian consumers had no protection from the law before the implementation of this act. Though there were laws like the Sales of Goods Act in 1930, there was no specific law to protect consumers. Also, in India, being a poor and largely illiterate country, protecting the interests of consumers is a big challenge. The unit will explain thevarious consequences of violating consumer protection act and also the provisions for the Consumer Protection Act.

1A.2   CONSUMER PROTECTION ACT

In the modern world, consumers play a vital role in the economic sectors. However, in India, the Consumer Protection Act came very late. In India movement of the consumers started in the 1960s but in January 1986 the consumer protection Act was passed. It has given Indian consumers rights to the services of goods.

It is interesting to note that such law has existed in advanced democracies like the USA, and the UK for years. In those countries, during the first half of the 20th century, the development of consumer welfare societies was established. Those days the consumer was helpless and had no right against the manufacturers and unscrupulous traders. Hence, they were easily fraud to consumers. One must credit the USA for starting the consumer rights movement in 1927. The Union of Consumers of the United States of America was established in 1936. After some years the President of the USA Mr. John Kennedy outlined four rights of the consumers [1] the Right to safety [2] the Right to be informed [3] the Right to choose [4] Right to be heard. This bill later became the base for many countries to follow the provisions of the act.

The major initiative from the United Nations had passed a resolution indicating certain guidelines under which the government should make laws for consumer protection. In developing countries, literacy levels and awareness levels are rather poor. Therefore, such laws are all the more necessary for the consumers.

1A.3 CONSUMERS AND INDIAN CONTRACT ACT

Consumer Protection Act seeks to promote and protect the rights of consumers such as:

Right to be protected against the marketing of goods that are hazardous to life and property [b] the right to be informed about the quality, quantity, potency, purity, standard, and price of goods to protect the consumer against unfair trade practices.[c] right to be assured, wherever possible, access to an authority of goods at competitive prices [d] right to be heard and to be assured that consumer's interests will receive due consideration at appropriate fora [e] right to seek redressal against unfair trade practices or unscrupulous exploitation of consumers [f] right to consumer education.

The mechanism resulted in the establishment of the Consumer Protection Councils at the Central and State level. However, it is not only for speedy and simple redressal of consumer disputes, but also a quasi-judicial body is to be set up at districts, state, and central levels. Such kinds of bodies should function according to the principles of natural justice.

The consumer protection act was passed for the benefit of unprotected consumers. The idea is to create an inexpensive system for trial and disposal of consumer disputes. The law made in 1986 had to be amended in light of changes that have taken place. Accordingly, the Consumer Protection [Amendment] Act, 2002 was passed it became effective on 17th

December 2002. The important feature of the amendment was provided for the establishment and composition of the Consumer Protection Council at the district level.

1A.4 VIOLATIONS OF THE CONSUMER PROTECTION ACT

Consumer rights are violated by the dealers, traders, manufacturers, distributors, companies, medical practitioners, etc., In this regard's complaint about infringement of consumer rights could be filed under the provisions of the Violations of Consumer Protection Act.

The law has defined various concepts associated with this law. The concepts like complainant, consumer, complaint, 'medical negligence', etc. are explained in the act. For instance, a complaint means any allegation in writing made by a complainant against a trade practice or a restrictive trade practice that has been adopted by any trader. Therefore, the goods bought by consumers if they suffer from one or more defects, the services hired or availed of or agreed to be hired or availed of by them and suffers from a deficiency in any respect so in that condition they can file the complaints. However, if the traders are doing wrong practices and earning profit where a trader has charged for the goods above mentioned the excessive prices which are beyond the fixed prices in this issues complaint can be filled by the consumers in court. Even if they are selling the hazardous products for life and safety are being offered for sale to the public in contravention of the provisions of any law. Then they must require traders to display information regards to the contents, manner, and effect of the use of such goods, with a view to seeking any relief before the forum/commission as provided under the Consumer Protection Act.

There has been an amendment to the Consumer Protection Act in 2002 according to which now the service provider is also required to display the list of the cost of services rendered like the traders of goods. It is however necessary that the complaint must be supported by the documentary or other proper evidence. The consumers can be filled the complaint against ill practices traders and also avail the of compensation by the provisions respective to the laws.

Check your progress

Q.1. Write a note on Consumer Protection Act.

Q.2. Discuss the consequences of violation of the Consumer Protection Act.

1A.5 CONSUMERS AND INDIAN CONTRACT ACT:

The Indian Contract Act is one of the oldest acts in India. This act came into existence in 1872 and has been amended from time to time as per the need of the consumers. The word "contract" is derived from the Latin word contractum, which means drawing together. The word contract is normally used to describe a series of promises constituting the contract,

documents constituting or evidencing that series or their performance; legal relations resulting from that series. In another sense, the contract is binding with the agreement between competent parties, upon a lawful consideration. Thus, the word binding is very important as it creates some obligations and some rights. If the contract is not performed then the consumers or manufacturers can go to court. This is not a new issue. For centuries people have been buying and selling goods and services. It also means the dispute about these issues is equally old. The Indian Contract Act takes into account all these issues and frames the responsibilities and duties of manufacturers/ service providers and consumers. Therefore, the some of the important issues are as follows:

1] The Indian Contract Act,1872 extends all over India [except the state of Jammu and Kashmir] and has been in force since 1st September 1872.

2] An agreement not enforceable by law is said to be void.

3] An agreement enforceable by law is a contract. [This shows that the Contract has the force of law behind it.]

1A.6 CONSEQUENCES OF BREACH OF CONTRACT:

When a contract has been broken, the person who suffers due to such a breach is entitled to receive compensation from the person who has broken the contract. While estimating the compensation, the means that existed of remedying the loss caused by the non-performance of the contract must be taken into account.

There is a separate treatment for compensation for breach of contract where the penalty is mentioned. In this case, the compensation is part of the contract. For example, if Mr. A enters into a contract with Mr. B to pay Rs.1000/- if he fails to pay Mr. B Rs.500/- on a particular day. Unfortunately, Mr. A fails to pay on that day. In this case, Mr. B can recover from Mr. A such compensation not exceeding Rs.1000/-

There is such kind of examples where the consumers may be faced in daily life. In addition to these provisions, they are many provisions in the Indian Contract Act that ensures smooth transactions between the buyer and the seller. Hence some of the provisions of the Contract Act can be read to interpret the Consumer Protection Act.

1A.7 CONSUMERS AND THE SALE OF GOODS ACT 1930:

While discussing the consumers and their rights, it's important to understand some important provisions of the Sale of Goods Act which came into force in 1930 in India. As historically before the British settled down in India, there was no uniform law for the sale of goods or movables in the country. There were many disputes regarding the goods and services. In 1870, the various branches of the law were codified and this process got its final shape in 1893. In the early decades of the 20th century,

a draft bill was prepared along the lines of the English Sale of Goods Act1893. This was introduced in the Legislative Assembly in September 1929. It came into force on 1ˢᵗ July 1930. It extends to the whole of India except the state of Jammu and Kashmir.

The act defines basic concepts like the buyer, delivery of goods price, seller, etc. The act has detailed provisions about buying and selling activities between the buyer and the seller. For example, a contract of sale may be absolute or conditional. Similarly, there are provisions for protecting the quality of the goods or services. If the buyer expressly or by implication makes known to the seller the particular purpose for which the goods are required to show that the buyer relies on the seller's skill or judgment. There i s an implied condition that the goods shall be reasonably fit for such purpose.

The act covers various aspects of buying and selling. For example, If the seller has sold goods and does not own or who does not have authority to sell the goods, in that case, the buyer does not get the title to the goods. This too has an exception. The sale by an agent is valid as he is acting on behalf of the principal.

However, the act specifies the duties of the buyer as well as the seller. The seller must deliver the goods and the buyer to accept and pay for them, according to the terms of the contract of sale. Normally the delivery of the goods and payment of the price are concurrent conditions i.e., the seller shall be ready and willing to give possession of the goods to the buyer in exchange for the price, and the buyer shall be ready and willing to pay the price in exchange for possession of the goods.

If the seller delivers to the buyer several goods less than the contracted quantity, the buyer may reject them. In case the buyer accepts the goods and is required to pay as per the contract rate.

Correspondingly, quite often it's possible to encounter situations when the whole price has not been paid. In this act seller of such goods is described as an unpaid seller. So, under such conditions, an unpaid seller enjoys certain rights. They have a lien on the goods for the price while it has them. In case the delivery of the goods has not taken place, the unpaid seller has to withhold delivery and stoppage in transit where the property has passed to the buyer.

When the contract is not fulfilled, suits can be filed for breach of the contract. According to the contract of sale, if the goods have passed to the buyer and the buyer neglects or refuses to pay such price, the seller may sue him/her for the price of the goods. Likewise, when the buyer neglects or refuses to accept and pay for the goods, the seller may sue him/her for the damages for non-acceptance. And if the seller neglects or refuses to deliver the goods to the buyer, the buyer may sue the seller for damages for non-delivery.

There are many such provisions in the Sale of Goods Act it is important to know the citizens as their rights.

Check your progress

Q.1.   Discuss the duties of buyer and seller under the Sale of Goods Act.

Q.2.   Explain the course of action when the contract is not fulfilled.

1A.8 CONSUMER AND THE ESSENTIAL COMMODITIES ACT 1955:

Theoretically market is a place where the buyers and sellers exchange goods and services for a price voluntarily. This definition of the market is valid even today but somewhat inadequate. The modern state is committed to the welfare of the people. In this context, it means it must be active in the marketplace to ensure that consumers get a steady supply of essential commodities. If such intervention is not ensured the trader's lobby could indulge in black-marketing by hoarding the commodities. Therefore, the Essential Commodities Act 1955 has been amended from time to time. In India, the Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act was passed in1980. The act of 1980 is to control the black marketing of essential commodities. The laws are indeed necessary to ensure the steady supply of essential commodities like edible oil, milk, etc.

This legal has been in existence from pre-independence days. The precursor of the Essential Commodities Act 1955 was the Essential Supplies [Temporary Powers] Act. 1946. The Essential Commodities Act 1955 extends in India. The act covers many commodities essential for modern living, coal, drugs, cattle fodder, foodstuffs, iron and steel, petrol and petroleum products, components and parts and accessories of automobiles, etc. are covered under this act.

Though this law has been made by the Parliament, each state government is authorized to make relevant changes in the act to apply to the conditions of the particular state. Under the provisions of this act, the state can control, and regulate the price at which any essential commodity may be bought or sold. The provisions of this act could be used to stop the excessive profit-making by putting an upper limit beyond which profit-making could be considered an act illegal and an offense.

In addition to this act, in 1980 The Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act was passed. This act extends to all parts of India except the state of Jammu and Kashmir. Under this act, the government gets the power of detaining a person who is acting in any manner prejudicial to the maintenance of supplies of commodities essential to the community. If the person is to be detained has absconded or is concealing himself, so that the order cannot be executed, then Government can issue a warrant for their arrest.

In other words, the purpose of these acts is to ensure that the people get a steady supply of essential commodities at a reasonable price. The traders

should not be able to hold up the supply of essential commodities and make unreasonable profits.

Check your progress

1. Discuss the provisions to check the black-marketing of essential commodities.

1   Why is it necessary to have an act like Essential commodities act?

1A.9 CONSUMER AND THE STANDARDS OF WEIGHTS AND MEASURES ACT 1976

The act has been passed to regulate inter-State trade or commerce in weights, measures, and other goods which are sold or distributed by weight, measure, or number.

The act discusses important concepts like a commodity in packaged form, dealer, export, false package, etc. The commodity in packaged form means commodity packaged whether in any bottle, tin, wrapper, or otherwise, in units suitable for sale, whether wholesale or retail.

The act ensures that every unit of weight or measure shall be based on the units of the metric system.

The base unit of length: shall be = meter. The base unit of mass: shall be = kilogram. The base unit of time: It shall be = second.

The government is empowered by this act to appoint legal authority to ensure compliance with the provisions of this act. The government appoints the Director of Legal Metrology and such other staff as deemed necessary to help the Director. The Director or any person authorised who has powers to enter any premises and search for and inspect any weight, measure, or other goods concerning which inter-State trade or commerce has taken place or is likely to take place. If the goods seized are subject to speedy or natural decay, the Director may dispose of such goods in such manner as may be prescribed.

If there is every false or unverified weight or measure and every false package used in the course of any inter-State trade or commerce and seized shall be liable to be forfeited to the Central Government.

When a commodity is sold in a packaged form, the manufacturer must give statutory details in the prescribed format. These details cover [1] the identity of the commodity in the package

[2] the net quantity of the commodity in the package, in terms of the standard unit of weight or measure [3] where the commodity is packaged or sold by number, the accurate measure, of the commodity contained in the package [4] the unit price of the commodity in the package [5] the sale price of the package.

The act has elaborate provisions for export and import business. Any good to be exported must have [1] quotation of any price [2] issue of any price list, invoice, or cash memo [3] indication of the weight or measure or several net contents of any package on any label, carton or another thing.

For the import purpose, the non-metric weight or measure is not to be imported. The article to be imported must conform to the standards of weight or measure established under this Act.

When any commodity, or machinery is to be imported from a country in which the metric system of weight or measure is not in force, before importing, the importer shall endeavor to obtain the weight or measurement expressed in terms of the standard unit of weight or measure established under this Act.

If any person uses any weight or measure or makes numeration other than established under this Act, shall be punished with imprisonment which may extend to six months, or with a fine which may extend to Rs.1000/- or with both. This is how the consumer gets further protection according to the provisions of this act.

Check your progress

Q.1. What is the system the government has created to ensure that consumers get proper weight and measure?

Q.2. How does the Consumer and the Standards of Weights and Measures Act work on the import and export of goods?

1A.10 CONSUMER AND THE PREVENTION OF FOOD ADULTERATION ACT 1954:

In India, the traders and merchants are quite prone to make quick profits by means fair and foul. Therefore, food adulteration is rampant in India. Thus, the importance of the act of 1954 which was passed to prevent food adulteration. It has extended throughout India.

In India, many states have passed such laws to prevent food adulteration. Historically the need for such a law was felt in 1937 when a committee was appointed by the Central Advisory Board of Health recommended such legislation. At current in India adulteration of food kinds of stuff and other goods is an issue included in the concurrent list in the Constitution of India. Therefore in1960 the inadequacies of this law came to the surface.

Alike any act, this too has defined adulterants, Adulterated, etc. The Adulterant means any material which is or could be employed for adulteration. The Adulterated has been defined in an exhaustive manner covering all other aspects and various issues regarding the same. It also defines what is not adulterated. It indicates that where two or more articles of primary goods are mixed and the resultant article of food [1] is stored, sold, or disturbed under a name that denotes the ingredients thereof and

[2] is not injurious to health, then such resultant article shall not be deemed to be adulterated within the meaning of the act. This act has also created various authorities to protect consumers from adulterated food. Under section 4 of the act, the Central Food Laboratory is exhibited. The Central government can appoint one or more Central Food Laboratories to carry out the functions entrusted to the Central Food Laboratory by this Act. At present, there are four such laboratories in our country located in Kolkata, Mysore, Pune, and Ghaziabad. Some of the states have come under each central laboratory.

Under section 3, there is Central Committee for the Food Standards. This committee advises the Central Government and State governments on matters arising out of the administration of this Act. Similarly, the Food [Health] Authority looks after the related issues. The Central government can ban the import of certain articles of food. Hence under this act, no person shall import into India [1] any adulterated food [2] any misbranded food [3] any article of food for the import of which a license is prescribed, except under the conditions of the license and [4] any article of food in contravention of any other provisions of this act.

Likewise, the Central or State government appoints food Inspectors for a specific locality. The food Inspectors have enough power to ensure that adulterated food is not available in the market. They can take samples of any article of food from any person selling such article; any person who is in the course of conveying, delivering, or preparing to deliver such article to a purchaser. A Food Inspector can enter and inspect any place where any article of food is manufactured or stored for sale. If they find any malpractices, then there is appropriate action can be taken place. Furthermore, there are separate provisions for offenses committed by companies. If a company has committed any crime under this act, it shall be punished accordingly.

When a person has been convicted under this act, the article of food for which he has been punished shall be forfeited to the government.

Check your progress

Q.1. Discuss in detail the purpose of the Prevention of Food Adulteration Act 1954:

Q.2. How does government ban the import of certain products?

1A.11 CONSUMER COURTS AND CONSUMER MOVEMENTS

CONSUMER COURTS: Under the Consumer Protection Act (1986) the redressal machinery is called Consumer Courts. It has functioned at the district, state, and national levels.

To provide a speedy redressal mechanism the three-tier machinery works as follows:

1) District Consumer Dispute Redressal Forum (DCDRF):

2) State Consumer Dispute Redressal Commission (SCDRC):

3) National Consumer Dispute Redressal Commission (NCDRC):

The consumer movement is mostly known as consumerism and its major concern is to protect the rights of citizens. It is a social movement with the main objective of justice and protection of the consumer's rights. The consumer is the prime factor in any business therefore their rights have to be taken care of by the concerned authority. According to Dey "In the word Consumerism, "Consumer" means the user or customer and "ism" means movement", hence, consumer movement is popularly known as "Consumerism. It is an organized and collective movement of consumers. The main object of this movement is to educate and unite consumers and to fight for the protection of their rights. The consumer movement is similar to trade unions because it is a collective approach to solve the malpractices and injustice done by any organization." Henceforth consumers' rights' main objective is to unite and educate for protection. As per as concerned with India, the consumer movement was started in 1966 with the establishment of the Consumer Guidance Society of India.

The historical development of consumerism is as follows:

1. In 1958 Consumer Association of India was established 1959.

2. In 1966, the Consumer Guidance Society of India was established in Mumbai. It has the main objective to protect right against the rising price. Thus, the council for Fair Business Practices was formed by leading industrialist J.R.D. Tata and others.

3. The legal advice, testing facilities, organising lectures, and seminars took place under The Indian Consumers Union which was established in 1971.

4. The Consumer Education and Research Centre was formed in 1978 in Ahmedabad to guide and protect consumer rights.

5. Grahak Panchayat and Government Employees Consumer Stores are the Consumers Cooperative Societies. It sets reasonable price rates.

6. The Sahakari Bazars in urban areas have made good contributions to protecting consumer interest.

7. Feedback columns in the leading newspapers also contributed to grievances relating to price and quality.

Check your progress

Q.1. Discuss in detail the purpose of the Consumer Courts in India?

Q.2. Explain the chronology of the Consumer Movement in India?

1A.12 SUMMARY

Though India passed Consumer Protection Act only in 1986, it does not mean the Indian consumer had no protection before. In this section, it has been studied the Consumer Protection Act, Contract Act, Prevention of Food Adulteration act, 1954, etc. This entire bunch of old laws together with the Consumer Protection Act, of 1986 has now empowered Indian consumers quite a lot.

1A.13 UNIT END QUESTIONS

Q.1 Discuss the details of the Consumer Protection Act and also explain how does the consumer get justice when their rights are violated?

Q.2 Explain the rights enjoyed by unpaid buyers.

Q.3 What is an essential commodity? Explain how the act protects consumers about the supply of essential commodities.

1A.14 REFERENCE:

* Dey, Indra. "Consumer's Movement in India »." *IILS Blog*, 6 Apr. 2015, www.iilsindia.com/blogs/consumers-movement-in-india. Accessed on 11 April 2022

* ClearTax. "Consumer Court India." Defmacro Software Pvt. Ltd. Copyright (c) 2016, 7 June 2021, cleartax.in/s/consumer-court. Accessed on 12 April 2022

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SIGNIFICANT, CONTEMPORARY RIGHTS OF CITIZENS

B. Right to Information

A new era of transparency and accountability

Unit Structure

1B.0 OBJECTIVES

After studying the unit students will be able to understand-

- The origin of the right to information movement.

- Objectives of the Right to Information Act 2005.

- Features of the Right to Information Act.

- The process to apply information.

- Success stories of the Right to Information.

- Challenges in implementation of the Act.

1B.1 INTRODUCTION:

The right to Information Act 2005 came fully into effect on12th October 2005. It is one of the most significant legislations enacted by the Parliament in India. It is a major step towards a more accountable and transparent government. RTI has been enacted to provide for setting out the practical regime of right to information for citizens to secure access to information under the control of public authorities to promote transparency and accountability. The Act will certainly lead to the end of the culture of government secrecy and fulfill its potential as a truly great democracy.

1B.2 ORIGIN OF THE RIGHT TO INFORMATION ACT 2005

The first and far most well-known right to information movement in India was the Mazdoor Kisan Shakti Sanghatan (MKSS), an organization for the empowerment of workers and landless workers, and rural poor, which began its right to information work in Rajasthan during the early 1990s. The MKSS started the grass route movement, demanding access to government information on behalf of wage workers and small farmers who were often deprived of their rightful wages or their just benefits under the government schemes. Hence through the innovative concept of Jan Sunvai or public hearing, MKSS started demanding information from local authorities regarding the wages, muster rolls, and materials used for the construction of roads during famine relief work. However, despite the modest beginning in the villages of Rajasthan, the success of MKSS has been a source of inspiration for activists in India demanding information from the bureaucracy and the government. The struggle of MKSS activists led to a nationwide demand for a law to guarantee the RTI to every citizen, with widespread support from social activists, professionals, lawyers, and media who are committed to transparent and accountable governance and people empowerment. The MKSS movement in Rajasthan was a turning point in the RTI movement and showed that even illiterate, socially mute, and exploited laborers could assert and get their other rights conceded by invoking the RTI.

The social movements in Rajasthan and other states led to the formation of the National Campaign for people's Right to Information in 1996. In the various state, RTI laws were passed during this period, including Tamilnadu, Delhi, Maharashtra Karnataka, Assam, Madhya Pradesh, and Goa. Finally, the national Freedom of Information Act was passed in 2002. However, this Act was not notified and the newly elected government (after General Election in 2004), got the Right to Information Act passed in Parliament in 2005.

1B.3 OBJECTIVE OF THE ACT

1. To promote transparency and accountability in the functioning of the government.

2. To set up a practical regime for giving citizens access to Information that is under the control of public authorities.

3. To empower the citizens as the law will promote the participation of the citizens in official decisions that directly affect their lives.

4. The effective implementation of the RTI Act will build public trust in the government's functioning.

5. It will lead to effective and efficient records of the management technique that is needed to facilitate the provision of information in response to the public interest.

Check your Progress

1. Write a note on right to information movement led by MKSS.

2. State the objectives of the Right to Information Act 2005.

1B.4 WHAT IS RIGHT TO INFORMATION?

Government information is a national resource so neither the particular government of the day nor public officials create information for their benefit. The government and officials are trustees of this information for the people. The RTI act enables the citizens to obtain access under the law to documents that may be available only at the discretion of the government.

The RTI Act 2005 provides effective access to information for citizens of India, which is under the control of public authorities. This overrides the Official Secrets Act and similar laws and rules.

The Act primarily envisages setting out a practical regime of right to information for citizens to secure access to information under the control of public authorities, to promote transparency and accountability in the working of every public authority.

Right to Information means the right to information accessible under this Act which is held by or under the control of any public authority and includes the right to: -

(i)   Inspection of work, documents, and records.

(ii)   Taking notes, extracts, or certified copies of documents or records.

(iii)   Taking certified samples of material.

(iv)   Obtaining information in the form of diskettes, floppies, tapes, video cassettes, or in any other electronic mode or through printouts where such information is shared in a computer or any other device.

As a result, all information held by or under the control of a public authority is accessible to a citizen, unless the information is exempt from disclosure.

i. What is Accessible under the Law?

The following are the sources that can be accessed under the law:

● Information means any material in any form, including records, documents, memos, e-mail, opinions, advice, press releases, circulars, orders, log books, contacts, reports, papers, samples, models, data material held in any electronic form, and information relating to any private body which can be accessed by a public authority under any law for the time being in force.

1B.4.1 Process

Application has to be submitted in writing with the prescribed fee to the public information officer (PIO).

Citizens can submit applications personally or by post in writing or through electronic means in English or Hindi or the official language of the area, to the Public Information Officer (PIO) specifying the particulars of the information sought for; along with fees; as may be prescribed (if not belonging to the below poverty line category). There are no required reasons for seeking information.

Proof of Receipt of RTI application

Applicant must retain a copy of the application for RTI given to the Public Information Officer (PIO) with the signature of the PIO for its receipt in any of the following ways.

(i) given by hand;

(ii) by registered mail;

(iii) by speed post through a postal department service.

There is a three-level regime for receiving information. The first-level officers are designated by every public authority to receive applications from citizens. At the second level, senior officers are designated by every public authority to look into those applications of citizens where the information sought is refused by first-level officers. If the information sought is refused or supplied information is unsatisfactory to the applicant, he/she has every right to appeal to the Departmental Appellate Authority (DAA) of the same department. At the third level, the state government sets up an independent State Information Commission (SIC). This SIC is empowered to monitor those cases where the applicants are unsatisfied with DAA's decision. SIC is also empowered to impose a fine of Rs. 250/- per day up to a maximum of Rs. 25000/-, if the application is not received without any reasonable cause and can also recommend disciplinary action.

Information has to be provided within 30 days and 48 hours where life or liberty is involved. Therefore, every PIO will be liable for a fine of Rs250/-per day up to a maximum of Rs25000/-for-

1. None accepting an application.

2. Malefice denying information

3. Delaying information release without reasonable cause.

4. Knowingly providing incomplete, incorrect, misleading information.

5. Destroying information that has been requested.

6. Obstructing furnishing of information in any manner.

2.1.1 Definition of Public Authority:

Any authority created by any Law operative in the country, either of the Central Government or the State Government shall be a Public Authority. The entire Government machinery, the ministries, the departments, and every organ of these ministries and departments shall be public authorities. In the crux, every authority which is managing anything in the country on the behalf of the government is a Public Authority and the citizens can request the information from the above-mentioned bodies. The entire institution of self-government in India, the Panchayati Raj is also a Public Authority. Hence by this process of accessing information, citizens can participate more directly in the administration and governance of society.

2.1.2 Check your Progress

Q.1. Define the concept of Information described in the RTI Act?

Q.2. What kind of information is accessible under the RTI Act?

1B.5 FEATURES OF RTI

- The Act extends to all over the part of India except Jammu & Kashmir.

- All the citizens shall have the right to information, subject to provisions of the Act. The RTI empowers the citizens to ask any question or seek any information from the government authorities such as central, state, or local governments.

- It shall apply to Public Authorities as follows:

  Any authority or body or institution of self-government established or constituted by or under the constitution. Also, by any law made by the appropriate government or, any other body owned, controlled, or substantially financed directly or indirectly by the appropriate government. It includes non-government organisations substantially financed by the government.

- The Act lays down the machinery for the grant of access to information. The public authorities are required to designate Public Information Officer and Assistant Public Information Officer within the hundred days of enactment to accept the request forms and provide information. The Public Information Officers/Assistant Public Information Officers will be responsible to deal with the requests for information and also assisting persons seeking information.

- The Act envisages the creation of independent non-judicial machinery viz, Central Information Commission, State Information Commission. Also, the legal framework for the exercise of powers by the commission has been defined in the Act.

- The Act also provides the two-tier Appellate forum. The first appeal is to be made to the departmental officer senior to the Public Information Officer. The second appeal is to be made to State Commission.

- The fee will be payable by the applicant depending on the nature of the information sought. The time limit has been prescribed for the compliance of information depending upon the information requirements.

- The certain categories of information have been exempted from the disclosure under Section 8 and 9 of the Act to conduct International Relations, security of the State, trade and commercial secrets, intelligence agency, etc.

- Central Information Commission and the State Information Commissions monitor the implementation of the Act and prepare an annual report to be laid before the Parliament / State legislatures.

Check your progress.

Q.1. Enumerate the features of the Right to Information Act 2005.

1B.6 RTI AND TRANSPARENCY AND ACCOUNTABILITY IN GOVERNMENT

Democracy requires an informed citizenry and transparency of information which are vital for its functioning. It is also having citizens' right to ask for information in every sector of authorities' bodies. Hence access to information secures and promotes transparency and accountability in every public authority. It diminishes the corruption practices.

The greater the access to the information the greater would be the responsiveness of the government to the needs of the people. However, without any authentic information, people cannot exercise their rights and duties.

RTI is a major step towards a more accountable and transparent government. It will certainly lead to the end of the culture of government secrecy and fulfill its potential as a truly great democracy.

The Act provides for setting out the practical regime of the right to information under the control of the public authority to promote transparency and accountability in the working of every public authority.

The promulgation of this Act set the stage for transparency in the functioning of the government and its various agencies.

Under this Act access to information from the public agency has become a statutory right of every citizen. Ordinary citizens do not have much information about how decisions are made and hoe public resources utilizes. Right to Information Act is a vehicle for greater transparency about the manner of functioning of public   agencies.

However, before this Act, the accountability of public authority was practicably minimal. The citizens can now question, audit, review, examine, and access government records, acts, and decisions to ensure that these are consistent with the principles of public interest, good governance, and justice. This act promotes transparency and accountability in administration. The act provides a framework for the promotion of citizen-government partnership in carrying out the programme for the welfare of the people.

When the government is transparent, there is less chance for corruption and more room for accountability.

For instance, people feel more powerful, and their bargaining power vis-à-vis public officials has increased manifold. The Act has resulted in greater transparency in governance.

The Act has become a powerful instrument for citizens and social activists to access information from the bureaucracy and thereby ensures greater accountability and transparency in decision making.

The Act aimed to concentrate power in the hands of the citizens who may demand, even without giving a reason, any information which they think will help them exercise their rights more effectively and take an informed decision.

Furthermore, even the judiciary has liberally interpreted the provisions of the Act, thereby making the public authorities more accountable. For instance, in Shyam Yadav vs. Department of Personnel. Training, the Central Information Commission held that property statements filed by civil servants are not confidential and information can be disclosed after taking the views of concerned officials as per the provisions of the RTI Act.

Check your progress

Q.1. Bring out the importance of transparency in the functioning of the government.

1B.7 SUCCESS STORIES

There are innumerable inspiring stories about the RTI Act reinforcing the belief that power in a democracy is concentrated in the hands of people.

In 2006 seventy-year-old rickshaw puller from Bihar filed an RTI application with the help of a local NGO. He wanted information connected to his application under the Indira Awas Yojana (a national housing scheme). The block development officer on receiving his

application handed it over him a cheque of Rs15000/-, his first instalment under Indira Awas Yojana.

In 2007 Vaishnavi Kasturi a visually impaired student was denied admission to the Indian Institute of Management, Bangalore, one of the premier management institutes, despite her impressive score in the entrance examination. She wanted to know whether it was because of her physical disability or anything else. Therefore, she has filed RTI application to request the institute disclose its selection process. Although she failed to gain admission to the institute, her RTI application meant that IIM had to make its admission criteria public.

In 2008, information obtained through RTI application by NGO based in Punjab revealed that bureaucrats heading local branches of the Indian Red Cross Society used money intended for victims of the Kargil war and natural disasters to buy a car, air conditioners, and pay for hotel bills- among other things. Local courts charged the officials responsible with fraud and funds were transferred to the Prime Minister's Relief Fund.

In another case the Indian Railway Pensioners Association, Bhavnagar division of western railway, since 1997 were submitting hundreds of representations to the General Manager of the western railway and DRM Bhavnagar to get the payment of pensioners. There was a total of 137 specific cases of non- payment were filed in the Pension Adalat, but nothing happened. When a request under RTI Act 1B005 was submitted to CPIO western railway accepted the liability for making payment and all the divisions of western railway were advised to take an immediate step for making payments.

The Janawad Scam known as —the mother of all rural development scams in Rajasthan was exposed through the Right to Information Act. In the 1990s the Janwad Panchayat in Rajasthan district began spending over rupees one corer fund annually, out of which over seventy percent of the money was siphoned off by a corrupt nexus between Sarpanch and the government officials. The Scam was exposed by villagers who used their right to information to nab the culprits. A government dispensary in the district was at the heart of the scam in Janwad Panchayat. Though it was built in 1960, in 1995 the then Sarpanch siphoned off nearly two lakh rupees claiming to be a new building. Two years later the Rajasthan Information Act made it compulsory to display in Panchayat offices the details of all development works and villagers soon caught the corrupt Sarpanch. The government took a tough action against the corrupt Sarpanch was jailed and thirteen government officials involved in the scam were suspended. The annual social audit of Panchayat funds was made mandatory.

Thus citizens are using RTI Act to get the information in everyday life like recovery of pending insurance policy dues, obtaining ration cards, tax refunds, provident funds transfer, school, and colleges admissions, and public issues like maintenance of public places like gardens, roads, corporation budgets, transport services, etc.

1B.8 CHALLENGES

- The general awareness amongst people about the RTI Act and its functions is still not expanded up to the mark of the citizen.

- There is a lack of sincerity on the part of government officials in providing the information.

- Lack of man power to comply with all the provisions of the Act in the official institutions.

- Lack of necessary infrastructural facilities causes a delay in providing information, especially in rural areas.

- The cases of misuse of the RTI Act are also increasing.

- The PIOs are not adequately trained about the different provisions and rules of the act regarding procedures to be followed in disseminating information.

- The PIOs have the same old colonial mind set and they try to guard every piece of information and work in secrecy under the Official Secrets Act. The bureaucrats deny information to the citizen to save themselves from criticism and feel uncomfortable with the notion of transparency.

- Attacks on RTI activists have also been a major deterrent in the RTI movement. There are no provisions to protect the applicant.

1B.9 SUMMARY

The RTI Act as it stands today is a strong tool to uphold the spirit of democracy. The act is influencing the people to come forward and question the progress of various welfare schemes creating positive change.

The true potential of the RTI Act is still to be explored, especially in rural India where villages find it very cumbersome to file RTI applications.

A little more stimulation by the government and other enlightened and empowered citizens can augment the benefits of this act manifold.

The catalytic role of the government and the NGO in implementing the RTI Act needs to be appreciated and supported by the people at large.

Real and true governance can be achieved not only by the acquisition of authority by law but also by the acquisition of the capacity to resist authority when they mistreated information.

1B.10 KEYWORDS

- Information, public authority, accountability, transparency.

1B.11 UNIT END QUESTIONS

1. Discuss the genesis of the Right to Information movement.

2. Explain in detail the Right to Information?

3. Discuss the features of the Right to Information Act 2005.

4. Right to information leads to accountability and transparency in administration. Discuss in brief.

5. Enumerate the hurdles in the implementation of the Right to Information Act.

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SIGNIFICANT, CONTEMPORARY RIGHTS OF CITIZENS

C. Public Interest Litigation

Unit Structure:

1C.0 OBJECTIVES

- To know the meaning of Public Interest Litigation.

- To understand the concept of the Public Interest Process.

- To file Public Interest Litigation.

- Need for Public Interest Litigation.

1C.1 INTRODUCTION

Public Interest Litigation is an important instrument of social change. It is working for the welfare of every section of society. It is an institutional

initiative toward the welfare of the needy of society. The term has become a common currency panacea for all ills-be it's human rights violations, consumer protection, personal liberty, environmental degradation, or the right to life. It has now become the characteristic feature of the higher judiciary in India. The PIL develops a new jurisprudence of the accountability of the state for constitutional and legal violations adversely affecting the interest of the weaker elements in the community.

1C.2 WHAT IS PIL?

According to Black's Law Dictionary- Public Interest Litigation means a legal action initiated in a Court of law for the enforcement of public interest or general interest in which the public or class of the community have pecuniary interest or some interest by which their legal rights or liabilities are affected.

PIL in simple words means, litigation filed in a court of law, for the protection of Public Interest such as pollution, road safety, protection of ecology, human rights, violence, etc.

In India, PIL is not defined in any statute or any act. It has been interpreted by judges to consider the interest of the public at large. PIL was introduced in the 1980s under the aegis of Justice P. N. Bhagwati. PIL in India has been initiated by some judges of the supreme court themselves. According to Prof. Upendra Baxi, the PIL movement is primarily judge-led and even judge-induced in India. The movement began in the aftermath of the emergency in aid of the dispossessed and deprived and came to be known as judicial populism.

PIL is a group-oriented action. It involves the questions of injustice about a group. It is litigation that vindicated a right of a large number of people, perhaps millions, or, redresses.

1C.3 WHAT IS PUBLIC INTEREST?

The expression of public interest indicated something in which the general public or the community at large has some pecuniary interest or some interest by which their legal rights or liabilities are affected. The word litigation means legal action, including all legal proceedings initiated in a court of law to enforce a right or seek a remedy.

Check your Progress.

1. Define Public Interest Litigation.

2. What is Public Interest?

1C.4 NEED FOR PUBLIC INTEREST LITIGATION:

The traditional conventional judicial process in India is described as a colonial legacy unsuited to our conditions. After the independence, poverty, social and educational backwardness, financial constraints, and

other obstacles prevented the citizens from approaching the courts. Earlier Indian law states that the citizen whose fundamental rights had been infringed had the right to approach the supreme court under Art. 1C2 of the Constitution, but PIL has relaxed the rule, and now NGOs, public-spirited citizens, or any other organisation can approach the court on behalf of the people who belong to a class of poor, deprived, women or children for the protection of their rights. It is in harmony with the objectives enshrined in 1C9A of the Constitution of India to protect and deliver prompt social justice with the help of law. It is working as an important instrument of social change. It is working for the welfare of every section of society. It is used as a strategy to combat the atrocities prevailing in society. It is an institutional initiative toward the welfare of the needy class of society. It has helped the people who are poor, ignorant, or in socially, and economically disadvantaged positions to protect their fundamental rights. It is a device that enables the citizens to participate in judicial administration and makes the judicial process democratic. PIL has enabled the individuals, social groups, and NGOs to approach the courts of the country for seeking legal remedies and justice in all cases where the public interest is at stake. PIL is a people-friendly procedure. The PIL intends to ensure redressal for those who are poor to move to Courts and are unaware of legal procedures.

The PIL was created to empower ordinary citizens to write a letter and draw the attention of the apex court. Judicial action initiated through such a petition has brought relief to a wide variety of cases and has taken action against political corruption and accountability.

It seeks to draw the attention of authorities to their constitutional and legal obligations. The greatest contribution of the PIL has been the accountability of government towards the human rights of the underprivileged.

PIL enables civil society to not only spread awareness about human rights but also allows them to participate in the decision-making process.

In Bandhu Mukti Morcha v/s Union of India, Justice Bhagwati explained the nature of PIL as —PIL is not like an adversary litigation, but it is a challenge and opportunity for the government and its officers to make basic human rights meaningful to the deprived and vulnerable sections of the community. Also, to assure them of social and economic justice which is the significant tune of the constitution.

Justice Bhagwati further observed that the primary focus of PIL in India is state repression, governmental lawlessness, administrative deviance and exploitation of disadvantaged groups, and denial to them of their rights and entitlements.

1C.5 WHO CAN FILE PIL?

Any public-spirited person, NGO, or any other organisation can file a Public Interest Litigation in Supreme Court or High Court in India. Even a foreigner can file a PIL on behalf of others but this is necessary that only

the person who is filing a PIL should not get the benefit. Whoever is filing PIL should be only and only in for the benefit of the citizens. If only one person is getting affected by any act, then that is not a ground for filing PIL.

Check your Progress.

1. Bring out the need for PIL.

1C.6 HOW TO FILE PIL?

A PIL may be filed like a writ petition. However, in the past, the supreme court has treated even letters addressed to the Court as PIL. In the early 90s, courts had treated a complaining postcard as PIL.

It is different from ordinary litigation; in that case, it is not filed by one private person against another for the enforcement of personal justice. A PIL can be filed when there must be a public injury and public wrong caused by the wrongful act or omission wrongful act or omission of the state or public authority. This is just like a writ petition while it is filed in Supreme Court under Art. 1C2 and High Courts under Art. 226.

PIL can be filed against the Central/State government, Municipal authorities, and not any private party. There is a fee for filing the PIL and its hearing proceeds are also just like other cases.

1C.7 SUBJECTS OF PIL OR JURISDICTION OF PIL

Prof. S.B. Sathe has summarized the extent of the jurisdiction which is being exercised by the courts in the area of PIL as follows:

1. Where the concerns underlying a petition are not individualistic but are shared widely by a large number of people (bonded labor, under trial prisoners, prison inmates.)

2. Where the affected persons belong to the disadvantaged sections of society (women, children, bonded labor, unorganized labor, etc.)

3. Where the judicial law making is necessary to avoid exploitation (inter country adoption, the education of the children of prostitutes)

4. Where judicial intervention is necessary for the protection of the sanctity of democratic institutions (independence of judiciary, existence of grievances Redressal forums)

5. Where administrative decisions related to development are harmful to the environment and jeopardize people's right to natural resources such as air or water.)

There are various areas or subjects where PIL can be filed-

1. Violation of Human Rights of poor, deprived, women and children

2. Compel municipal authorities to perform a public duty.

3. Content of conduct of government policy.

4. Violation of religious rights or other basic fundamental rights.

5. Matters of harassment or torture of persons belonging to SC, ST, and EBC either by villagers or by the public.

6. Matters relating to environmental pollution, disturbances of ecological balance, drugs, food adulteration,

7. Maintenance of culture, forests, and wildlife.

8. Bonded labor matters.

9. The exploitation of causal laborers and non-payment of wages to them.

10. Petitions from riot victims.

11. Matters of neglected children.

12. Sexual harassment of women at work place.

13. For maintaining roads, and sewers in good condition.

14. Protection of public places like gardens and playgrounds.

15. The banquet hall plays loud music at night causing noise pollution.

Check your Progress.

1. Enumerate the process to file the PIL.

2. Discuss the subjects of PIL

1C.8 SOME CASES

a) **Missing children of India:**

Advocate Sarwa Mitra filed a PIL in Supreme Court demanding the direction of the center and all the state governments for tracing the 55,000 missing children in the country. Agreeing to hear the PIL a bench headed by Justice Aftab Alam sought a response from the center and states on the issue of missing children. The petitioner Sarwa Mitra claimed that almost all the states have failed to solve the kidnapping of 55,000 children by organised gangs. The state has failed to investigate the cases of kidnapping and had failed to trace the missing children, which is a total denial of the right to life and liberty of these innocent children.

b) **Installation of unauthorised mobile towers:**

Ashish Kumar Singh, an advocate in the high court of Jharkhand filed PIL against the installation of more than 400 unauthorised cell phone towers in the city of Ranchi without the permission of proper authorities. Children staying close to such towers, which receive and emit electromagnetic waves, were bound to lose the power of retention and resulting in memory

loss. The petitioner demands immediate action against the telecom companies and also directly from the court to remove such towers installed without proper authorisation. Acting upon the directives issued by the Court on the PIL, the Ranchi Municipal Corporation decided to act against companies that have installed mobile phone towers atop buildings and other places without seeking the mandatory no-objection certificate.

c) Fast track courts:

In January 2011C, in the aftermath of the Delhi gang-rape case of a para medical student, retired IAS officer Promilla Shanker pleaded in her PIL with the supreme court to direct the government to set up fast track courts in all states for expeditious trial of rape cases. The bench headed by Chief Justice Alltamas Kabir agreed to hear the PIL seeking direction from the government to ensure the safety of women and for fast-track courts proceedings in all rape cases. She also submitted that cases of rape and crime against women and children be investigated by lady police officials and trials be conducted by lade judges. Acting upon the PIL the court has issued the directive to the government to consider the system fast track courts to ensure speedy justice for victims of rape cases.

d) Vehicle parking at Shivaji Park:

A Mumbai City-based NGO, Wecom, which claims to represent the residents of Shivaji Park and two citizens filed a PIL in the Mumbai High Court stating that the government and civic bodies have not declared Shivaji Park and its vicinity as a silent zone as per the noise pollution (Regulation and Control) Act 2000. Also, the PIL contends that although Shivaji Park has been declared a —Kridasthan (playground or open ground), it is very often used for non-sports activities like festivals, political rallies, and on several occasions for car parking. A division bench of chief justice Mohit Shah and Justice S.C.Dharmadhikari restrained the civic body from permitting parking of vehicles including four-wheelers only except the ones which are used for cleaning the playground. The high court had also restrained the local police from granting permission for use of loudspeakers of any kind at functions in the park at night. The court also directed the municipal corporation to notify the iconic Shivaji Park ground and its periphery as a silence zone.

PIL as it has developed in recent years marks a significant departure from traditional judicial proceedings. It is now venturing into the formulation of policy in which the state must have to follow the guidelines. The people now expect the courts to issue directions to the legislature and executive through PIL on matters which are functions of the legislature and outside the ambit of the Judiciary.

1C.9 ABUSE OF PIL

PIL today has largely become publicity Interest Litigation,

Private Interest Litigation and Political Interest Litigation. The people are approaching the courts through PIL on matters which are outside the

domain of the courts. It has become a tool in the hands of powerful and influential people. Many frivolous cases have been filed in the courts through PIL. It has been noticed that such as important jurisdiction is blatantly abused by filing some petitions with oblique motives. The abuse of PIL has become more rampant than its use in genuine cases and causes. PIL has become a tool of harassment in some cases and could be filed without paying heavy court fees.

The credibility of the PIL process is now adversely affected by the criticism that the judiciary is overstepping the boundaries of its jurisdiction and that it is unable to supervise the effective implementation of its orders. It has been also increasingly felt that PIL is being misused by the people for their private interest and for seeking publicity.

Check your progress.

1. Write a note on misuse of PIL.

1C.10 SUMMARY

Public Interest Litigation is for any public interest. The expression of public interest indicated something in which the general public or the community at large has some pecuniary interest or some interest by which their legal rights or liabilities are affected. It is an instrument of social change. It has certainly helped in drawing the attention of the courts, government authorities, and society to the problems of poor, deprived classes in India. PIL has proved a boon for the common people in our society.

Hover ever some cases of abuse of PIL have been reported. PIL has been misused in various cases. There must be a screening process while filing the PIL. Heavy fines must be imposed on frivolous PILs. The courts must refrain from passing orders that cannot be enforced unless a suitable mechanism is formulated to prevent the filing of frivolous PIL, the entire object of Public Interest Litigation and Judicial activism will be eroded.

1C.11 KEYWORDS

• Litigation, public interest.

1C.12 UNIT END QUESTIONS

1. Discuss the need for Public Interest Litigation.

2. Enumerate the process to file the PIL.

3. Bring out the role of the judiciary in the PIL movement.

4. Bring out the subject area of Public Interest Litigation.

5. Suggest some measures to control the misuse of PIL.

6. PIL is an instrument of social change. Discuss.

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SIGNIFICANT, CONTEMPORARY RIGHTS OF CITIZENS

D. Citizen's Charters, Public Service Guarantee Acts

Unit Structure

1D.1 Introduction

1D.2 The main aspects of Citizens Charters in India are as follows

1D.3 Public Services Guarantee Act

1D.4 References

1D.1 INTRODUCTION

The concept of the Citizens' Charter enshrines the trust between the service provider and its users. The concept was first articulated and implemented in the United Kingdom by the Conservative Government of John Major in 1991 as a national Programme with a simple aim: to continuously improve the quality of public services for the people of the country so that these services respond to the needs and wishes of the users. The Programme was re-launched in 1998 by the Labour Government of Tony Blair which rechristened its Services First.

(https://darpg.gov.in/citizens-charters-historical-background)

Principles for Governing Citizens' Charter are as follows:

1. Quality

2. Choice

3. Standards

4. Value

5. Accountability

6. Transparency

Citizens' Charter's main motif is to provide the standard service and commitment of the organisation towards citizens. As Tony Blair's Government listed the following principles of "Service First" -1998.

1. Standard of Service

2. Provide all information

3. Consult and Involve

4. Encourage access and promotion of choice

5. Treat all fairly

6. Put things right when they go wrong

7. Use resources effectively

8. Innovate and Improve

9. Work with other providers

Over the years, in India, significant progress has been made in the field of economic development. This, along with a substantial increase in the literacy rate, (from 51.63% to 65.38% in the last decade) has made Indian citizens increasingly aware of their rights. Citizens have become more articulate and expect the administration not merely to respond to their demands but also to anticipate them. It was in this climate that since 1996 a consensus had evolved in the Government on effective and responsive administration. In a Conference of Chief Ministers of various States and Union Territories held on 24 May 1997 in New Delhi, presided over by the Prime Minister of India, an 'Action Plan for Effective and Responsive Government' at the Centre and State levels were adopted. One of the major decisions at that Conference was that the Central and State Governments would formulate Citizens' Charters, starting with those sectors that have a large public interface (e.g. Railways, Telecom, Posts, and Public Distribution Systems). These Charters were required to include standards of service and time limits that the public can reasonably expect, avenues of grievance redress, and a provision for independent scrutiny with the involvement of citizen and consumer groups.

The Department of Administrative Reforms and Public Grievances in Government of India (DARPG) initiated the task of coordinating, formulating, and operationalising Citizens' Charters. Guidelines for formulating the Charters as well as a list of do's and don'ts were communicated to various government departments/organisations to enable them to bring out focused and effective charters. For the formulation of the Charters, the government agencies at the Centre and State levels were advised to constitute a task force with representation from users, senior management, and the cutting edge staff.

The Charters are expected to incorporate the following elements:

 (i)   Vision and Mission Statement;

 (ii) Details of business transacted by the organisation;

 (iii) Details of clients;

 (iv) Details of services provided to each client group;

 (v)   Details of grievance redress mechanism and how to access it;

 (vi) Expectations from the clients.

(https://darpg.gov.in/citizens-charters-historical-background)

1D.2 THE MAIN ASPECTS OF CITIZENS CHARTERS IN INDIA ARE AS FOLLOWS:

1. Coordinative Agency: According to the Department of Administrative Reforms and Public Grievances the Government of India (DARPG) has initiated the work on coordinating, formulating, and operationalizing Citizen's Charters. Therefore, the various guidelines about the list of 'do' and 'don'ts were communicated to the various government departments for the implementation of an effective charter.

2. **To incorporate the elements of Charters:** There are various elements to incorporate:

● Vision and Mission Statement

● Details of business

● Details of clients

● Details of services

● Details of grievances

● Expectations from the clients

3. Monitoring by External Agencies: There's necessary the involvement of consumers organisation, citizen groups, various stakeholders. Also reviewing, and evaluation of works is carried out in the process.

4. Comprehensive website on Citizens' Charters: A Comprehensive website of Citizens' Charters in Government of India www.goicharters.nic.in) has been developed and launched by the Department of Administrative Reforms and Public Grievances on 31 May 2002.

5. Enactments of the Citizens' Charter:

Efforts and initiatives of the government on the Citizens' Charter were continuing, it was realised that exemplary implementation of the Charter in a major public interface area of government would not only establish the new concept in the inertia-prone bureaucracy but also act as a role model for replication in other sectors/areas.

1D.3 PUBLIC SERVICES GUARANTEE ACT

Right to Public Services legislation in India consists of statutory laws which guarantee timely delivery of public services by the Government for the citizens. It provides a mechanism for punishing transgressive behaviors of public servants who fail to provide services sufficiently that fall under their stature. Madhya Pradesh is the first state in India to impose the Right to Service Act on 18th August 2010 followed by Bihar which implemented it on 25th July 2011. Several other states like Delhi, Goa, Odisha, Haryana, Maharashtra, Kerala, Punjab, Rajasthan, etc. have also introduced similar legislations.

Main Features:

1. **Objectives:** Various guarantees converge and fall under the umbrella of The Right to Public Services (RTPS) Acts at the state level. RTPS Acts aims to provide better public services, reduce corruption, impose a time frame for delivery of services and universalize public services.

2. **Procedures to Access to Services:** The procedure to access services under RTPS follows a similar pattern across states. The citizens approach the designated authorities, apply for the required service, receive an acknowledgment of the application and then the service is provided within the stipulated duration. A citizen can appeal if s/he is denied service or the service is delayed.

3. **Redressal:** If the designated officer fails to provide the service within a stipulated time, the aggrieved citizen can approach the First Appellate Authority who can, after making a hearing, accept or reject the appeal. The First Appellate Authority will provide a written order stating the reasons for the order and may also order the public servant to provide service to the applicant.

4. **Appeal:** An appeal can be made from the order of the First Appellate Authority to the Second Appellate Authority in case of dissatisfactory results. The Second Appellate Authority can either accept or reject the application by providing a written order stating the reasons for the decision.

5. **Penalty:** The Second Appellate Authority can order the public servant to provide service to the aggrieved or impose a penalty from Rs 500 to Rs 5000 on the public servant for deficient service.

6. **Compensation:** The applicant may be compensated out of the penalty imposed on the public servant. This compensation falls under the powers granted to the Civil Court under the Code of Civil Procedure, 1908.

7. **Process Simplification:** Timely delivery of services can be ensured by simplifying the process of application by reducing the number of steps involved. This simplification also entails measures to make the procedure transparent, citizen-centric, and fixing accountability for the delivery of services. The use of Information Technology (IT) helps to simplify the application process through online registrations and applications.

8. **Public Awareness Measures:** Public services can be made more citizen-centric only if the citizens are educated about the guarantees and how to utilize the appeal process provided by RTPS. Therefore, there is a need to make the public aware of their rights.

9. **Challenges related to citizen awareness:** In the smooth implementation of RTPS, the citizens must be aware of not only their rights and services but also the Act under which they fall. For RTPS to be effective, citizens must know the contents of the service, eligibility,

process, and cost for accessing the service, and the process of approval, delivery, and maintenance of the service.

10. Impact: Based on the interactions with government officials, it has been found that citizens have been more than satisfied due to the implementation of RTPS Acts. It has reduced corruption and guaranteed timely delivery of services.

Check your progress.

1. Explain Citizens' Charters and Public Service Guarantee Acts.

1D.4 REFERENCES:

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E-resources:

- https://panchayatcharter.nic.in/#/

- https://darpg.gov.in/citizens-charters-historical-background

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Module II

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2A

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A. APPROACHES TO UNDERSTANDING ECOLOGY

Unit Structure

2A.0 OBJECTIVES

- To understand the meaning of ecology

- To know the various approaches to studying ecology

- To understand the evolution of various concepts related to environmental ethics.

2A.1 AN INTRODUCTION

Although there is a common understanding of the nature and environment around us, the perception of the same differs to large extent. The religious perception of nature and environment may be spiritual, economic perception may be resource-oriented and based on its utility. Similarly, an academician   may see to it purely in terms of its structure, functioning, and system. These approaches to learning ecology, nature, or environment may not be wrong; but they are certainly not cohesive and complete. It is, therefore, worth understanding ecology from a different perspective to get its cohesive and complete depiction.

2A.2 ECOLOGY

Ecology is the study of the interrelation between abiotic and biotic things in the region. As ecology has a hierarchical setup. It can be studied at the micro as well as macro levels. Micro ecology becomes a part of macro ecology. e.g. one single tree has its ecosystem; while the same tree becomes a part of a larger ecosystem of the forest in which it is situated.

2A.3 STUDY OF AN ECOSYSTEM

Scientists studying ecosystems are called ecologists. Ecologists study the interrelations between the biotic and biotic factors and try to understand the degree of this relationship. They also study the problems and the issues related to the functioning and survival of ecosystems. Ecologists are concerned with land, sea, and water ecologies. They work at different levels like community level, population level, and biome level. Ecologists may also focus on a specific ecosystem like a forest ecosystem, grass-land ecosystem, pond ecosystem, marine ecosystem, and alike.

There are different approaches to studying the ecosystem and ecologists divide widely in their focus and approaches. If fact, the philosophical development in the field of ecology has put- forth the diverse viewpoints in the study of ecosystem /ecology.

There are predominantly five dimensions or approaches to the study of ecology. Every approach has its perspectives. Different perspectives make the concept of ecology sufficiently rich to adopt its best at the end.

Five approaches to understanding ecology are:

Anthropocentrism Biocentrism

Eco-centrism Eco-feminism Deep ecology.

2A.4 ANTHROPOCENTRISM

An anthropocentrism is a human-centric approach. Ecologists, particularly in the western world, adopting this approach, keep the human race at the center. It is like the humans, by the humans and for the human's ideology of dealing with ecology. Here, ecological existence is considered in terms of its utility to humans.

Important features of this approach are,

1. Human beings are considered to be at the center or most significant in the universe.

2. Many western philosophers consider humans to the separate and superior entities in nature.

3. Other resources (animals, plants, minerals, etc.) may be justifiably exploited by humans -not just as a chance, but as a right- for the benefit of mankind.

This approach, however, is not acceptable on several counts. The main critics of this approach are as follows:

1. This approach is formulated from the human perspective only and this may not be the only reality.

2. Ecology cannot be considered only in terms of its usefulness to humans. It's rather a selfish attitude.

3. This approach ignores the value of every aspect of ecology/ universe.

4. The perspective is to understand the ecology and its very purpose of existence beyond human perception is ignored.

However, there is also one view that threats perceived due to humans' actions and projections of damage made by humans are not realistic. It is also believed that there is nothing wrong to consider humans at the center as humans only, with their ability and technological assistance, can restore ecological damages. Humans can restore not only the ecology of the earth but also can understand the universe from a wider perspective.

Check your Progress

Q.1 Ecology is a study of the interrelation between .... and ....factors of nature.

Q.2 Scientists studying ecology are called ……….

Q.3 Anthropocentrism is ……… centric approach toward ecology.

Q.4 What is the main criticism of the Anthropocentrism approach?

2A.5 BIOCENTRISM

Humans are a part of the environment, and not apart from the environment. This is an important view behind the term biocentrism. Biocentrism stands in contrast to anthropocentrism. Modern thinking now deviates from human-centric anthropocentrism. The affinity, awareness, and better understanding of nature by man have led to a new approach to studying ecosystems as biocentrism. In biocentrism, the entire nature is respected and the inherent worth of every species, including humans, regardless of its uses and hierarchy is valued. Biocentrism does not believe in any order or hierarchy of organisms and humans are considered on par with other species. Biocentrism denies the so-called moral and ethical superiority of humans. Biocentrism further states that each organism- small or big- has a purpose and a reason for its existence. Perhaps every organism plays some or other role which is good, valuable, essential, and inevitable.

This approach is well received by many ecologists. The very concepts of the conservation of nature, preservation of biodiversity; animal rights, and environmental protection have emerged from the acceptance of biocentrism.

Important features of this approach are as follows:

1. It is nature/earth-centered.

2. It extends values to the plants and animal species, natural resources, ecosystem, and processes of nature beyond their relevance or importance to mankind.

3. Humans are members of a community of life on equal terms with all other species in ecology.

4. There is an interdependence between all members of the species.

5. Every organism has a purpose and a reason for being, which is inherent —good —or —valuable

6. Humans are not superior to other species.

Check your Progress

Q.1 Bio-centrism is ……… centric approach toward ecology.

Q.2 What is the outcome of the Bio-centrism approach?

Q.3 State any three important characteristics of Bio-centrism?

2A.6 ECO-CENTRISM

This approach to understanding ecology is also nature-centered. Eco-centrism believes that there is hardly any difference/ division between humans and nonhumans. It further believes in equality among human and nonhuman organisms with their internal association. Thus, it does not agree on an equal value of all organisms.

Eco-centrism argued that humans were important beyond doubts but more than that the ecosphere as a whole is more significant, inclusive, and integrated. Eco-centrism expresses that the overall ecosphere is vast beyond the imagination of humans. Eco-centrism is also a wider concept and goes beyond biocentrism. It believes that humans are part and partial of entirely organic and inorganic i.e. biotic/abiotic nature. The concept of eco-centrism states that all species on the earth are part of the common and only process of evolution and their lifecycle are interrelated. Eco-centrism lacks faith in modern technology and a red-tape attitude of managing ecology. Egocentrism argues that nature has its processes and products.

Important features of this approach are:

1. Nature is of prime importance and it is a nature-centered system of values.

2. An entire ecosystem is very vast beyond the comprehension of humans.

3. There is equity among all organisms and humans are part of it.

4. It is described as a fundamental shift in the values of human beings on planet earth.

5. It targets humans for their contribution to environmental degradation.

6. It states that all species including humans are the product of a long evolutionary process and are interrelated in their life processes.

7. Eco-centrism strives to maintain ecosystem composition and ecological processes.

Eco-centric does not support the traditional consumptive and resourcefulness of nature. Eco-centrism states that environmental health is beyond the comparison with economic gain. However, critics of egocentrism believe that this approach is anti-human.

Check your Progress

Q.1 What is the meaning of Eco- centrism?

Q.2 According to Eco-centrism, who is responsible for   environmental degradation?

2A.7 ECO-FEMINISM

This approach has a root in the feminist movement. Feminism believes that the mentality, psychology, and attitude towards both oppression of women and abuse of the environment are the same. Therefore, the principle of the philosophy behind eco-feminism states that male-dominant culture assesses nature, trees, animals, and land only by their economic value and contribution to GDP. Further, eco-feminism believes that the degradation of nature (in any region) leads to the degradation of women.

It is claimed that women have better knowledge of the ecological processes and hence have a deep connection with the environment due to regular interaction while fetching several resources including water. Eco-feminism also believes that consumption of the resources like food, wood, and minerals that have traveled thousands of kilometers is not tenable on any count. This is an abuse of ability as well as a robbery of ecology. Similarly, the development of landscape gardens and eco-tourism lead to ecological destruction.

Important features of this approach are listed below:

1. It is believed that caring nature and women are synonymous actions. The more you care and treat women equally, the more you protect nature.

2. Women acquire the knowledge of land\soil conditions, water, and other environmental features in a much better way than their male counterparts.

3. Women are excluded from policy decisions of development despite their better understanding of nature.

4. Eco-feminist insists on cooperation, mutual benefits, respect, love, and care as the foundation of ecological just, fair and sustainable alternatives.

5. Women are responsible for the production and reproduction of life and therefore need to be directly concerned with preserving environmental integrity to ensure food security, water safety along with healthy environment for their children and family.

6. Eco-feminist holds industrialisation responsible for toxicities of land and water bodies that directly effects women's health.

7. As a social movement they have been involved in social struggle against mega-dam projects (e.g. Narmada Bachao Andolan), nuclear power plants (e.g. Jaitapur), agro-business, deforestation (e.g. Chipko movement) and toxic waste dumps.

Eco-feminism is criticised this approach is one-sided and partial to women. Furthermore, critics believe that the analogy of women with nature is too idealist to accept and thus deviates from the realistic conditions. It is also argued that very gender equality is ignored by eco-feminism which is otherwise a common expectation in normal circumstances. It is further expected that gender (equality) is the relevant factor in accessing and controlling natural resources for social justice.

Check your Progress:

Q.1 How is eco-feminism connected to the feminist approach?

Q.2 How does caring for nature and women synonymous?

2A.8 DEEP ECOLOGY

Deep ecology states that every organism in the living environment has the same right to live and flourish. The very concept of deep ecology is related to answering deeper questions like, **how** should we live. **Why is** environmental protection a must? **What** is the level of interdependence among biotic and abiotic factors of ecology? **Where** do humans stand in the biotic community? etc.

The deep ecology concept focuses on the deep commitment to the environment. Deep ecology provides guidelines for human activities.

Important features:

1. The well-being and flourishing of human and nonhuman life on earth are interrelated. Further, the infinite value of both humans and nonhumans is independent of their usefulness to each other.

2. Planet earth has a rich diversity of plants and animals living in different habitats and they depend on each other for their survival. The richness and diversity of life forms contribute to the recognition of nature values.

3. Deep ecology concentrates on the causes of the environmental problems rather than simply responding to the symptoms of the problems.

4. Humans have no right to reduce this richness and diversity except to satisfy vital human needs.

5. The flourishing of human life and cultures is well-matched with the substantial decrease in the human population. The flourishing of nonhuman life also requires such population control.

6. Present human interference with the non-human world is excessive and the situation is rapidly worsening.

7. Policies affecting the basic economic, technological and ideological structures must be changed. The resulting state of affairs will be deeply different from the present.

8. The ideological change is mainly that of appreciating life quality rather than adhering to an increasingly higher standard of living.

2A.9 SUMMARY

From the above discussion, it is clear that ecology is the base and foundation not only for mankind but also for the entire system. It is a huge concept even beyond humans' comprehension and hence ecology must be cherished beyond humans' interest.

2A.10 UNIT END QUESTIONS

Q.1 Define the terms ecology and ecosystem.

Q.2 What are the different approaches toward ecological studies?

Q.3 Briefly explain the anthropocentrism approach to understanding ecology.

Q.4 Distinguish between anthropocentrism and eco-centrism.

Q.5 Bring out the salient features of the biocentrism approach to explaining ecology.

Q.6 How is the eco-feminist approach different from other approaches to ecology? Explain with examples.

Q.7 Define deep ecology and explain its characteristics.

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B. ENVIRONMENTAL ETHICS AND ECOLOGICAL PRINCIPLES

Unit Structure

2B.0 Objectives

2B.1 Environmental Ethics-meaning

2B.2 Libertarian View

2B.3 Ecological View

2B.4 Conservation View

2B.5 Eco-spirituality

2B.6 Sustainability and Polluter pays principle

2B.7 Principle of fair Carbon Share

2B.8 Summary

2B.9 Unit End Questions

2B.0 OBJECTIVES

- To know the meaning of environmental ethics

- To be acquainted with different kinds of views on environmental ethics

- To understand the concept of the Principle of Fair Carbon Share.

2B.1 ENVIRONMENTAL ETHICS- MEANING

Ethics is a part of philosophy and guides us to follow the righteous path which is in the larger interest of the society. Environmental ethics is related to environmental philosophy and defines what is right and wrong at the ecological level. It is more a moral binding than legal compulsions. Practicing environmental ethics is, therefore, left to an individual. The outcome of such practices is always par excellence since it comes from voluntarily and with dedication. Educating today's youths, thus, becomes more significant to achieving the expected outcome.

The religious school of thought was the first philosophical ground to advocate environmental ethics. So every religion has strongly affirmed respect for rivers, animals, and the ecology nearby.

Modern philosophy on environmental ethics has evolved in the second half of the twentieth century. The population explosion, environmental degradation, resource crisis, etc. are the problems that drew attention to the environmental concerns. However, it also raised some challenges when deciding the environmental ethics in the contemporary situation. The disparity among society, nations, and regions; the basic right to procure the resources for daily livelihood; the right to access to resources, etc. were the key challenges in designing environmental ethics. It has led to different views on environmental ethics. It also led to the formulation of different approaches to environmental ethics. There are primarily three views on environmental ethics:

1. Libertarian View

2. Ecological View

3. Conservation View

2B.2 LIBERTARIAN VIEW

This view is correlated to the principle of civil liberty. As civil liberty follows the commitment to equal rights for every member of the community, the development of ethics to deal with men's relationship with land animals, and the plant is essential. Social conscience from people to land and nature is equally inevitable. It is not right to see the natural world simply in the terms of its economic worth to humans. Therefore equal rights or liberty to all human and nonhuman members in the environment is the principle doctrine of the libertarian view.

Check your Progress

Q.1. What do you mean by the concept of environmental ethics?

Q.2. How are principles of civil liberty and environmental liberty correlated?

2B.3 ECOLOGICAL VIEW

The ecological view demonstrates ecological functioning. On ethical grounds, it is believed that the earth has its mechanism for functioning, growth, and development. Nature has its own purification processes and recovery systems of life even in most adverse conditions. Moreover, it is believed that whenever the climatic change had taken place, it took place within a very narrow range of regions to enable life to recover before it gets destroyed. This theory is in contrast to the Darwinian idea of "survival of the fittest." In support of this view, ecologists argue that many types of algae are resistant to ultraviolet radiation, and life would continue and new life would evolve even if the ultraviolet radiation possess a threat to the life on the earth. This theory warns humans to change their perceptions and understand them as a part of a whole system. However, later it was considered that as the global temperature rises higher and

higher there are more climatic disasters, and the planet may not be able to recover as it was previously thought. With a three-degree rise in global temperature, the rainforest will start to die releasing vast new amounts of carbon dioxide; in the oceans, the algae will fail and absorb carbon. It is, therefore, necessary to recognise the fundamental interdependence of all biological and abiological entities.

Check your Progress

Q.1. What mechanism does ecology have to minimize environmental damage?

2B.4 CONSERVATION ETHIC

The conservation ethic is an extension of instrumental value to the natural environment. It focuses only on the work of environment in the terms of its utility and usefulness to humans conservation is the oldest form of ethic that lead to the creation of national parks, wildlife sanctuaries, responsible use of non-renewable energy sources, and water conservation efforts. Conservation is therefore a means to an end and is purely concerned with mankind and the future generations. Most of the international treaties are outlined as consequences of ethics.

Check your Progress

Q.1. How is Conservation Ethic related to human centric approach?

2B.5 ECO-SPIRITUALITY

While policymakers negotiate and create cleaner solutions, it is important to heal the earth and its process to heal us. It should be guided by the spiritual principle that ensures long-term sustainability. The idea that faith can be used to save ecology was first used by the formation of WORLDWIDE FUND FOR NATURE. Eco- spiritualism was later extended up to five major world religions (Buddhism, Christianity, Hinduism, Islam, and Judaism). Each religion thus provided spiritual motivation for environmental action in a number of its program like Go Green has become a ritual across the world.

Check your Progress

Q.1. How are religions helpful in protecting the environment?

2B.6 SUSTAINABILITY AND POLLUTER PAYS PRINCIPLE

Due to globalisation, several multinational companies have established their branches all over the world. The national borders are becoming less important as markets stretch across them, and multinationals have taken advantage. Globalization also brings problems- especially those of justice

toward poorer countries. The disaster at Bhopal in India is a prime example, companies concerned continued to deny responsibility for a long time, and some survivors still await compensation. The toxic waste still pollutes the environment.

The emergence of the conservation movement in the late 19th Century and the later development of environmentalism as a social and political force has been the primary catalyst for the development of environmental law.

Although sustainability may not be represented in law to a great degree. Several multinational and national companies have formulated their sustainability programs and are voluntarily coming forward with clean technologies, and renewable energy sources, to develop regulations for the protection of wetlands, mountains, and other ecosystems, environmental education, and awareness programs. However, many management and environmental law colleges are offering a course in sustainability and provide education in sustainable management practices, environmental justice, energy resource law, water law, ocean resources law, etc.

The polluter pays principle is a popular concept which means that if a company /person causes pollution, he is liable to clean it up and pay for it. The cost of causing damage to the environment is decided by the authorities and borne by the polluter. The polluter pays principle as a means for allocating the cost of pollution prevention and control measures.

The Supreme Court of India ruled ―The Polluter Pays Principle means that absolute liability of harm to the environment extends not only to compensate the victims of pollution but also to the cost of reducing environmental degradation.

Salient features of this principle:

1. It has become a significant element of Environmental law in much of the world.

2. Principle 16 of the Rio declaration on environment & development affirms the principle.

3. The polluter pays principle states that whoever is responsible for damage to the environment should bear the cost associated with it.

4. The polluter pays principle states that the party responsible for producing pollution is responsible for paying for the damage done to the environment.

5. It is the underlying principle of green taxes that balances the negative externalities of environmentally harmful activity. The revenue generated can be used to remedy those externalities e.g. Carbon taxes, taxes on hazardous waste, taxes on dumping of solid waste, etc. are examples of green taxes.

Q.1. What do you understand by the concept polluter pays principle?

2B.7 PRINCIPLE OF FAIR CARBON SHARE

The air is precious and life on earth cannot exist without it. The normal composition of dry air contains approximately 78% nitrogen, 21% oxygen, and a very small amount of 0.032% carbon dioxide along with traces of other gases. The earth is neither hot nor cold. The thick veil of gases known as the atmosphere filters off the harmful ultraviolet radiations and allows only a certain number of radiations to reach Earth's surface. For millions of years, the temperature of the troposphere has remained almost steady, however, in the postindustrial era. It is due to the enormous burning of fossil fuels like coal and petroleum products and a large amount of carbon dioxide in the air has increased. Therefore, excess amounts of greenhouse gasses (GHGs) have the potential for trapping more heat and thus have more potential for global warming.

The climatic conditions become worst day by day because of the changes in the atmospheric conditions in the environment. Climate change is a matter of global concern. The atmosphere of the earth is considered a common space shared by all nations in the world for their emission. The developing and developed nations have to decide their share of atmospheric carbon space. The limitations on the use of this common space are a limitation on the availability of the atmosphere as a sink for GHG emission.

The Kyoto Protocol

The Kyoto Protocol is the first international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC). It sets binding targets for 37 industrialised countries and the European Community for reducing Greenhouse Gas (GHG) emissions.

Carbon Budget Approach

The Kyoto protocol was not successful in controlling GHG emissions by the various countries. The carbon budget approach is based on the principle of equity advocated during international climate change agreements. The world has limited atmospheric space and a definite carbon budget within which global temperature rise because of climate changes. Therefore, the carbon budget specifies more clearly the need to do to limit the global average temperature rise to below two degrees Celsius. The carbon budget will allow fixed emissions of carbon (GHGs) in the atmosphere.

It is proposed that while allotting the carbon budget for different countries there are three aspects must be considered:

a) Immediate action to control climate change.

b) The necessity of development projects for human progress.

c) The Right to an equal amount of energy availability per capita for all human beings in the developed as well as developing nations.

Emissions of the developed country have stabilised while those of developing countries are growing as they progress. Hence this legacy of historical emissions, developed nations have already utilized their share of carbon space and if the donor takes immediate action to cut down their emissions, the carbon space available to the developing countries will be greatly reduced. Therefore, it is necessary to consider not only the present emission of GHGs but the stocks of GHGs especially long-lasting carbon dioxide which keeps accumulating in the atmosphere while allocation of the carbon rights. Thus, developed countries continue their occupation of atmospheric carbon and shift much of the burden of emission reduction on the developing countries. The global debate over a fair share of carbon space is a struggle for climate justice and the right to equity.

Multilateral environmental agreements have been signed to share the responsibility of the environmental cleanup actions. The atmosphere has been utilised as the common space for the emission of all the pollutants. As a result, there is a continuous debate over the fair share of carbon space.

Equity Principle, Human Rights Principles, The Participation Principle

Equity Principle:

The 'Equity Principle' of 1980's talks about the idea of equity or fairness. This concept is often referred to as 'intergenerational equity'. It means equity and justice among the future population.

The International Union for Conservation of Nature and Natural Resources (IUCN) created the World Conservation Strategy in partnership with the UN Environment Programme (UNEP) and the World Wildlife Fund (WWF). It talks about the managing the human use of biosphere (the thin covering of the Earth which protects life) It should be protected so it benefits the future generations. The equity principle is important for sustainable development.

Human Rights Principles: In 1980s the principle of human rights was seriously related to environmental issues. The Universal Declaration of Human Rights was adopted in 1948, well before environmental concerns were raised. Since the 1980s has become clear the environmental protection is necessary to support some of the most fundamental Human Rights such as right to life, health and wellbeing.

Activities that damage the environment result in death injury and diseases obviously breach Human Rights. According to World Bank about 20% of diseases in poor countries can be attributed to environmental factors including climate change and pollution.

The Participation Principle:

Human Rights include the rights of individual citizens and groups to participate in decision making that affect them. International Covenant on Civil and Political rights (ICCPR) projects the rights of citizens to participate in the Governance of their Nations. Article 22B of ((ICCPR) guarantees the right to take part in the conduct of public affairs directly or through freely chosen representatives.

Check your Progress

Q.1. What do you understand by the concept Human Rights Principle, Equity Principle and Participation Principle?

2B.8 SUMMARY

It is of utmost importance to practice environmental ethics to ensure its safety and protection of the interest of coming generations.

2B.9 UNIT END QUESTIONS

Q.1. Write a detailed note on environmental ethics.

Q.2. Write on core ecological principles.

Q.3. What is the polluter pays principle? How it is useful in protecting environment?

Q.4. What are the global efforts in bringing down carbon emissions?

Q.5. Comment on the carbon budget approach to control carbon emissions.

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Module III

3

SCIENCE AND TECHNOLOGY- II

Part A: Some significant modern technologies, Features, and Applications:

Part B: Issues of Control, Access, and Misuse of Technology

Unit structure:

3.0   Objectives

3.1   Introduction

3.2   History of technology

3.3   Growth of Technology and its use in modern living

3.4   Significant Modern Technologies: Features and Applications

3.5   Laser technology

3.3   Satellite technology

3.7   Information and communication technology

3.8   Biotechnology

3.9   Nanotechnology

3.10 Issues of Control, Access, and Misuse of Technology

3.11 Issues relating to control over technology

3.12 Access to technology

3.13 Misuse of technology

3.14 Summary

3.15 Unit End Questions

3.0 OBJECTIVES

- To understand the stages in the growth of technology

- To analyze the role of technology in modern life

3.1 INTRODUCTION

Technology is the application of scientific knowledge. It is a sign of how human beings' knowledge of nature has increased and diversified in the multidimensions. The invention of new technology has brought changes in the daily lives of humans in various ways. Hence technology becomes one of the ways to measure the progress of mankind.

3.2 HISTORY OF TECHNOLOGY

The history of technology is based on the history of inventions of tools and techniques. It is the discovery of various inventions that changed the ways of human life. It has reached the present stage after passing through several stages of evolution. In every stage, it has devised new survival methods. The primary stone tools were the first attempt at using intelligence and knowledge to sustain better than the rest of the living beings. The first fire and later wheel were the inventions which changed the social, economic, cultural, and also political conditions in society.

3.2.1 Pre-historic period:

Before humans could store their knowledge in the form of written records, they passed knowledge from one generation to another through oral communications. Hence during the prehistoric period, human knowledge was restricted to the use of stone. Stone tools and fire were the most important technological development of this period. The nature of stone tools evolved gradually. They were produced with more finesse and detail. Thus humans have developed the knowledge of making clothes from animal skin.

3.2.2 Proto-historic period:

In around 9000 B.C. man started practicing agriculture. He started the domestication of animals on a large scale. One of the most important technological developments of this period is the technology of extracting metals from their ores through smelting. There are numerous tools of copper are found to belong to this period. Therefore technology is taken one step further with the knowledge of producing alloy. the bronze tools have been found in several places at this level. Stone tools continued to be used. Shreds of evidence of well-planned houses, canals, and burials show man's knowledge of architecture. People had international trade relations during this period. Indus valley civilization traded with the Sumerians. The seals from both civilizations give proof of advanced boat-making technology. However, the other most important technological marker is pottery. The technology of pottery making becomes the base of the development of cultures in India. Even, man has learned the skill of writing during this period. The Egyptian civilization was a pioneer in several scientific, architectural and biological studies.

3.2.3 Iron Age:

The discovery of iron is another important milestone in technological progress. The use of iron and the quality of iron weapons belonging to this period have proven the development of metal smelting technology. The use of iron in equipment has been used further in agricultural production. The control over iron resources and iron weapons became sources of political power.

3.2.4 Historical period:

The period from when written sources for the study are available is known as the historical period. All across the world man had made numerous technological innovations during this period. This period can be further divided into three sections as follows:

a) Ancient: The Chinese invented the iron plow, paper, the magnetic compass, and gun powder. The ancient Greeks made remarkable progress in mechanical technology. They were pioneers in several aspects of mathematics, astronomy, and medicine. They invented the watermill. In India, one can find inventions in the field of medicine, mathematics, and sculpture during this period.

b) Medieval: In the medieval period the advancement of technology because of the growth of science becomes a separate branch of study. There are several schools and colleges were established for the development of scientific research, The Renaissance spirit encouraged not only scientific experiments but also expanding of scientific thoughts. The creators of modern science belong to this period. Also, numerous laws and theories in physics, biology, chemistry, astronomy, etc. were established during this period. The development in the technology of weapons and ammunitions changed the system of military warfare. The invention of the printing press revolutionised the spread of knowledge and information. The new styles of architecture developed in the medieval period.

In the later medieval period, Europeans started venturing out to explore new sea routes to Asia. This spirit of adventure and exploration was supported by the development of shipbuilding technology, cartography, and equipment to measure wind, longitude, etc.

c) Modern: The industrial age is said to be the symbol of the modern age. The new technology based on iron machines running on steam or coal was developed. It led to the creation of industries, large-scale production, and change in economic conditions in society. Furthermore, the cotton industry developed into a huge enterprise. The steam engine increased the output of coal from mines. It led to the beginning of the transport revolution. In the 19th century, there were so many inventions taking place in the sector of modern technology. The discovery of electricity led to a transformation in transport, communication, and general living. Agriculture machinery, the production of steel, its large-scale use in construction, and the growth of the chemical industry were some of the important developments of this time.

The 20th century is considered the age of technology during this period technology became the symbol of development for a country. Household living became comfortable with electrification, new appliances like fridges, washing machines, and advanced systems of water supply. Contact and communication got easier and faster with the telephone, radio, and television. Transport became faster with cruise ships and most importantly airplanes as well as computer technology transformed the field of business, medicine, etc.

3.3 GROWTH OF TECHNOLOGY AND ITS USE IN MODERN LIVING

Technological inventions are solutions to existing problems. Technology makes living easier and more comfortable. It helps in economic progress, and industrial growth and also helps in the best use of available resources. The relationships between the various classes of society have changed due to technology. Especially in developing countries like India, there is a need for cost-effective technologies which can solve the problems of the maximum of the population and can reach the remotest part of the nation. Hence such kind of technology can help better the network of essential services across the nation. Some of the fields in which technology has brought about effective changes are as follows:

a) Communication: Mobile phone revolution has lessened the distance between people across the nation with affordable and easy-to-use handsets from a range of companies and low-priced recharges available to call. Even the poor and not-so-educated people have been able to connect. The Internet has connected people around the world through emails and social networking sites.

b) Education: The field of education has benefitted immensely from technological progress. The fast and large-scale printing technology and e-learning are examples of inventions that are used in education for the development of the student. some of its benefits. The internet is an excellent source of information for both teachers and students to update their knowledge. Online courses are also offered by several universities. The various aspects of technology have become new areas for students to pursue their careers.

c) Medicine: New technologies have made healthy living possible and also increased life expectancy rates. The use of laser technology has made operations simpler and less painful with less recovery time as well. The operations can be made available at affordable rates to the poor too; for example, cataract operations.

d) Online transactions: The system of online payment has facilitated fast-track transactions in various fields. The booking of railway tickets, Air tickets, bank transactions through e-banking, and shopping online have become easier and hassle-free due to online transactions. This has greatly saved the time and efforts of the people.

e) Industries: The growth of various industries in less developed regions of the country has helped in increasing employment. This has increased the economic conditions of such regions and reduced regional imbalance in the country.

f) Agriculture: Agriculture has benefited due to advanced agricultural machinery, highly advanced hybrid seeds, and also pesticides and fertilisers available at subsidized rates for the farmers. The better irrigation facility has helped to tackle the problem of an irregular pattern of agriculture in several regions.

g) National security: Advanced arms and ammunition has led to a better-equipped army to fight terrorists and invaders. Intelligence equipment connected to the satellite help to protect borders and track enemies. The security machines, CCTV cameras in public places, and advanced explosive detection machines have also increased the strength of regional police and investigating agencies.

h) Other areas: Several other areas like infrastructural development, commerce, land distribution, disaster management, etc. are also affecting the growth of society positively.

Check your progress

Q.1. Technology plays an important role in the life of modern man. Comment.

Q.2. Discuss in brief the history of technology.

3.4 SIGNIFICANT MODERN TECHNOLOGIES: FEATURES AND APPLICATIONS

3.4.1 Objectives

1. To study the various features and development in modern technologies

2. To understand its uses in everyday life, at home, in industries, in agriculture, in space, etc.

3.4.2 Introduction

Modern technology has made life simpler today. It has become an indispensable part of our lives. The new technology has been used in research and conducted in various sectors of innovations. There are following some of the scientific inventions that revolutionised almost every day of life.

3.5 LASER TECHNOLOGY

The term laser is an acronym for Light Amplification by Stimulated Emission of Radiation. A laser is an optical device that emits a single colored light in the form of one single beam. It differs in frequency and

vibrations from other lights. It works on the operation of free electrons. The first working laser was demonstrated on May 13, 1930, by Theodore Miman in California, USA. Since then, the laser has been used for several reasons. The different types of materials are used to produce lasers. There are gas lasers, chemical lasers, dye lasers, and many others.

Applications:

1. **Commercial use:** The first application of laser was in the supermarket barcode scanner in 1974 later it was used in the compact disc reader in disc players and computer disk drives. The latest common use of laser is in printers.

2. **Industrial use:** Lasers are used for cutting and welding metals in industry. They are used to drill holes and shape hard materials like plastic and wood also used   for inscribing letters on materials. Lasers are cut with precision and do not leave uneven marks. They can be directed by computers and easily handled.

3. **Distance and velocity measurement:** Distances can be measured with lasers by calculating the time taken by light to reach that distance. The Portable Velocity meters are devised using laser lights to detect the speed of a moving car.

4. **Medical use:** Laser is put to a wide range of use in the medical field. Laser operations are sterile, bloodless surgery that even takes less recovery time. A laser not only cuts the skin sharply but also seals it simultaneously. Its use in the area of optics is remarkable. It is used to repair the retina, treat glaucoma, and also cataracts. It is used in the removal of cancer and tumors, removal of dental caries, and treatment of fractured bones. Lasers are also widely used in cosmetic surgery. It is used for hair removal, skin spot and birthmark removal, and also fat removal surgeries.

5. **Optical communication:** Lasers are used in the fiber optic cables for long-distance communication through them. Signals formulated by lasers are used to communicate information.

6. **Environmental studies:** Lasers are used in pollution control and monitoring the environment. A beam of light is sent into the atmosphere to detect and measure suspended particles.

7. **Defense**: Lasers are used in radars in finding the range of targets. They are also used in signal light guns used in the air force to direct an airplane during radio signal failure. Modern weaponry is equipped with lasers to specify the direction of shooting and conceal the source of the shooting. They are also used as distracting devices effective in creating confusion among the enemy.

8. **Holography:** Holography is a technique in which lasers are used to produce three-dimensional pictures. This technique uses the reflection of laser light and creates an interface that gives depth to the picture.

Holographic images are widely used for varied purposes today such as authentication purpose, brand promotion, decoration, and also labeling and sealing.

9. **GIS/GPS mapping:** When it is used with geographical Information systems, lasers help to derive details about a certain area with the specification. They are used in various fields like urban planning, cartography, advertising, and marketing. Lasers can be connected to GPS devices to collect data related to remote areas. Also, with the help of lasers the slope distance, angular distance, and inclination of the area can be measured. It is beneficial for trekking, and geographical and geological surveys.

3.6 SATELLITE TECHNOLOGY

Artificial satellites are objects that are placed in the earth's atmosphere; they are connected to systems on the earth. Satellites can receive data from the earth and send data to the particular Satellites in the form of signals. They can be connected to numerous programmers and systems at one point in time.

The world's first satellite named Sputnik was sent into space in 1957 by the Soviet Union. Since then many satellites have been sent into space by several countries. A satellite is launched into space with the help of a rocket. The rocket gives the necessary thrust to the satellite to attain velocity and evolve around the earth at a certain momentum. Gradually habitable space stations developed which maintained better control and observation satellites. In India, the Indian Space research Organization (ISRO) is responsible for the research, development, and operations of space systems.

A. Uses of space technology:

Satellites are used for a large number of purposes. The structure and functioning of the satellite are designed depending upon the purpose. Following are the various uses of space technology:

1. Navigation: Navigation satellites can be connected to Satellite navigation systems to attain the exact location of the systems within a radius of a few meters. The receiver system can get information such as latitude, longitude, and altitude from radio signals sent by the satellites in space. To obtain such data the receiver has to connect to two or more satellites. Global Positioning Systems (GPS), designed by the USA, is a satellite navigation system most widely used today. This system is available on independent devices, vehicles, airplanes, and also mobile phones. Today, France and Japan are on their way to developing a regional GPS. The GPS-aided Geo-Augmented Navigation is a planned implementation of a regional satellite-based augmentation system developed by India. Such navigation systems help to guide aircraft during difficult weather conditions, help people find a way in unknown regions, and track lost people and machines through their GPS signals.

2. Weather forecasting: Modern weather forecasting is done with the help of a compound system consisting of weather satellites, remote sensing systems, advanced radars, and complex weather data analysing machinery and computer programme. The weather satellites send photographs of the earth at regular intervals to the forecasting department. The department analyses the climate and predicts weather through the continuous data coming in from the satellites. Satellites are used to monitor and record information related to ocean level rise, sea surface temperature, and snowfall and ice bodies around the world.

a. Geostationary Operational Environmental Satellites (GOES): there are two GOES satellites; the GOES-East and GOES-West. This satellite revolves at the speed of the earth. It constantly monitors various areas of the planet and gives updated information through photographs every 15minutes. These are critical for identifying severe weather, storms, and hurricanes.

b. Polar Operational Environmental Satellites (POES): POES orbit the earth longitudinally from pole to pole from a lower altitude than GOES. Thus, based on the information obtained from POES meteorologists can develop models to predict weather conditions. The data from the POES series is also useful for a wide range of environmental monitoring applications such as volcanic eruptions monitoring, global vegetation analysis, etc. They are beneficial for the long-term analysis of weather conditions. Active emergency locator beacons also can be detected by POES, which is beneficial during rescue operations.

3. Communication: All wireless communication of modern times is based on satellite connectivity. For instance, radio, television, cell phones, and the internet work through satellite information. Long-distance communication has connected the remotest places with the development in broadcasting technology, faster sending and receiving the information has become possible. The cell phone network providers are setting up a greater number of towers in every place possible to provide better coverage. Satellite communications are increasingly used to transmit information to remote areas which do not have cell phone reception.

4. Disaster management: Satellites help to predict and detect natural calamities like storms, hurricanes, and even volcanic eruptions early. Therefore, evacuation and other precautionary activities thus become possible. At the time of disasters, satellites are the only option of communication. Thus satellites have become indispensable parts of climatic disaster management.

5. Scientific research: Satellite gathers information about all aspects of the earth such as the atmosphere, geology, ocean, and also the moon. They also collect information about space, other planets, and the sun. Such information gathered by satellites is useful for research. It is through satellites that scientists can study the mars and have sent robotic missions to the planet. Another such exploratory satellite is currently observing Jupiter.

3. Observation of the earth's surface: The satellites help s to observe many features of the earth. It helps to locate freshwater resources, oil resources, and mineral resources and observe forest life.

B. Global Positioning System (GPS)

The global positioning system or GPS is the only operational Global Navigational Satellite System. It is a set of satellites and control systems that allow a specially designed GPS receiver to determine its location anywhere on earth. The receiver gets connected to more than 20 satellites at a time to determine its exact location. It has a wide range of applications today. It was developed by the Department of Defense of the US.

Uses of GPS

1. Military: Primarily developed for the military, the GPS allows accurate targeting of various military weapons including cruise missiles.

2. Automobile: Cars can be equipped with GPS receivers that display moving maps and information about location, speed, directions, nearby streets, and landmarks. The GPS can act as a tracking device and thus can be helpful to locate a lost or stolen car. Cyclists use GPS in racing and tours to plot their way through congested spaces and especially mountain ranges and places with no direction signs.

3. Aircraft: GPS in the aircraft is also designed to give information about the nearest landing option, mountain passes, and other direction suggestions. It can be connected to the autopilot option for better navigation.

4. Hikers: Hikers venture into unknown and isolated areas. GPS helps them to determine their position precisely. It can be very helpful if somebody gets lost away from the team.

5. Tracking devices: GPS tracking devices can be attached to vehicles, persons, and pets to record their position at regular intervals and locate them at any point in time. GPS functionality is used in emergency conditions to locate cell phones. This system is helpful for the police to track movement and gather evidence.

6. Integration with GIS: GPS can be integrated with the GIS (Geographic Information System) to get accurate information from the field for mapping. The customized computer software's prepared that can analyze data from GPS and reduce positioning errors in the GIS.

7. Satellite communication: The antennas used for satellite communication can be incorporated with GPS to provide the exact location of the moving systems like the train or ships.

8. Weather prediction: Specialised GPS satellites help to study the earth's atmosphere with the help of a technique known as GPS occultation. This includes the study and calculation of bending of GPS satellite signals to determine atmospheric conditions like air density, temperature, moisture, etc.

9. Marketing: Some companies have combined GIS systems and survey-based research to help the companies decide on the locations to open new branches. It is because to set the target of the advertising and make a profit.

3.7 INFORMATION AND COMMUNICATION TECHNOLOGY

The modern world is known as the IT world. The various advances in this field have changed the mediums and methods of communication drastically. The new research and development in information and communication technology are poised to provide faster, easier and cheaper mediums of communication. IT or OCT deals with the use of electronic computer hardware and software to convert, store, protect, process, transmit and retrieve information. The use of IT has become an inseparable part of life today. So daily communication, business, and even entertainment revolve around the various mediums of IT.

A. Applications of IT:

1. Telecommunication: Telecommunication is the electronic exchange of information it includes mediums like telephone, faxes, computers, pagers, etc. The telephone is the most widely used modern technological medium of communication. Telegraph, now not in use, was also one of the fastest mediums of direct communication in earlier times. It is used connection by direct cable wires for communication. However further progress in the radio signals, fiber optics, and satellite communication replaced them. The fax machine is used to scan and send documents across regions through signals. The latest fax machines use a computer programme as the receiver and are faster than the earlier ones.

2. Radio and television: Broadcast systems work on the transmission of high-frequency electromagnetic waves to numerous low-powered receivers. The receiver is tuned to retrieve the signal containing audio and/or visual information and radio and television work on this principle. With the advancement in broadcasting and satellite technology, television now works on digital signals. This has reduced distortions and improved the quality of pictures and sound.

3. Mobile phones: Mobile phones, and cellular phones have revolutionised communications has changed drastically in various ways. The first and foremost is constant connectivity a person can be contacted at any place on a mobile phone. Short Messaging Service (SMS) has become the fastest way of messaging in both formal and informal forms of communication and also the business. The two forms of mobiletechnologies namely Global System for Mobiles (GSM) and Code Divisional Multiple Access (CDMA) provide a wide range of functions on cell phones. CDMA is an improved technology providing better voice quality, and better power management to enhance battery life and longer talk time. Today mobile phones are connected to internet services thus providing a wider range of communication. This gives access to emails,

sending and receiving of multimedia, web browsing, and email. Varied commercial services like banking, paying bills, money transfers, and shopping can also be done through mobile phones today.

4. Internet: The Internet is a worldwide network of computers. It is a seamless electronic network of computers all over the globe. It is a platform for communication, sharing information, and even education. Computers connect through their unique Internet Protocol (IP) addresses. On a smaller level, (Local Area Network) LAN and Wide Area Network (WAN) services are available for internet connectivity. Modern computers are equipped with LAN ports that can be connected with modem or internet cables. LAN extends only up to a few kilometers. WAN extends up to a thousand kilometers. It gives better privacy and security on a smaller level and is also cost-effective.

Internet connectivity is the soul of information and communication technology in modern times. E-mails are used for almost all the important official communications. Online banking has facilitated the handling of banking transactions at any time of the day. The ticket reservations, shopping, availing network services, and also registering for educational courses have become online today.

5. Videoconferencing: Videoconferencing uses a set of telecommunication technologies to facilitate audio as well as video communication among two or more users. An official meeting, educational lectures, and addresses for seminars can be conducted using this technology. It is also used for point-to-point or two-way communication among only two parties. The aim of a conference is for discussion, sharing documents, and arriving at solutions through presentations, etc. can be achieved through videoconferencing. It has reduced the distance between the communicators by allowing them to communicate.

B. Convergence of technology:

Meaning:

Each communication medium or technological form uses a certain medium and form of knowledge to function.

Technological convergence refers to the process in which more than one technology merges into a new form that brings together different media and applications. Technological convergence did not develop due to accidents. It was the outcome of a calculated and planned merger of technologies to achieve a certain common goal. The new converged technologies thus have revolutionized the world of information and communication. The earlier single medium had a single function. For example; a radio to listen to songs. Today one computer can perform the function of communication through email and songs through its media player. This is an example of convergence.

Causes:

Various factors have been responsible for this convergence of technologies. The hardware of devices has been designed to cater the several functions at one time. The earliest mobile phones were used only for communication but gradually they could be used for listening to and recording songs. Today is the time of smartphones. It has multiple uses like playing media of any type, audio, and video, connect to the internet. Therefore, it is the medium to play and allows social networking. The internet is one of the strongest mediums of technological convergence in the field of information and communication. It is a medium for sharing information, entertainment, and also communication. The latest models of televisions are equipped with internet connectivity and programme to share and view media from mobile phones as well. Satellite technology has been integrated with computer and cellular technology to enhance communication. The GPS and Wi-Fi services are the best examples of this convergence.

Benefits:

Convergence plays an important role in society from the economic, social, and development perspectives. It can influence how governments develop appropriate policies while looking for social welfare. It provides a wide range of efficient and lower-cost, innovative, and new value-added products and services. Technological convergence brings new opportunities to meet development goals and bridge the digital divide; a single service provider can offer different products and services. It can help to build such infrastructure that becomes the base of a strong network of basic services in the nation such as prompt medical emergency services, police helplines, easier access to government services through interactive websites, etc. The convergence allows new opportunities in business because of the scope for innovation and development. This can be observed in mobile phone technology as well as a wide range of service providers. Consumers have a wide range of options to choose from the varied varieties. Thus, it helps to satisfy their multiple needs at one time with the best and most cost-effective mediums.

3.8 BIOTECHNOLOGY

Biotechnology is based on biological concepts designed for use in medicine, food, and agriculture. It is a science that combines other disciplines such as genetics, molecular biology, and microbiology. It involves the use of living organisms and their products to improve our lives and the environment. Biotechnology can be defined as the application of technology in life science to develop commercial products.

For centuries people have been using biotechnology. The microorganisms were used for making yogurt, vinegar, yeast, cheese, and beer. Our predecessors have used these methods to make their life easier. In recent years the branch of genetic engineering has emerged from the application of biotechnology. It is associated with the genetic modification of plants or

bacteria for use in industry and agriculture. It involves the manipulation and synthesizing of DNA, thereby inserting it into another organism by changing the genetic setup of the organism. An organism that is created through this method is referred to be a genetically modified organism. This technique can be used in various fields of forex; in medicine. For example, it has been used to make insulin, zebrafish are used for experiments, and genetically modified foods are being widely used.

Applications:

1. Medicine: In medicine, biotechnology is used in various areas namely;

a) Pharmacogenomics: This study examines the response of human beings to drugs due to some genetic properties. In other words, it is a study of the relationship between pharmaceuticals and genetics. Therefore this branch of medicine aims to develop drugs that can adapt to every man's genetic setup, to find a more accurate method of the amount drug dosage to be given to every patient. Hence better vaccines can be developed by organisms transformed by employing genetic engineering.

b) Pharmaceutical products: Biotechnology has been successful in developing medicines to treat hepatitis B, cancers, arthritis, cardiovascular disorders, etc. It has developed diagnostic devices to be used to define the target patient population. For example; the drug named Herceptin can be used to treat breast cancer in women whose cancer cells show the protein HER2. Thus, genetic engineering is used to create animal models of human diseases to study cancer, obesity, heart diseases, diabetes, etc. The potential cures can be tested on these animals. Also, genetically modified crops have been used to make drugs.

c) Genetic testing: It involves a direct examination of DNA molecules to determine the sex of a fetus, prenatal   diagnostic screening, forensic testing, and pre-symptomatic testing for predicting the risk of disorders. Gene therapy is also used for replacing defective human genes with functional copies. It can be used to treat genetic as well as acquired diseases.

1. Agriculture:

a) **Increases productivity**: To increase the productivity of crops can be modified with the help of biotechnology by modifying their genes and new characteristics are imparted to them.

b) **Increased resistance to climate change**: Genetically modified crops can withstand adverse situations like droughts or salty soil.

c) **Increases nutritional value**: Proteins in foods may be modified to increase their nutritional quality for example; cereals can be modified to provide amino acids much needed for the human body.

d) **Increases the taste and enhances the appearance of food:** With the help of biotechnology, the process of spoilage of food can be slowed down so that it could be transported to the customers in fresh

conditions. It improves the taste, texture, and appearance of food. It has proved to be beneficial for farmers in developing countries.

e) **Reduces dependency on fertilizers and pesticides**: The most recent application of biotechnology is the development of soil bacterium that produces proteins with insecticidal qualities thereby reducing the use of chemical pesticides and fertilizers at the same time.

2. Research:

Genetic engineering provides greater help to natural scientists. A wide range of organisms can be transformed into bacteria for storage. The bacteria can be grown and stored cloned much easily and almost indefinitely at -80 degrees Celsius. Once the gene is isolated it can be stored inside bacteria for research.

3. Industry:

Micro-organisms can be used in industrial processes to produce chemicals, antibiotics, and pharmaceuticals. Hence using living organisms for chemical synthesis reduces many risks. Someimportant products such as wine, beer, and many fermented beverages and products are made by the process of microorganisms. Organisms have been modified to degrade oil spilled on the water body.

Issues of Control, Access, and Misuse of Technology

3.9 NANOTECHNOLOGY

Nanotechnology is the latest but fastest-growing field of technology. In this field the research has been increasing at a growing rate; it is an interdisciplinary application, integrating with other fields of science like physics, biology, molecular chemistry, and engineering.

Meaning:

Nanoscience and nanotechnology involve the ability to see and control individual atoms and molecules. A **nanometer (nm)** is one billionth of a meter, smaller than the wavelength of visible light and a hundred-thousandth the width of a human hair. Scientists can work on such small atoms with a help of specialized designed machines such as the scanning tunneling microscope (STM) and the atomic force microscope (AFM). The atoms and molecules can be changed in such a manner to fit in the composition of a new product or a product can be deconstructed to its atomic level to use its atoms in some other application.

Applications of nanotechnology:

1. Electronics: Nano-scale transistors are faster and more powerful. They can store a huge amount of information in small sizes. The compact storage devices are used in the making of motherboards of computers. The magnetic random-access memory (MRAM) is made using nanoparticles that can store the entire data of a computer effectively during a system

crash or emergency shutdown. The displays of televisions, laptops, and mobiles are made of OLED. Organic Light-Emitting Diodes are nanostructured polymer films that give a brighter picture and better image quality.

2. Medicine: Nanotechnology has the potential to enhance medical and biotechnological tools. The use of nanocrystals in biological tests such as MRIs can give more specific information as they enhance biological imaging by locating and identifying specific cells and biological activities. Nanotechnology can help in the early diagnosis of arteriosclerosis through such imaging. Nanoparticles are used in the treatment of cancer cells with a minimum risk of tissue damage. Research is underway to use nanotechnology to spur the growth of nerve cells, e.g., in damaged spinal cord or brain cells. There are also researches being conducted in the field of fertility and brain damage with the use of nanotechnology.

3. Cosmetics: Several cosmetic products contain nanoparticles. They help in better absorption of cleansing of the skin. They also act as anti-oxidants in complexion treatments, lotions, and makeup. Even some hair strengtheners have nanodiamond plates to reduce friction.

4. Food: Nanocomposites in food containers to minimize carbon dioxide leakage out of carbonated beverages, or reduce oxygen inflow, moisture outflow, or the growth of bacteria to keep food fresher and safer, longer. Nanosensors are being developed to detect salmonella, pesticides, and other contaminants on food before packaging and distribution. Nanomaterials are being developed which will enhance the taste of food and also have health benefits.

5. Cells and batteries: Nanotechnology is already being used in numerous new kinds of batteries that are less flammable, quicker charging, more efficient, lighter weight, have a higher power density, and hold electrical charge longer. Researchers are developing wires containing carbon nanotubes to have much lower resistance than the high-tension wires currently used in the electric grid and thus reduce transmission power loss.

6. Energy: Scientists are working towards greater use of nanotechnology in the production of non-conventional energy. Prototype solar panels incorporating nanotechnology are more efficient than standard designs in converting sunlight to electricity, promising inexpensive solar power in the future. A polymer material containing carbon nanotubes is being used to make windmill blades that are longer, stronger, and lighter-weight than other blades to increase the amount of electricity that windmills can generate. The use of nanoparticles in increasing energy efficiency of present machinery such as air coolers, pumps, fans, lights, etc.

7. Automobiles: Nanotube composites have better mechanical strength than steel. Its use is encouraged in the manufacture of automobile parts. Cars are sprayed with Nanoparticles paints which provide a smooth coating. In powerful motors, the use of memory alloys with nanoparticles plays an important role. The use of efficient nanomaterial catalysts is one

of the solutions to convert harmful emissions into harmless gases. The window glasses of cars are made of nanoparticles of self-cleaning glass by dissolving small amounts of titanium particles.

8. **Sports and toys**: Nanoscale additives in polymer composite materials for baseball bats, tennis rackets, and motorcycle helmets can make them simultaneously lightweight, stiff, durable, and resilient. The use of carbon Nanotube in sports types of equipment makes them stronger. Eye movements of dolls and robot moments are made using nanotechnology-based motors.

9. **Textiles**: The use of nanoparticles in making fabrics helps them resist wrinkling, staining, and bacterial growth. The clothes are produced which would give the pleasant look of synthetic material and also comfort of cotton.

10. **Space and defense:** Nanomaterials are replacing conventional materials in the production of equipment. Nanoparticle-based aerogels are used in spacecraft and defense to reduce weight. For example; special lightweight suits and jackets are made of aerogels. The use of nanoparticles in the production of lightweight and energy-efficient spacecraft's cost of reaching orbit and traveling in space will be reduced considerably.

11. **Environment**: Nanotechnology is being used to develop solutions to stop water pollution by devising ways to use it for the treatment of industrial waste, and making cleaning solvents for natural water reservoirs. The use of nanoparticles of hydrogen for storage or oil filters may reduce pollution due by vehicles. Nanotechnology can enable sensors to detect very small amounts of chemical vapors. It will allow tackling of air pollution.

Check your progress: -

Q.1. Explain the term GPS. State its uses.

Q.2. Describe the various applications of Information and communication technology.

Q.3 Discuss the various applications of biotechnology.

Q.4 State the various fields in which Nanotechnology can be useful.

3.9.1 Objectives

1. To understand the need for control over technology.

2. To analyze the various reasons and effects of lack of access to technology

3. To study the ways through which technology is misused.

3.9.2 Introduction

Technology has been a boon for humankind. It has led to progress and development. It has become an indispensable part of today's daily life in several small and big ways. However, it has also led to many problems in society. Several problems are not due to the technologies but due to improper control over them or their misuse. Many countries have realised this issue and have created strict laws to handle the issues relating to technology.

3.10 ISSUES RELATING TO CONTROL OVER TECHNOLOGY

The development of technology is not the right of a certain organization or country only. Any individual researcher or organization can invent, develop and sell a certain technological product. Similarly, the use of technology is not confined to a single group. All over the world due to technological development, many issues have been rising. Technology does not remain only a product for processing in industry or advancement of communication. Today it is a part of the social process which affects social relationships, methods of communication, behavior patterns, and also laws. In daily lives, people have become so dependent on technology that their life system becomes slows down or even sometimes comes to a standstill when technology shuts down. For example, the loss of internet connectivity means time lost on business, cut off from friends on social networks, etc. Teenagers and adults alike suffer from addiction to mobile phones and direct communication has suffered due to chat and mail. These issues are pointed and it has an overly dependent relationship between human beings and technology.

3.10.1 Need for Control

There are several concerns of health, ethics, environment, and behavioral problems relating to the use of technology. Thus there is a direct need for some kind of control over the use of technology.

Following are some of the issues that require control and discretion in their use:

1.   Children's use of technology: Today the youngest of the children can handle smartphones with ease. Children are exposed to the wide world of information and communication. Gaming on computers has reduced physical activity among them. They can communicate with strangers and can access pornographic websites easily. Parental control is required to protect children from becoming victims of cybercrimes, bullying, and also indulging in pranks or acts which may become dangerous. There are several hardware and software solutions available to keep ensure parental control on the use of the internet by children.

2.   Environmental issues: Pollution is one of the biggest ill effects of technology. Excessive use of fuels, cutting down of forests and use of artificial pesticides and chemical fertilizers in agriculture are some of the

reasons for pollution. Increasing global heat, the alarming quantities of carbon, mercury, and sulfur are adversely affecting the life of flora and fauna. The natural cycles and biodiversity is affected. The concept of corporate social responsibility (CSR) has been developed to ensure environmental protection alongside industrial growth.

3. Genetically modified food: Research has proved that genetically modified food is better in quality because it has better natural features and is also beneficial for farmers. However, the production and consumption of genetically modified food raise several ethical and health-related issues. Some religious and ethnic groups are against the production of plants with animal genes in them. There are debates over health issues relating to the consumption of such food. Genetically modified plants may require a lesser amount of pesticide but it requires a much greater number of chemical fertilizers than natural plants. Adequate research has not yet been carried out to identify the effects of eating animals fed with genetically modified food grains. Genetically modified food is largely used worldwide without much awareness. Thus, proper research in this area and proper control over the mediums of production of genetically modified is required.

4. Cloning: Be it animal or human cloning, it is considered unethical by many people, especially those with strong religious beliefs, all over the world. It has the belief that living beings should not be considered objects of experiments. Cloning has opened many options for providing solutions to several diseases. The US government has approved the consumption of meat from cloned animals. There are debates regarding the risks related to the consumption of such food. Scientists continue to research bioengineering and cloning to explore greater possibilities despite the opposition. Effective control is required to prevent harmful effects and misuse of such technology.

5. Information technology: Information technology has made communication quicker and easier. However, hacking of email accounts, bank accounts, and personal data are some of the issues relating to its use. To prevent cyber-crime and   helps the victims, a specialized cyber police force is required. Strong cyber laws can help in such issues with strictness.

6. The danger of cell towers: Increasing number of cell towers in residential areas has led to serious health hazards. The results have proved that people suffer from a variety of physical and mental disorders like hearing problems, attention disorders, and even cancer due to immediate exposure to radiation from cell towers for a long time.

The above examples clearly show that there is utmost need for control over technology. The nature and degree of control can be different depending upon the intensity of ill effects of the particular technologies.

3.10.2 Forms of Control

The various agencies in the society can exercise control over technology, it should be kept in mind that such control should be legal. Moreover, it

should be exercised in such a manner that research and development in science should not be harmed. The agencies should keep in mind the rights of human society in total and should have proper knowledge of the problems posed by technology. There are several forms of control over the technology that can be seen as follows:

• **State control**: Government can exercise effective control over technology by making relevant laws. Cyber laws exist to curb crimes related to technology. The government grants patents and has provided a legal framework for technological innovation.

• **Non-governmental organizations**: Civil societies can play an important role in exercising control over technology in use. NGOs are in direct contact with the people. They can generate awareness among them, gather feedback from them about their experiences with certain technology and convey such feedback to the government and technological experts effectively.

• **International control:** International organizations like the UNO, Nuclear Energy Agency (NEA), etc. are working towards cooperation in the production of technology and its use.

3.11 ACCESS TO TECHNOLOGY

The application of any technology becomes successful when the technology becomes useful to a greater number of people directly or indirectly. There are several issues relating to access to technology. Hence efforts are made by the different agencies to make technology accessible to all people around the globe.

3.11.1 Hindrances to Free Access

Following are the important factors that are a hindrance to the access to technology;

1. **Patents**: Patents are the legal rights of the inventors over the access and its use. It has gained so that the inventor gets monetary rewards related to the development and use of the invention in terms of royalty. The copyrights and patented technology may be expensive for some people and hence not accessible.

2. **Government restrictions**: The Government exercised a certain degree of control over what kind of technology has been useful for the citizens. It may put restrictions on the use of such technology and be considered harmful to society.

3. **Lack of infrastructure**: Technology requires a certain environment to function properly. For example, computers require electricity, or for the distribution of electricity, a wider grid network is required. So people living in villages with no electricity will not be able to use electrical devices.

4. Illiteracy: Certain technology requires the users to be literate. For example, illiterate people will not be able to use mobile phones. There are known technological illiteracy as well. technological illiteracy means a lack of knowledge and training in the use of a certain technology. Even many educated people from the older generations cannot use computers because of a lack of technical knowledge.

3.11.2 Effects of Lack of Access

The reason for lack of access to technology will vary from region to region because of the lack of access, the society may lag in the developing world. Following are some of the conditions which may arise due to lack of technological access.

1. Lower standards of living: The use of technology in daily life signifies a comfortable standard of living even if it does not involve luxuries. Technology facilitates easy life. Lack of access to technology may result in a poor standard of living in society. The people may remain dependent upon older, time and energy-consuming ways for daily life.

2. Inequality: If a part of society does not have access to technology, they may be looked down upon by those having access. They may be discriminated against and treated unequally. For example, those regions having lesser technological access are considered backward, like many villages in India. This inequality is reflected in social, economic as well as political fields.

3. Emphasis on labour use: Minimum or no use of technology in work puts greater pressure on the labour. It increases their hardships, working hours, and the amount of energy they put into work.

4. Environmental degradation: Technology is the answer to all problems created by technology. For example, chemical waste created by industries can be passed through cleaning machinery to be treated before letting it out so it does not become harmful to nature. However, many such technologies can be adapted to maintain the balance between development and a sustainable environment.

Check your progress

Q.1. Why do certain people not have the access to use technology?

Q.2. What are the effects of lack of access to technology?

3.12 MISUSE OF TECHNOLOGY

Access to technology is made accessible by following various mediums to ensure the all-round development of society. However, technology has been misused by many on several occasions in the past. The misuse of technology should not discourage innovation. In fact with proper protection measures and awareness misuse can be prevented. Thus some of the misuses are explained below:

1. **Information technology**: Information technology is the most widely available form of technology. Television, radio and today even computers and mobile phones are accessible to the youngest of the society. A large amount of information is stored on computer databases. Though protected with passwords and security checks, this information can be accessed discreetly and misused. The degree of crime related to the internet and computers has been such that cyber laws specific to this field had to be evolved. Fake profiles, websites, offers of employment, and investments are created to cheat people. Malware and viruses are created to destroy information on computers and such viruses corrupt the system and render it useless. Many viruses have led to the losses of millions to bigger organizations. E-mail and messaging through phone or SMS are widely used by stalkers, and miscreants to threaten, bully, blackmail, or even defame people. The innumerable fraud employment schemes and investment offers have led to the loss of their life savings to people. Even pornography and the creation and sharing of sexually illicit material are a problem faced by several countries.

2. **Nuclear technology**: In today's time nuclear energy is considered the most powerful and best non-conventional source of energy. Its application in the production of electricity and other research is increasing tremendously. However, the beginning of the use of nuclear power happened most inhumanly. This power was introduced to the world during the Second World War by the USA when it dropped atomic bombs on Japan. Since then every developed nation is producing and accumulating nuclear weapons to increase its strength. Though an international agency exists to regulate its use many countries such as Iran and North Korea threaten the world with their increasing nuclear weaponry.

3. **Food technology:** Use of chemicals at various levels of production of food has resulted in severe health hazards. The chemical preservatives and emulsifiers used in processed food have harmful effects on important systems of the body. The synthetic colours and flavors used in ready-to-eat foods, snacks, and beverages have serious effects on the cells of the human body. These foods can cause serious diseases such as cancer, diabetes, premature aging, and arthritis. They can cause genetic disorders which may affect future generations. Also, the pesticides for protecting the plants can become dangerous to human health if not treated properly.

4. **Genetically modified food**: Genetically modified food has created a revolution in food production. Several health issues can arise as a result of the consumption of such foods. Scientists have expressed fear of diseases like cancer; food allergies and damage to the immune system.

5. **Media**: Media is the most direct and widespread means of technology. Its misuse, therefore, affects a large number of people at one time. The direct exposure of sensationalised news to children is a matter of serious concern. Also, the addiction of children to T.V and the internet hamper their personality development and social skills. They also face challenges of health like obesity, laziness, and attention disorders. They may fall prey to internet bullies and scams.

6. Sonography: Ultrasound machines are used to check the growth and health of a fetus growing in the womb detect abnormalities in the abdomen and chest and test some functions of the heart. By check-up through ultrasound is an important and basic medium, beneficial from different angles. It is a considerably affordable medium of diagnosis. In India however, people use the facility to detect the sex of the fetus. In many cases, doctors involved in female foeticide have come up in the past. Though there now exists a law prohibiting sex determination at sonography centers, such practices are continuing especially in the backward and rural areas. This has resulted in a skewed sex ratio in many regions.

Check your progress

Q.1. Discuss the various ways in which technology is misused.

3.13 SUMMARY

The technological development in various fields of science has brought revolutionary changes to today's modern society. The usage of these technologies in agriculture, industry, effective communication, defense, medical science, and everyday life has proved to be a boon to entire humankind. The remarkable inventions and their successful application in the above-mentioned fields have led to the development of societies. However, one must be careful about their use as there are chances of misuse of these technologies. Therefore it has raised many issues over how to control technology and prevent its misuse.

3.14 UNIT END QUESTIONS

1. Write notes on:

a) Technology in the Protohistoric period

b) Important technological innovations of the modern period

2. Write a detailed note on the application of laser technology.

3. How satellite technology has been beneficial for the development?

4. Give reasons for maintaining control over technology.

5. Which are the various agencies that exercise control over technology?

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Module IV

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INTRODUCTION TO COMPETITIVE EXAMINATIONS

A. Basic Information on Competitive Examinations the pattern, eligibility criteria and local centers.

B. Soft Skills required for Competitive Examinations

Unit Structure

4.0 Objectives

4.1 Introduction

4.2 Examinations Conducted for Admissions into Professional Courses

4.3 Examinations conducted for entry into jobs

4.4 Soft Skills required for Competitive examinations

4.5 Summary

4.6 Unit End Questions

4.7 Reference

4.0 OBJECTIVES

- To know the pattern of Various Examinations
- To get information about the exams conducted for the entry into jobs
- To become aware of the various soft skills
- To use the time effectively
- To become aware of the goals of life

4.1 INTRODUCTION

Examinations are conducted to evaluate a person of his knowledge or ability. There are different types of examinations like qualifying or competitive exams. The qualifying examinations are conducted to evaluate certain kinds of knowledge or skills; it has been decided as per the course by the concerned authority. After completing a particular course or during the course competitive examinations are conducted and the number of students is limited. The competitive examinations are conducted either to qualify a candidate for a particular course or to give admission into the

institution. Competitive exams are also conducted for selecting a person for a job. Clearing a competitive examination will help a person to enter into his/her dream college or institution or to pursue his/her dream job. This section will help students to get some vital information about the various examinations. So, some of the major institutions of government conduct competitive examinations.

To clear the examinations students must to dedicated efforts along with certain soft skills are required. One should have a clear knowledge of own's goals and should know how to use time effectively for getting success in a competitive examination.

4.2 EXAMINATIONS CONDUCTED FOR ADMISSIONS INTO PROFESSIONAL COURSES

Competitive exams are considered an integral part of the entry into elite institutions to get an admission. They are also called entrance exams. There is more number of students and limited numbers of seats, admission tests are the solution for selecting deserving students for the specific course. Through these examinations, the best-talented candidates are selected by entrance test which mainly evaluates quantitative aptitude, verbal reasoning, logical reasoning, aptitude, intelligent quotient, lateral thinking, etc. Therefore rigorous training, systematic planning, and hard work are the keys to facing the entrance examinations. In some, the institutions' entrance exams are followed by group discussions and interviews. Entrance exams in India are more common in professional courses like MBA.

7.2.1 Graduate Record Examination (GRE)

Graduate Record Examination is the basic admission requirement for many graduate schools for the various academic programme (except management) in the United States and some English-speaking countries. The main aim is to measure verbal reasoning, quantitative reasoning, analytical writing, and critical thinking skills that have been acquired over a long period and it is not related to a specific study or subject. The GRE General Test is offered as a computer-based exam administered by selected qualified testing centers.

To appear for these tests no minimum qualification as such is prescribed but it is expected that candidate must be a graduate or must complete graduation within six months. This exam is conducted by The Educational Testing Service (ETS) in Princeton, New Jersey. The ETS administered the exam under the direction of the Graduate Record Examination Board. ETS sets the questions, conducts the test, and sends each examinee the score report.

To conduct the test, ETS has appointed testing agencies in various countries, which act as franchisees for ETS. In India, this agency is the "Sylvan Testing Services Pvt Ltd" which administers the test at nine centers in the country as follows:

Ahmedabad, Allahabad (officially known as Prayagraj) Bangalore, Calcutta, Chennai, Hyderabad, Mumbai, New Delhi, and Trivandrum**.** GRE does not have the same set of question papers for all candidates. The test is held throughout the year, an examiner has to choose the day and timing for the examination.

The computer-based GRE General Test consists of six sections. The first section is about analytical writing, there are two sections on verbal reasoning and two sections on quantitative reasoning, the last section is on experimental research section. There is no fixed order of these sections. The entire test duration is 3hours and 45minutes.

7.2.2   Graduate Management Admission Test (GMAT)

The Graduate Management Admission Test is a standardized, computer-based assessment. More than 5, 400 programs offered by more than 1,500 universities and institutions in almost 83 countries use the GMAT examination as part of the selection criteria for their programs site. This exam is for getting admission into the business schools for the academic programs like M.B.A, Master of Accountancy, and some other programs. This examination is administered throughout the world around the year with the highest level of security. It is conducted in selected test centers in more than 110 countries. According to a survey conducted by Kaplan Test Prep, the GMAT is still the number one choice for MBA aspirants despite the increasing acceptability of GRE scores.

The GMAT exam measures skills that help graduate management students to able to face the challenges of the academic programme. This exam tests quantitative aptitude, verbal reasoning, integrated reasoning, and analytical writing. For testing quantitative and verbal skills multiple-choice questions are asked. The total testing time is three and a half hours. The quantitative and verbal sections of the GMAT exam, both multiple-choice, are administered in the computer-adaptive format. This both shortens the time it takes to complete the exam and establishes a higher level of accuracy than a fixed test. At the start of each multiple-choice section of the examination and presented with a question of medium difficulty. As students answer each question, the computer scores their answer and uses it as well as their responses to any preceding questions to determine which question to present next. The correct responses typically prompt questions of increased difficulty. Incorrect responses generally result in questions of lesser difficulty. This process continues until the test completes the section, at which point the computer will have an accurate assessment of their ability level in that subject area.

7.2.3   Common Admission Test

The Indian Institute of Management (IIM) started(CAT) examination for selecting the candidates for their business administration programme. One of the IIMs conducts every year by rotation. According to the Asian Survey of examinations, CAT is rated as the third toughest test in Asia, after UPSCs Indian engineering services at first and IIT-JEE at the second spot.

Some of the other institutes like the Indian Institute of Technology (IIT) and the Indian Institute of Science would also use CAT in the process of their selection of candidates for their management programme from 2012- to 2013. The passing in the CAT merely shortlisting the candidates for the second stage of selection which includes a written ability test (WAT), Group discussion, and personal interviews.

CAT is normally conducted every year during a 20-day testing window in October and November. The test score is valid for admission to the forthcoming academic year only.

The current online test has two separate sections, each consisting of 40 questions for which 40 minutes is given for each section. These two sections are-

● Quarantine ability and data interpretation

● Verbal Ability and Logical Reasoning

The candidate must hold a Bachelor's degree with at least50% marks or equivalent CGPA. However for Scheduled Castes(SCs)and Scheduled Tribes(STs) it is45%. The SAT is a standardized test for college admission in the United States. The SAT is owned, published, and developed by the College Board and colonization of the United States. It was first introduced in1926, it was called a Scholarship Aptitude test, then was called a scholarship assessment test. It evaluates mainly verbal and writing skills needed for academic success in a college. It also measures the analytical and problem-solving skills of a candidate. The test contains 3 hours and 45 minutes of the actual timed section, including breaks and others like orientation, distribution of material, etc it may take four and half hours.

There are different levels of questions including easy, medium, and hard levels. Easier questions appear at the beginning and harder questions appear at the end of the examinations.

7.3 EXAMINATIONS CONDUCTED FOR ENTRY   INTO JOBS

7.3.1 Union Public Service Commission

The first Public Service Commission was set up on 1st Oct.1926 for the recruitment into its territory. After independence, the need was to set up an independent organization for recruitment into government services. On 26th Jan 1950 the federal Public Service Commission was given constitutional status as an autonomous entity and given the title– Union Public Service Commission. This has been established under article 315 of the constitution of India. Its main duties are recruitment to services and posts under the Union and the Central Government through the conduct of competitive examinations and interviews.

Civil Services Examination

Under the constitution, one of the functions of the commission is to conduct examinations for appointment to Civil Services/Posts of the Union. It conducts its examinations spread over 42 regular centers throughout the country. The civil services examination is a single and combined examination for recruitment to Indian Administrative Services (IAS), Indian Police Service (IPS), Indian Foreign Service (IFS), and the other higher Central Services(i.e .group A and group B).

ELIGIBILITY

A candidate must be a minimum of 21years and a maximum of 30 years of age, however, the upper age limit is relaxable for the SC/ST candidates by five years. A candidate must hold a degree from any university or equivalent, candidates appearing for the requisite degree qualification is also eligible; however, they are supposed to give proof of their passing while submitting the application form for their main examination.

Plan of examination

The exam is conducted in two stages, preliminary and main examination. The notification for preliminary comes in the month of Nov.-Dec. and it is conducted during May of the next year. It consists of two papers of General Studies with 200 marks each.

Civil service's main written examination is conducted in October-November. There are a total of nine papers including Indian language, English, essay, two papers on General studies and two papers of first optional subject and two papers of second optional subject. Total marks are 2000, Interview test is 300 marks.

Candidates have the option to answer all the question papers, except the language papers, viz, Paper-I and Paper-II, in any one of the languages included in the eighth schedule to the constitution or in English.

In addition to Civil Services Examination UPSC also conduct examinations for entry to certain Defense Services, through the National Defense Academy, Indian Military Academy, Naval Academy, Air force Academy, and the Officers Training Academy. National Defense Academy (NDA)Entrance Exam is held twice a year, generally in April and September. A candidate must be an unmarried male. The course of training is for three years. NDA awards a bachelor's degree in Arts, Science, or Computer Science on completion of the training. Besides this examination commission also conducts over a dozen examinations every year including examinations for recruitment to services/posts in various fields such as Engineering, Medical, Forest Service, etc. For details, please refer to the UPSC website.

7.3.2 Staff Selection Commission

The Staff Selection Commission is an independent body for the recruitment of a large number of workforces required by the various

government departments. It conducts open examinations regularly for posts for which a large number of vacancies from the various department:

Graduate Level Assistants, Auditors/Jr. Accountants/ Upper Division Clerks, Divisional Accountants, Inspectors of Income Tax/ Central Excise, Sub-Inspectors in Central Police Organisations (CRPF,BSF,CISF,ITBP and SSB) and the CBI, Section Officer (Commercial) and Section Officer (Audit). Matric Level: Stenographer Grade`C`, Stenographer Grade`D`, and Lower Division Clerks.(ii)Direct interviews are held for some posts, called Selection Posts, after inviting applications through advertisements, as and when such vacancies are reported to the Commission. Some of such posts are Statistical Assistant, Store Keeper, Jr/Sr. Computers, Information assistants, etc.

Scheme of examinations conducted by the Staff Selection Commission:

The Staff Selection Commission Conducts Combined (Graduate Level) Examinations every year for various posts the qualification for which is graduation, and Combined (Matric Level) Examinations for posts requiring matriculation or High School. Those candidates who qualify in the prelims are required to appear for the Mains. Followed by an Interview (as specified). Those qualifying in the Matric Level Main Exam are required to pass a Skill test (typing or stenography). For some examinations such as the Section Officers, Investigators, etc. no prelims are held.

The age limits are different for different posts and they are to be confirmed from the Notice of examination published in the Employment News / Rozgar Samachar. Generally, the age limits are 18 to 24years on the crucial date. There is an upper age concession for SCs/STs for up to 5 years, for OBCs it is 3 years and for physically handicapped candidates it is10years. For widows, divorced women, and judicially separated women, the age limit is 35 years for the UR category; 40 years for SC/ST women, and 38 years for OBC women.

7.3.3 State Public Service Commission

Each state has its public service commission with functions similar to the UPSC. The major function of the state public service commission is to conduct examinations and recruitments for appointments to the services of the state including Civil services and others. Through the state service commission, the candidates are selected for the following categories viz,

a) State civil services-class-I(SCS). State Police Service, class-I (SPS)

b) Block Development Officer

c) Tehsildar/Talukedar /Asst. collector

d) Excise &Taxation Officer

e)   District Employment Officer

f)   District Treasury Officer

g)   District Welfare Officer

h)   Asst Registrar Cooperative Societies

i)   District Food and Supplies Controller/Officer

j)   Any other Class-I/Class-II service is notified as per rules by the concerned state.

All these services belong to the middle-level administration, after gaining experience of certain years, the officer of the SCS and SPs may expect to be nominated to the IAS and IPS respectively, with some antedate seniority.

For appearing in this examination, a candidate must be a graduate, and his/her age must be 21 years and the upper age limit ranges from 28 to 35 years, varying from state to state, there is also relaxation of the upper age limit to candidates belonging to Scheduled Castes and Scheduled Tribes, Ex-servicemen, physically challenged, etc.

The pattern of the state Civil services examination is similar to the Civil Services Examination conducted by the UPSC, However, some of the smaller states having a smaller number of vacancies do not conduct preliminary examinations where preliminary examinations are held followed by the main examination is followed by an interview(for details regarding the details of examination refer internet).

7.3.4 Bank and Insurance Examinations.

There are mainly three types of Banks in our country; they are Nationalised banks, Co-operative Banks, and Private banks. The development in the Indian economy banking sector is growing day by day, shortly the growth in this sector will increase the employment opportunity. The banking industry is recruiting in a big way. In the next five years, banks will have to recruit almost 4.5 lakh people Generally, the bank examinations are of the following types:

A) Common Written Examination (CWE) is conducted by the Institute of Banking Personnel Selection (IBPS)as a prerequisite for the selection of personnel for Probationary Officer/Management Trainee/Clerk/Specialist Officer posts in19 Public Sector banks.

B) Examination conducted by SBI and SBI Associate banks for recruitment to the posts of Clerks and officers.

C) Examination conducted by Private Sector banks for recruitment to the posts of Clerks and officers

D) Examination conducted by Regional Rural Banks(RRBs)and Cooperative banks for recruitment to the posts of Clerks and officers.

Except for SBI, almost all the major public sector banks are participating in the CWE.The19 banks which are participating in the CWE are Andhra Bank, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, Indian Bank, Indian Overseas Bank, Oriental Bank of Commerce, Punjab National Bank, Punjab & Sind Bank, Syndicate Bank, Union Bank of India, United Bank of India, UCO Bank and Vijaya Bank.

The Common written examination will be conducted five times a year, twice for Probationary Officer/Management Trainee, twice for clerical cadre posts, and once for special is to officer posts.

The private sector and cooperative banks conduct their examinations. The major recruiters in the private sector include the ICICI Bank, HDFC Bank, Axis Bank, Federal Bank, Centurion Bank of Punjab, IndusInd Bank, Kotak Mahindra Bank, Yes Bank, ING Vysya Bank, Bank of Rajasthan, Karur Vysya Bank, Karnataka Bank, Jammu &Kashmir Bank, South Indian Bank, Bharat Overseas Bank, etc.

Insurance Sector

In India, Insurance was under the government undertaking till the recent years, but after the opening of the Indian market, nowadays many multinational Insurance companies have come to offer more job opportunities in the insurance sector in India. Still, the major Indian government undertaking Insurance Enterprises namely LIC (Life Insurance Corporation), GIC (General Insurance Corporation), and Postal Life Insurance are always in the top place in recruiting the candidates for the placements by giving secured jobs through competitive examinations. The more number people prefer to serve in these established sectors.

In the three major Insurance Companies of the Indian government i.e. Life Insurance, General Insurance, and Postal Insurance, the following positions are recruited every year:

● Officer positions,

● Agent positions,

● Insurance surveyor positions

Following are some of the important examinations for entry of the jobs into insurance sector:

a) LIC Officers 'Exam

b) LIC Development Officers' Exam

c) GIC Officers' Exam

d) GIC Assistants 'Exam

7.3.5 National and State Eligibility Test (NET/SET)

National Eligibility Test (NET) was introduced by the University Grants Commission for bringing Uniformity in the qualification of college teachers and research students. The first National Eligibility Test (NET) was conducted by the University Grants Commission in December 1989 and in March 1990 commonly for both Lectureship and Junior Research fellowships in two parts.

National Eligibility Test is generally conducted twice a year in June and December. The UGC-CSIR NET for the science subjects such as Life sciences, Physical sciences, Chemical Sciences, Mathematical Sciences and Earth, Atmospheric, Ocean and planetary sciences are conducted by the Council of Scientific and Industrial Research(CSIR)   jointly with UGC. The notification for the same will be issued separately by the Council of Scientific and Industrial Research (CSIR).

The eligibility criteria for these exams is a candidate must have a master's degree with a minimum of 55%. The Scheduled Castes/Scheduled Tribes/ Physically handicapped(PH)who have secured at least 50% in the Master's degree examination are eligible for this test.

Examination Pattern

There are three papers, Paper I is common for all subjects. The questions are objective-based with multiple options. Earlier Paper II and Paper III were according to the pattern and based on the subject but at the present, only Paper II is prescribed instead of paper III.

The same pattern is followed in the State Eligibility Test.

7.4 SOFT SKILLS REQUIRED FOR COMPETITIVE EXAMS

7.4.1 Information on Areas Tested (soft skills)

Soft skills are a sociological term relating to a person's Emotional Intelligence Quotient- (EQ) including the ability to listen well, communicate effectively, be positive, easy to handle conflict, accept responsibility, and well nature the work with others. Soft skills are behavioral competencies, they enhance individual interaction, job performance, and career prospects. The most important soft skills are Quantitative ability, Data interpretation, Verbal Ability, and Critical and Lateral thinking.

Quantitative ability

Quantitative ability measures the numerical ability and accuracy in mathematical calculations to problems of arithmetic reasoning, graph and table reading, percentage analysis, categorisation, and quantitative analysis. Quantitative ability is required in several competitive exams like GRE, GMAT, CAT, and Civil Services examination in various competitive examinations there is a section to test a candidate's

quantitative ability. There are multiple-choice questions, and all of these require quick calculation abilities and sharp analytical skills. For this student, fundamental knowledge of mathematics needs to be strengthened. Quantitative aptitude covers topics like HCF/LCM, Decimal fractions, Profit and Loss, Time and Distance, Simple and Compound interest, Probability, etc. Some careers require exceptional quantitative ability e.g. Careers in science, engineering, architecture, or Quantitative ability helps meteorologists track weather systems and develop accurate forecasts.

Data Interpretation

The Data Interpretation section is part of almost all entrance examinations like CAT, MAT, etc. For B-schools because this section bears the close stress balance to the kind of problems that a person faces in his/her professional career. Data Interpretation has no particular syllabus. It tests one's speed, decision-making capability, and analysis of data. When information is arranged systematically or in an organized form presented systematically it is called data. The data interpretation is to take out maximum information from given data of information. There are different ways of representing data i.e., tables, diagrams, charts, etc.

Three types of data interpretation questions are as follows:

• Observation-based questions:

These questions require simple and careful observation of the data.

● Interpretation and Calculation (IC) based questions:

These questions require basic analysis and calculation of data.

• Explorative questions: The questions will pose a hypothetical scenario, and may expect you to use, observation, interpretation, and calculation.

Verbal Ability

Communication is a very important tool in all spheres of life. In almost all competitive examinations there are several questions to test the verbal ability. Verbal ability is tested to find out how the candidate comprehends the data and understands the meaning of the words used, to find out a person's grammatical competency.

The Syllabus covers reading comprehension, etymological approach to vocabulary, synonyms, and antonyms, analogy, the grammar punctuation, usage, etc. in the competitive exams Verbal ability tests a person's knowledge of the English language, in the following way-

a) Comprehends the given data(passage/sentence) and understand

b) the explicit message conveyed

c) the implicit undertones of the passages or sentence

d) the knowledge of grammar like punctuation, usage, etc.

e) the direction/conclusion

l) How well he manages to respond to the question posed by applying a similar analysis of each of the 4/5 options presented, before repacking answers.

From the verbal section, the question type asked in competitive exams is trying to test the candidate on one or more of the above. Thus for preparing to answer well in this section one must read more and more. The reading has to be consistently spread out across a few months or more.

Critical Thinking or Lateral Thinking

The term Lateral thinking was coined by Edward de Bono in1964. Lateral thinking is the ability to think creatively outside of the box. It refers to one's skill of problem-solving from an unexpected perspective. This skill includes the ability to think critically, creatively, analytically, and innovatively. It refers to a new approach to problem-solving or looking from a completely new perspective. Edward de Bono describes lateral thinking as a special kind of thinking that is distinct from ordinary thinking or vertical thinking. Vertical thinking is the traditional type of thinking. Both types of thinking are complementary to each other.

With the problem-solving skills required to break the barriers, the mind should be free to move into the problem-solving territory. It involves understanding the problem; to solve the problem different techniques are used one such is a brainstorming session. This process allows all those creative solutions to tumble out onto the table. Whatever the solutions are coming to mind are listed. Another process is analysing the problem.

To test this ability in competitive examinations multiple-choice options are given and the candidate has to choose any one of the cited options or sometimes the statement is given and two or more assumptions are given and the candidate has to choose which one is implicit in the statement.

7.4.2   Motivation: -Concept, theories of motivation

 The term motivation has been derived from the word motive. Motive refers to the inner drive or intention that makes a person do something or behave in a certain way. According to Buchanan defines motivation is a decision-making process, through which the individual chooses the desired outcomes and sets in motion the behavior appropriate to them. Motivation an individual chooses a particular set of actions to achieve the desired goal. Motivated employees use their potentialities fully to achieve the desired success.

Motivation is a continuous process; it can be positive it can be negative. Positive motivation can be stimulated by providing positive incentives, (high pay, power, etc). Negative motivation implies the use of penalties, punishments, etc. motivation directs a person's action towards achieving the desired goal.

Theories of Motivation

a) **Maslow's theory of Motivation: -** Is one of the most popular theories of motivation, Maslow talks about the hierarchy of needs. According to him, there are mainly five sets of human needs, listed as follows: -

1) **Physiological needs:** These includes food, clothing, and shelter which are the basic need of human beings. These needs are at the lowest level of the hierarchy and they are to be satisfied at first.

2) **Safety and Security needs:**

Includes security and protection from physical and emotional harm. Employees need job safety and security.

3) **Social needs: -**These needs include affection, belongingness, acceptance, and friendship. Human being feels a need to belong to a group or community. Everyone wants the company of others. They prefer to be loved and cared for by others (i.e. family members, workmates, friends, superiors, and others.)

4) **Esteem Needs: -** It refers to ego needs. People want others should respect them. This includes self-respect, autonomy, achievement, status, recognition, and attention.

5) **Self Actualisation needs: -** These needs are at the highest level of the hierarchy. This refers to the drive to become what own is capable of becoming including growth, achieving own's potential, and self–fulfillment.

There is a hierarchy of these needs, satisfying own an individual wants to satisfy next needs after satisfaction of the next need becomes dominant.

b) **Existence, Relatedness, and Growth (ERG)Theory:**

In 1969 Clayton P. Alderfer simplified Maslow's theory by categorizing the hierarchy of needs into three categories viz. Existence, Relatedness, and Growth Existence needs correspond to Maslow's physiological, safety, and security needs. It includes food, clothing, shelter, better pay, good working conditions, and job security.

Relatedness needs relate to Maslow's social needs. It includes being loved and cared for by others, interacting with other people, receiving public recognition, and feeling secure around people.

Growth needs align with Maslow's esteem and self-Actualisation needs. It includes praise and recognition from others and realise own 's potential to the fullest.

McGregor's Theory X and Theory Y

In 1960 McGregor's theory was published in a classic article

The Human Side of Enterprise. He propounded two distinct views of human beings one is negatively known as theory X and the other is positively known as theory Y.

Theory X is the traditional approach to managing people and theory is the professional way of management. Theory X and Theory Y are based on certain assumptions.

Theory X is based on the following assumptions

1. People are not creative, they are dull, and lack rational thinking

2. A common man or average person is generally irresponsible, they do not like to take responsibility and therefore they avoid responsible wherever it is possible.

3. People are lazy, they do not like to work, they must be punished or threatened so that they will work.

4. People want routine work; they are not ready for any change in their routine they dislike innovation or novelty.

5. People are orthodox; they are not very ambitious.

Theory Y is based on the following assumptions:

1. People are creative, if they are motivated properly then they will come up with new ideas

2. People are responsible, they are committed to the goals and objectives.

3. People are active. They enjoy their work if the conditions are favorable.

4. People like to accept challenges in life. They are ready to face any hardships and difficult situations.

5. People welcome innovative ideas; they can make innovative decisions. They are ready to change if the situation demands.

From these two theories, McGregor believed that Theory Y assumptions were more valid and appropriate than theory X. A manager can make use of both theories depending on the situation and types of people. All the people do not have the same nature, there are differences in their likes, dislikes, and interests and their way approach towards work therefore depending on the situation he can follow theory X or theory Y.

Two Factor Theory

The two-factor theory was proposed by Fredrick Herzbegin1959. This theory is based on the study of the motivational needs of 200 employees of the Pittsburgh industry(U.S.A.This theory is also called a motivation-hygiene theory. According to Herzberg owns success or failure in work depends on self-attitude towards work. According to him, there are two factors:

A. Job dissatisfaction factors

B. Motivational factors

1. Job dissatisfaction factors- These factors are also called Hygiene factors. Some factors could a person to become unhappy with their job. These factors need to be satisfied. Thus some of the hygiene factors are salaries and wages, working conditions, job security, and welfare faculties. These factors are extrinsic factors related to the job and the environment surrounding the job. If factors are not satisfied then the person becomes unhappy with the job. However, the presence of the factors does not motivate the person for better performance.

2. Motivational factors-there are some factors that can increase a person's job satisfaction, these are called Motivators must be satisfied to motivate the people to do the work. Therefore, the motivational factors are challenging tasks, Appreciation and Recognition, Achievement, Advancement, Possibility of growth, Responsibility, etc. the motivators are intrinsic factors. If factors are present then the chances of individual growth and development increase.

OTHER THEORIES OF MOTIVATION

McClelland's theory of Needs

David McClelland and his associates proposed McClelland's theory of Needs /Achievement Motivation Theory. This theory focuses on three needs-Need for Achievement, Power, and Affiliation.

The need for **achievement** is the urge to excel, to make efforts to achieve success. Individuals with high achievement needs are highly motivated by competing and challenging work. They always want to improve their performance; they like to take feedback on their performance. They always attempt to do things better and get satisfaction after bringing improvement in their work. Their high-performance results in high achievement. Thus Individuals are highly motivated, like to accept challenges, and are ready to take responsibility.

The need for **power** is the desire to influence other individuals' behavior as per their wishes. In other words, it is the desire to have control over others and to be influential. They want to lead others and want that others should accept their views and ideas, they like to dominate others. Such individuals give a lot of importance to the need for reputation and self-esteem. They are more determined and loyal to the organization they work for. Those individuals with high power help the organisation to achieve its goals.

The need for **affiliation** is a need for open and sociable interpersonal relationships. In other words, it is a desire for a relationship based on co-operation and mutual understanding. Individuals with high affiliations need to perform well in a team. They want to be liked by others. They like to work in an environment where there is greater interaction.

Cognitive Evaluation Theory

According to this theory, there are two motivation systems: intrinsic and extrinsic that correspond to two kinds of motivators i.e. intrinsic motivators like achievement, responsibility, etc., and extrinsic motivators e.g. salary, promotion, working conditions, etc. intrinsic motivators come from the interest of the work whereas extrinsic motivators come from a person's environment which is external to them. Hence the motivator factor is powerful in a person.

Intrinsically motivated individuals perform for their achievement and satisfaction. If they come to believe that they are doing some job because of the extrinsic motivators then their motivation is decreased. The belief is that the presence of powerful extrinsic motivators can reduce a person's intrinsic motivation, particularly if the extrinsic motivators are perceived by the person to be controlled by people.

Equity Theory

Equity theory is proposed by John Stacy Adams in 1963. According to this theory, the individual feels satisfied if he/she perceives that the rewards received are equitable. If everyone gota5%raise, B is likely to feel quite pleased with her raise, even if she worked harder than everyone else. But if A got an even higher raise, B perceives that she worked just as hard as A, and she will be unhappy. So as per this theory, it is not the reward that motivates but it is the perception of fairness. People's motivation results from a ratio of ratios: a person compares the the ratio of reward to effort with the comparable ratio of reward to effort that they think others are getting.

7.4.3 Goal-Setting

Goal setting is a powerful process for thinking about an ideal future, and for motivating ourselves to turn our future vision into reality. The process of setting goals helps us to choose as per a person's wish and be dedicated to achieving the individual's aim. It gives direction to life. The setting of goals gives us a long-term vision and at the same time short-term motivation. It focuses on our acquisition of knowledge and helps to organize our time and resources so that we make the best of our life.

Everyone should start setting their personal goals, by setting sharp, clear, and defined goals we can measure and take pride in achieving these goals. By setting our goals our self-confidence is also raised. The first step in setting your personal goals is that we first should consider what you want to achieve in our life. This lifetime goal will give us the overall perspective which shapes the other aspects of our decision-making.

There are various types of life goals that can choose to depend on self-interest and liking. Some of the important categories of life goals are as mentioned below:

1) Physical goals

2) Educational goals

3) Career goals

4) Artistic goals

5) Financial goals

6) Relationship and family goals

7) Attitude goals

8) Pleasure goals

9) Social goals

10) Spiritual goals

11) Public Service goals

After setting a lifetime goal in any field, set a smaller goal to achieve success. Then prepare one year plan, then six months, one month progressively of smaller goal, however, all these should be based on our previous plan.

Finally, the creation of a daily to-do list of things to achieve success is very important. Once one decides first to set a goal then reviewing the progress is also important.

To achieve the goal it must be **SMART** which means,

Specific, Measurable, Attainable, Relevant, and Time-Bound

Specific: The chances of accomplishing a specific goal are more important than the general goals. To set a specific goal one must know what exactly one wants to achieve and should know the time limit as well as proper requirements and constraints. The person must know the specific reasons and the purpose of the goal. E.g. A general goal is to get success in life but a specific goal is to become an I.A.S.

Measurable- Establish concrete criteria form ensure progress toward the attainment of each goal one set. A measurable goal means one must know when and how the goal is to be accomplished.

The attainable- attainable goal means one must be able to judge whether the goals are to be accomplished or not. One must know the importance of goals in his or her life and the ways to achieve own 's goals.

Realistic-one should be able to judge oneself while setting a goal, one should not underestimate oneself. One should be able to know what are self-capabilities and potentialities and accordingly one should set a goal. A goal can be higher so that one can use his/her full capacity to achieve it.

Timely- A goal should be grounded within a time frame. If no time frame tied to it then there's no sense of urgency. If someone wants to lose or gain weight then one must fix the period, that within next three months I will lose ten kg. or so. **T** canal so stands for Tangible–A goal is tangible when you can experience it with one of the senses, that is, taste, touch, smell, sight, or hearing.

Time Management-Effective strategies for the Management

Time management helps one to use available time more effectively. It has also other benefits like health benefits or monetary benefits. If the time is managed properly and wisely then a lot of stress can be reduced and it will help bring improvement In life. There are some strategies one can take help of those strategies to make effective use of time.

Planning-if proper planning is done then one can efficiently utilize time. While making a plan one must plan every day. Keep a schedule of daily activities to minimize conflicts and last-minute rushes.

Plan each day. Planning your day can help you accomplish more and feel more in control of your life. By writing a to-do list, putting the most important tasks at the top. Keep a schedule of your daily activities to minimize conflicts and avoid the last-minute rushes.

Prioritize your tasks. One must be able to identify more important and less important tasks and accordingly one priority the tasks. This will help in spending time and energy on important tasks only.

Say no to nonessential tasks. One should be able to say no to the things which are not so important. For that should be able to know own's goal objectives.

Delegate. Take a look at your to-do list and consider what you can pass on to someone else.

Take the time you need to do a quality job. Doing work right the first time may take more time upfront, but errors usually result in time spent making corrections, which takes more time overall.

Day to day check on your schedule –this will enable you to know where the time is wasted.

Taking Review of the work done Before making a plan one should evaluate how he/she spends the time. Writing a diary will help in finding out how the time is spent and how it is wasted? Look for a time that can be used more wisely. By avoiding the things which distract a person lot of time is saved.

Get plenty of sleep, eat a healthy diet, and exercise regularly. A healthy lifestyle can improve your focus and concentration, which will help improve efficiency in work this will result in doing things faster.

For effective time management distressing is a must. For this one need a break from the routine work and then by relaxing and rejuvenating oneself one can do the work more efficiently.

Paragraph Writing:

A paragraph is a small piece of text made of at least one sentence. Each paragraph consists of a central idea which is expanded throughout the paragraph. As a cardinal rule, a paragraph must focus on one idea at a time. Each paragraph begins on a new line.

An important characteristic of a Good Paragraph:

A typical paragraph consists of five sentences: the topic sentence, the supporting sentences that expand the idea proposed in the topic sentence, and a concluding sentence. However, to write a good paragraph, it is important to focus on four vital elements: unity, order, coherence, and completeness.

1.   **Unity**: In a paragraph, unity begins with the topic sentence that introduces the main idea of the paragraph and controls its flow. The paragraph is unified around this main idea. The following supporting sentences provide the details and discussions based on the main idea. Therefore, to write a good paragraph, it is important to write a good topic sentence. To write a good topic sentence, one must select the main theme of the paragraph carefully. The most important point that one has to make while writing a paragraph is typically the topic sentence.

2.   **Order:** Order refers to the way the supporting sentences are structured and organised. A good paragraph must have definite organization. This organisation of sentences can be chronological, based on the importance of the points, or have any other logical presentation of detail. A well-ordered paragraph allows the reader to follow through with the information easily.

3.   **Coherence:** Coherence is the quality that makes the writing logical and easily understandable. It makes the sentences within a paragraph connect and work as a unified whole. One can achieve coherence in their writing by using transition words. Transition words are words that create bridges between sentences. They help to present thoughts in an orderly fashion, clarify vagueness, make connections and show comparison. For example, one can show order using words like 'first', 'second', 'last', etc., spatial relationships using 'above', 'below', 'under', etc., logic using 'furthermore', 'in addition, 'in fact', etc. Using consistent verb tense and point of view also contributes to great coherence.

4.   **Completeness:** Completeness refers to the quality of benign well-developed. A paragraph is complete when all the sentences clearly and sufficiently support the main idea. Usually, a topic sentence, three supporting sentences, and a concluding sentence are necessary to complete a paragraph. The concluding sentence or the last sentence of the paragraph must summarize the main idea and reinforce the topic sentence.

REPORT WRITING

According to the Oxford Dictionary, A report is a statement of facts and figures which is prepared as "a record of ascertained facts". It is made for information and calls for action.

Types of Reports:

There are various types of reports. They can be classified into two major groups: statutory reports and non-statutory reports.

The various types of reports that companies prepare as explained as follows:

1. Statutory Reports: The three main statutory reports that are required as per the Companies Acts are:

i) **Statutory Report:** This report is prepared to comply with Section 165 of the Companies Act. It is prepared by the directors and sent to all members at least 21 days before the statutory meeting. The statutory report states the affairs of the company since incorporation.

The statutory report describes:

● The total numbers and types of shares allotted, the amount received for each share, etc.

● The name, address, and occupation of directors, auditors, and secretary

● The details of contracts entered into by the company since incorporation

● Other relevant details

ii) **Annual Report:** This report is prepared annually after the finalisation of annual accounts and is sent to all members along with the notice of the annual general meeting. It is prepared to comply with Section 214 of the Companies Act. It is also called Directors Report.

An annual report includes:
● A summary of the financial results of the company

● A summary of the company affairs

● Prospects of the company in the upcoming year

● Names of directors retiring by rotation, and those offering for re-election

● Other relevant details

iii) **Auditors Report:** This report is prepared by the auditor of the company and sent to all members along with the notice of the AGM. It is attached to the final accounts statement that is sent to the members. It is prepared to comply with Section 244 of the Companies Act.

The report describes:

- Maintenance of books of accounts and other records

- Correctness of the company's annual accounts

- Certification that the company made all the books and accounts available for audit

- A statement that all information and queries' answers were provided by the company

- Other relevant remarks

2. Non-Statutory Reports: These reports are not required by the law, but are prepared by companies to provide information. They are stated as follows:

i) **Progress Report:** It indicates the progress made by the company or by a particular department or a unit during a period. It can be prepared for any duration of period, weeks, months, or years. It enables the members and/or investors and the management to analyse the prospects of the department or the unit. It indicates the efficiency of the department or the unit.

Some progress reports include:

- General progress report: It indicates the overall progress made by a company within a certain duration.

- Division-wise or branch-wise progress report: It indicates the performance of a particular division or a branch.

- Department-wise progress report: It indicates the performance of a particular department within a certain period

- Progress report from foreign subsidiaries: It indicates the performance and prospects of the foreign subsidiaries.

ii) **Committee Report:** It is prepared by a committee of experts appointed to study a problem or a situation. It may provide recommendations to resolve the problem or handle the situation. Most committees report only once, especially if it is appointed to report on a particular problem or situation. For example, committee reports on workers unrest, decline in sales, launching a new product, proposed modernisation, etc.

iii) **Search Reports:** A company may prepare research reports- a report that indicates findings of a particular area of research or subject. It helps the company to know the causes and effects of certain conditions, problems, and situations. The company can then take necessary actions based on research reports. For example, research reports on customer reactions to a new product, reactions toward the company's products and services, etc.

ESSENTIAL CHARACTERISTICS OF A GOOD REPORT

Essential characteristics of a good report include:

1. **Accuracy:** The report must contain accurate facts and figures so that the managers can correctly base their decisions on the information that is provided.

2. **Clarity:** The report must be in a simple and lucid language so that the readers can easily understand its contents. Ambiguous words and phrases should be avoided to avoid confusion and misunderstanding. Technical language can be used in exceptional cases.

3. **Concise:** The report must be brief. It should provide maximum information in minimum words. A report must not be too lengthy or it might lead to confusion.

4. **Objectivity:** The report must be objective. It should report only objective facts and figures, not subjective and biased personal opinions.

5. **Reliability:** A good report is reliable. The information presented in a report must be collected from reliable sources. It must be thoroughly checked and confirmed before presenting.

6. **Logical Arrangement:** The report must be written systematically. The views and findings must be arranged logically and sequentially to ensure coherence.

Check your progress

Q.1. Discuss the various features of paragraph and report writing.

- **FORMAT OF APPLICATION FOR SEEKING INFORMATION UNDER THE RIGHT TO INFORMATION ACT-2005**

Application ID No. : IITR/MS/RTI-

(For official use)

To

_____

The Public Information Officer/Asstt. Public Information Officer,

Indian Institute of Technology Roorkee

1. Name of the Applicant: _____

2. Address: _____

_____

3. Particulars of information

   . Concerned   Office/Department: _____

   a. Particulars   of   information   required: _____

(i) Details of information required: _____

(ii) Period for which information asked for: _____

(iii) Other details _____

4. Format in which information is required:

5. Mode of delivery expected (ordinary post, speed post, by courier, by hand, through internet or e-mail, by fax etc.). Additional fee may be charged to cover the cost of delivery.

6. The information can be furnished within 30 days as prescribed under Section 6 (1)/ the information sought for concerns my life and liberty, therefore may be furnished to me within 48 hours (Please delete the inapplicable portion).

4. Without prejudice to my rights under RTI Act 2005, to facilitate faster retrieval of information, I would like to state that the information could be available in _____

(please indicate the name of concerned Office/Department of the Institute).

8. I state that the information sought does not fall within the restrictions contained in section 8 and 9 of the Act and to the best of my knowledge it pertains to your office.

9. I also state that I am a citizen of India and I am eligible to seek information under the Right to Information Act 2005.

10. (i) A fee of ▢ _____ has been deposited in the Finance & Accounts Office of the Institute vide Receipt No. _____ dated _____, or

  (ii) A Postal Order/ Bank Draft No. _____ dated _____ is

enclosed, or

  (iii) The applicant is not liable to pay any fee because he/she is below the poverty line (proof   is attached).

(Please tick one and delete the remaining two options.)

Place:

Date:

(Name & Signature)

Postal Address: _____

_____

_____

E-mail address: _____

Tel No. _____

CONSUMER GRIEVANCE LETTER

A consumer complaint letter is written usually to an external agency like a Consumer Complaint Forum (District Forum/ State Commission/ National Commission) which redresses grievances of the public.

When writing a complaint letter you should:

● Describe your problem and the outcome you want

● Include key dates, such as when you purchased the goods or services and when the problem occurred

● Identify what action you've already taken to fix the problem and what you will do if you and the seller cannot resolve the problem

● Ask for a response within a reasonable time

● Attach a copy of any supporting relevant documentation such as a receipt or invoice.

From

_____ (your name)

_____

_____ (your address)

To

_____ (name of recipient)

_____ (designation)

_____ (name of organization)

_____ (address)

_____

_____

Date _____ (date of writing letter)

Dear Sir/Madam,

I want to lodge a complaint against _____ (mention organization's name) for _____ (mention reason for the complaint).

I _____ (furnish details about item procured/ service) and paid an amount of _____ (mention amount paid) on _____ (mention date of procurement).

_____ (briefly explain the problem you are facing with respect to item purchased or service taken).

I have written umpteen mails to concerned authorities, but with no response. I am enclosing _____ (mention documents you are enclosing as proof for your allegation).

I request your forum to intervene and get me justice at the earliest.

Thanking You

_____ (your name)

7.5 SUMMARY

In today's competitive world there is a need to know the various skills, for future graduates, the knowledge of various career opportunities is essential. There are two types of competitive examinations; they are for entry into a good educational institution where they can take up higher education. Other competitive examinations are for entry into jobs. For getting success in the competitive examinations some skills have to be developed. If one has a clear idea about the objectives of life, can set SMART goals, and practice effective strategies of time management then success and happiness are not far away for him/her.

7.6 UNIT END QUESTIONS

1. Write short notes

a) Soft skills required competitive examination

b) Quantitative Ability

c) Concept of Motivation

d) Maslows Theory of Motivation

e) ERG Theory of Motivation

f) SMART goals

g) MCGREGOR theory Xand theory Y

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