

MODULE V

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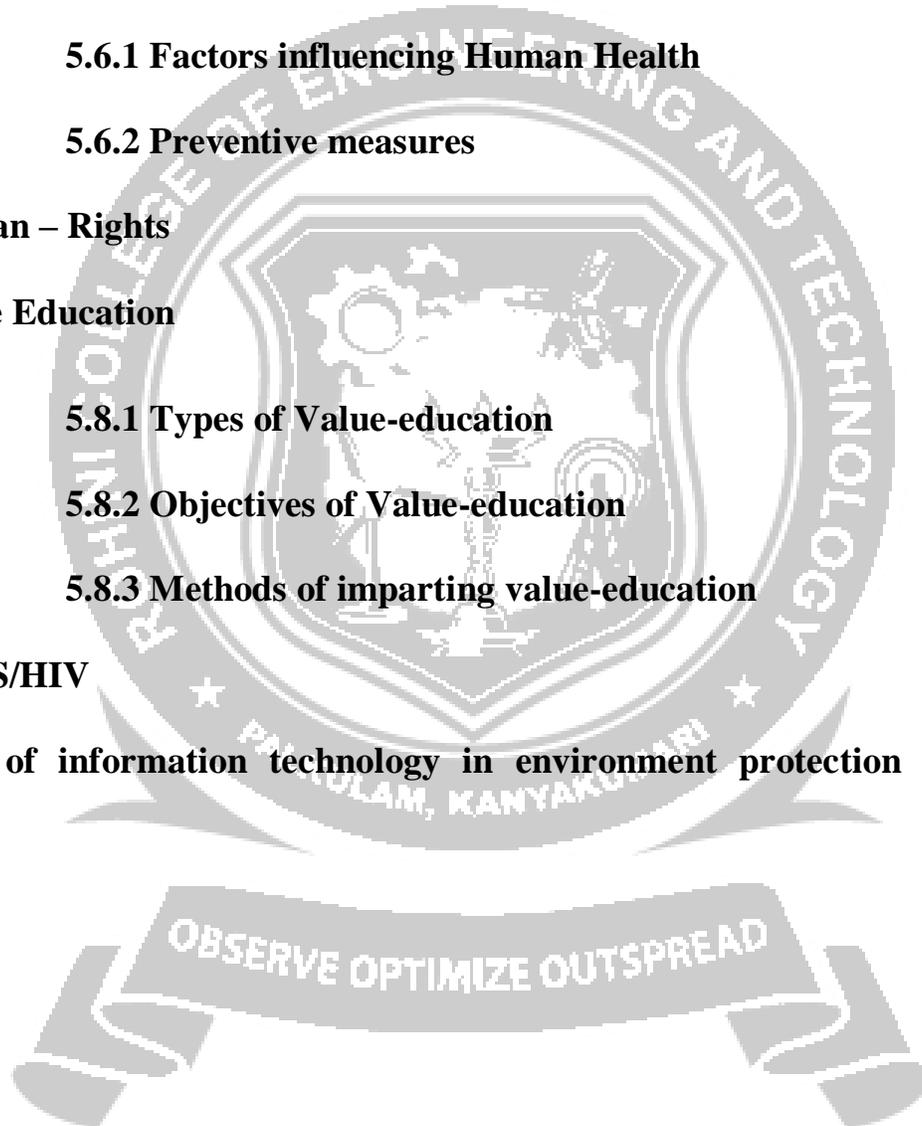
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MODULE V

Human Population & The environment

5.6 Environment & Human Health

Human health is directly related to the environment to which the people get constantly exposed.

5.6.1 Factors influencing Human Health

- 1) Nutritional factors
- 2) Biological factors
- 3) Chemical factors
- 4) Psychological factors

Due to vigorous population, our environment becomes heavily polluted. The man made activities causes environmental pollution leads to illness & death.

1) Physical hazards & their health effect

- a) Radioactive radiations affects the body cells, glands function. It produces cancer.
- b) UV radiations produces skin cancer
- c) Global warming cause famine, mortality
- d) CFC causes depletion O₃ layer, allows more UV radiation, skin cancer.
- e) Noise produces painful & irreparable damage to human ear.

2) Chemical hazards their health effects:

- a) Combustion of fossil fuels liberates SO_2 , NO_2 , CO_2 & particular matters produces Asthma, bronchitis and other lungs diseases.
- b) Industrial effluent affects body cells leads to death.
- c) Pesticides affects food chain.
- d) Heavy metals like Hg, Cd, Pb, fluoride & nitrate contaminated with H_2O produces ill effect.

3) **Biological hazards and their health effect.**

- a) Bacteria, virus & parasites produces Diarrhea, malaria, anemia, cholera & respiratory diseases.

5.6.2 Preventive measures

- 1) Before eating, we should wash our hands
- 2) Maintaining skin, teeth, nail, and hair neatly.
- 3) Drinking chemically purified treated water.
- 4) Eat the food items which is in hot condition
- 5) Wash the vegetables & raw materials before cook
- 6) Try to avoid plastic containers & aluminum vessels.
- 7) Do the physical exercise, to have proper blood circulation in the body.

5.7 Human – Rights

Human Rights are the fundamental rights, which are possessed by all human beings irrespective of their caste, nationality, sex & language.

Human right is the right for peaceful and healthy life.

Universal declaration of human rights:

- 1) Human rights to freedom
- 2) Human rights to property
- 3) Human right to freedom of religion
- 4) Human right to culture & education
- 5) Human right to equality
- 6) Human right against exploitation
- 7) Human right to good health
- 8) Rights of equal dignity.
- 9) Right of liberty & security
- 10) Right from torture (or) cruelty
- 11) Freedom from inhuman treatment
- 12) Freedom from slavery & forced labour
- 13) Freedom of movement & choice of residence
- 14) Right to privacy
- 15) Freedom of thought, conscience & religion.
- 16) Freedom of opinion & expression
- 17) Right to marry & found a family
- 18) Right of the child
- 19) Political rights.
- 20) Equality before the law
- 21) Rights of minorities

- 22) Right to do community development work
- 23) Rights should not curtail other rights.

5.8 Value Education

Value education imparts social, moral, cultural, spiritual and human values.

Value education is aimed at personality development, character building, moral development spiritual development, mannerism, patience, forgiveness, honesty, sincerity, courage, timely decision making. It's builds a person's overall character.

5.8.1 Types of Value-education

- 1) Formal education
 - 2) Value Education
 - 3) Value based environmental education
- 1) **Formal education**: Formal education is exam oriented. It provides a degree (or) diploma. It helps to get a job (or) business.
 - 2) **Value-education** : Value education teaches, the distinction between right & wrong, helpful, loving, generous and tolerant. This education helps to behave properly with the environment.
 - 3) **Value based education** : Value-based education provides a knowledge about the principles of ecology, fundamentals of environment & biodiversity.

It tells us about the care of natural resources and manage them in a sustainable way.

5.8.2 Objectives of Value-education

- 1) Improve the integral growth of human being.
- 2) Increasing awareness about our national history, cultural heritage, constitutional rights, community development & environment.
- 3) Developing moral discipline, good citizenship
- 4) Developing tolerance & moral decisions
- 5) Developing spirit of patriotism.

5.8.3 Methods of imparting value-education

1. **Telling** : It is a process of developing values to enable a pupil to have a clear picture of a value-laden situation by means of his own narration of the situation.
2. **Modeling** : The individual perceived an ideal values is presented to the learners as a model.
3. **Role playing** : Acting and expressing the feelings of the actor/actors by taking the role of another person but without the risk of reprisals.
4. **Problem solving** : It is a method where in a dilemma is presented to the learners asking them what decisions they are going to take.

Studying biographies of great man:

This method makes use of the lives of the great man as the subject matter for trying to elicit their good deeds and thoughts worthy for emulation.

5.9 AIDS/HIV

AIDS: Acquired Immuno Deficiency Syndrome. It is a viral disease. It is a sexually transmitted disease (STD). Due to THE INFECTION OF RNA Virus on Lymphocytes, it decreases the activity of T-helper cells in the body. This leads to suppress the immune system called immunes deficiency.

It was discovered in America in 1981. About 4 million people in India are affected by HIV.

HIV – Human Immune Deficiency Virus. (RNA virus)

Causes of AIDS (Infection)

- 1) AIDs is caused by a HIV-RNA virus.
- 2) HIV Virus transmitted through blood contact, unprotected sex
- 3) Injection with unsterile Syringes & needles
- 4) Intravenous drug using
- 5) Pass from infected mother to their babies during pregnancy, delivery (or) breast feeding
- 6) Blood transfusing at the time of accident & pregnancy time.
- 7) Illegal sexual contact with many people
- 8) Using a single blade for shaving many people.

Symptoms of AIDS

Minor symptoms

- a) Persistent cough for more than one month
- b) General skin disease

- c) Viral infection
- d) Fungus infection in mouth & throat
- e) Frequent fever, head ache, fatigue.

More Symptoms

- a) Fever for more than one month
- b) Diarrhea for more than one month
- c) Cough & TB for more than six months
- d) Hair fall from the head
- e) Loss of body weight 10% within a short period.

Consequence of HIV/AIDS

- 1) Large number of deaths occurs, which affect environment & natural resources.
- 2) There is loss of labour & production level decreases.
- 3) More H₂O required for maintaining hygiene in AIDS affected locality.
- 4) The HIV affected people cannot perform work well due to lack of energy & frequent fever & Sweating.

Preventive Measures of AIDS

- 1) **Education** : Health education represents to avoid unprotected sexual contact, and encourage the usage of condoms, syringes & needles should be used only one time.
- 2) **Prevention of blood borne HIV Transmission**

3) Blood containing HIV should not be donated. Strict sterilization practices should be followed in hospitals.

4) **Primary Healthy Care**

Conducting awareness programmes via voluntary health agencies. Training Programmes to doctors and paramedical workers should be conducted.

5) **Counselling Services**

Counseling Services should be provided either in person (or) through telephone.

6) **Drug treatment**

By taking nutritious diet, drug the immune system has to be kept boosted and maintaining a stress-free mind.

Diagnosis of AIDS

It is diagnosed by 2 methods.

- 1) ELISA – Enzyme Linked Immune Sorbent Agency
- 2) Western Blotting.

6.0 Role of information technology in environment protection & Human health.

Information Technology helps to study, environmental issues using computer, internet, satellites. It helps people to monitor the environmental problems in the following ways.

- 1) It has a number of data bases for environment. Some of the data bases are the following:

GIS : Geographical Information System

GRID : Global Resource Information Database

NEDS : National Emission Data system

ENVIS: Environmental Information system.

- 1) The Science using information technology to study, Environmental problems is called Environmental Informatics
- 2) Geometrics is an field of IT. It deals with geographic information. It involves surveys of mapping, remote sensing.
- 3) It helps to announce the occurrence of earthquake.
- 4) The daily range of temp of the entire world, rainfall, is predicted with the help of IT resources can be detected.
- 5) Non renewable energy resources can be detected and controlled by IT.
- 6) Remote sensing helps to determine bio diversity
- 7) The flora and fauna of the world can be surveyed with the help of geographical Information system.
- 8) It helps to store, railway routes, roads, dams, rivers and other geographical features of the world in the internet.
- 9) The losses and management of disasters like earthquake, tsunami, floods, cyclones, volcanoes landslider can be made by IT.

Role of IT in human health

IT plays a vital role in human health.

1. Bio informatics

Bio informatics is the application of information technology on molecular biology of man & animals. This field is applied in medicine, agriculture.

2. Human Genome Project:

It mapping of the genes of man on a computer. It monitor human diseases like cancer.

3. Invasive surgery:

It is the surgery using endoscope. It needs only a small hole.(Ex) gall bladder decease. In this technology there is no bleeding and short recovery.

4. Drug manufacturing:

Drug manufacturing industries use bio sensors, gateway sensors, soft wares to control quality & quantity.

NSSA Extreme Environment Mission Operation:

This project aims to help the surgeon on earth to operate the astronauts in space using wireless technology & robots.

