

Points to remember

Unit – VI (CHE110)

- The increase in the number of individuals in a population is known as population growth.
- The study of human population trends is called demography.
- Factors Deciding the Growth or Decline of Population: Birth Rate (Number of births per thousand people in a geographical area), Death rate (Number of deaths per thousand people in a geographical area), Migration (Rate of change in population for a specific area).
- Causes of Population Growth: Availability of cure for many life-threatening diseases, Poverty, Preference for sons, Custom of early marriages, Improvement in public health, Illiteracy.
- Effects of Population Growth: Excessive exploitation of natural resources, Unemployment, Lack of proper health and sanitation facilities, Environmental pollution.
- Population transfer or resettlement is the movement of a large group of people from one region to another.
- Restoration is the restoration of someone to a useful place in society to a satisfactory state.
- Reasons for Displacement of Human Habitation: Natural hazards (Earthquakes, cyclones, landslides, floods, drought, volcanic eruptions, and epidemic diseases), Anthropogenic factors (Developmental activities such as construction of dams, roads, tunnels, etc., which increase the risks of calamities such as floods and landslides. Other factors include accumulation of wastes and environmental pollution).
- Problems Faced by Displaced People:
 - The compensation for the lost land is often not paid or the payment is delayed.
 - Basic infrastructure and amenities are not provided in the new area.
 - Very often, temporary camps become permanent settlements.
 - Ethnic and caste differences make it difficult for the refugees to live peacefully with the communities already living in the area.
- Environmental Ethics: Creating a moral sense of environmental conservation in each person is called environmental ethics.
- The Contrasting Views: Utilitarian justification (also known as individualistic ethics), Ecological justification (also known as moral justification).
- Environmental Equity and Priority Principle: Always respect all nature especially in cases where strong human rights are at stake.

- Environmental ethics: Possible Solutions:
 - One should respect the power of environment and apply it for the benefits of humankind.
 - One should place the highest priority on health, safety, and environmental protection while using environmental products.
 - One should be sensitive to ethical and social issues regarding the environment.
- Methods to generate public awareness: Formal Method (Introduction of Environmental Studies as a course in schools and colleges), Non-formal Method (Organizing meetings, seminars and conferences, Organizing various competitions, Through folk songs, street plays, TV serials, etc., Mass media such as newspapers, magazine, radio, T.V.).
- Objectives of disaster management:
 - Reduce, or avoid, losses from disasters
 - Assure assistance to victims
 - Achieve rapid and effective recovery
- Components of Disaster management:
 - Mitigation: Minimizing the possible effects of a disaster
 - Preparedness: Planning how to respond to a disaster
 - Response: Taking immediate measures to save life and property, providing medical relief, etc.
 - Recovery: Returning the community to normal conditions
- A disaster is defined as a sudden event or calamity that causes large-scale damage and destruction of human life and property.
- Types of Disasters
 - Natural Disasters: Air-related (Hurricanes, cyclones, storms, etc.), Water-related (Floods, drought, etc.), Earth-related (Earthquakes, landslides, volcanic eruptions, etc.).
 - Man-made Disasters (Industrial accidents, Wars, riots, terrorism, etc., Toxic spills, Transportation accidents).
- The term earthquake is used to describe any seismic event, caused naturally or as a consequence of human activities, that leads to the generation of devastating seismic waves.
- Causes of Earthquake: Movement of hot gases and magma, Volcanic activities, Stress buildup due to water pressure, Tectonic stress generated by movement of tectonic plates.
- Effects of Earthquake: Destruction and demolition of buildings, dams, etc., Large-scale damage to life and property, Increased incidence of fire, landslides, etc., Increased incidence of tsunami waves.
- Management of Earthquakes: Marking earthquake-sensitive areas, Construction of houses, factories, dams, bridges, etc., with appropriate design and materials and strategically placed vibration absorbers, Forecast and early prediction of earthquakes, Creating

public awareness regarding the steps to be taken during emergencies, Relief measures through timely support by individuals, government, and non-governmental organizations.

- Landslides are natural phenomena during which large amounts of landmass slide downwards from hilly areas, mainly because of gravity, destroying everything lying in the path.
- Causes of Landslides: Earthquakes, Glaciers and Torrential rain, Construction of dams, bridges, tunnels, roads, etc., Use of explosives for breaking rocks during mining, Deforestation of mountain slopes.
- Effects of Landslides: Rocks, large debris, and sliding landmasses destroy urban and rural habitation; Damage to roads, dams, bridges, etc.; Obstruction of river flow increasing the incidence of flood; Severe damage to crops and agricultural lands; Management of Landslides; Construction activities should be done only after properly evaluating the geological and geographic conditions; Regulating rate of water flow also helps in controlling landslides; Agriculture at slopes should be avoided as far as possible; Relief task through economic help supporting resettlement and rehabilitation of affected people at individual, community, and organizational levels should be carried out.
- The accumulation of a large quantity of water at a place or the presence of more water than can be handled by the drainage of the area is known as flood.
- Types of Floods: Flash floods, River floods, Coastal floods.
- Causes of Floods: Deforestation, Urbanization, Change in river course, Man-made activities in river channels, Uncertain rainfall.
- Effects of Floods: Damage to agricultural crops, Damage to life and property, Disturbances in transportation, Increase in populations of disease vectors and pathogens, Loss of biodiversity, Economic crisis.
- Control of Floods: Plantation on slopes, Drainage management, Flood plain zoning, Forecasting.
- Cyclone: In northern hemisphere, a cyclone refers to an area of low atmospheric pressure surrounded by a wind system in a counter-clockwise direction.
- Effects of Cyclones: They damage installations, communication systems, trees, etc., resulting in loss of life and property, They may cause river floods and submergence of low-lying areas.
- Management of Cyclones: Forecasting, Proper construction of houses and Construction of cyclone shelters in the cyclone-prone areas, Relief tasks, Development of warning systems, Community preparedness at all levels to deal with emergency situations.
- BISHNOI MOVEMENT : It was started in 400 years ago by a Sage known as Sombaji. in Rajasthan, a large number of trees are still

worshiped by devotees. people resisted the cutting of such tree & advocated movement against deforestation.

- **CHIPKO MOVEMENT** : It was started in 1973 in the Chamoli district of Uttarakhand, Chipko movement was against deforestation. Sunderlal Bahuguna, Gauri devi & Chandi Prasad Bhatt were prominent leaders of this movement.
- **NARMADA BACHAO ANDOLAN** : It was a movement against building multi-purpose dam over Narmada river which will ultimately result in flood & water logging in large area covered by about 1,00,000 people. the movement is led by Medha Potekar, Baba Amte & Arundhati Roy.
- **SILENT VALLEY MOVEMENT** : It was a movement against a hydro-electric project on the river Kuthipuzha, tributary of Periyar river. In fact, the project site is covered by evergreen forest which is a home of many rare species of plants & fauna which may be destroyed by submergence.
- **BALIYAPAL MOVEMENT** : It was a movement against testing of missiles on the land of Baliyal villagers which may lead to infertility of soil.