



QUESTION BANK

Name of the Department : Computer Science and Engineering

Subject Code & Name : OCE751 & Environmental and Social Impact

Assessment

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UNIT I INTRODUCTION

PART-A

1. Define Environment.

The natural environment encompasses all living and non-living things occurring naturally, meaning in this case not artificial. The term is most often applied to the Earth or some parts of Earth. This environment encompasses the interaction of all living species, climate, weather and natural resources that affect human survival and economic activity.

2. What is Sustainable development ?

Sustainable development is the idea that human societies must live and meet their needs without compromising the ability of future generations to meet their own needs. The “official” definition of sustainable development was developed for the first time in the Brundtland Report in 1987.

3. Demonstrate Environmental Impacts.

An **environmental impact** is defined as any change to the **environment**, whether adverse or beneficial, resulting from a facility's activities, products, or services. In other words it is the effect that people's actions have on the **environment**.

4. Define Environmental Impact Assessment.

Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.

5. What is Environmental Law?

Environmental law is the collection of laws, regulations, agreements and common law that governs how humans interact with their environment. The purpose of environmental law is to protect the environment and create rules for how people can use natural resources.

6. List the Environmental Laws in India.

The National Green Tribunal Act, 2010.

The Air (Prevention and Control of Pollution) Act, 1981.



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The Water (Prevention and Control of Pollution) Act, 1974.

The Environment Protection Act, 1986.

The Hazardous Waste Management Regulations

7. What is the significance of the Wildlife Protection Act 1972?

India's Wildlife Protection Act of 1972 is a comprehensive piece of legislation that regulates sanctuaries, national parks, and zoos among other protected locations. Its primary aim is to curb the illegal trade in wildlife and the derivative parts.

8. Write about Forest Conservation Act.

The Forest (Conservation) Act, 1980 an Act of the Parliament of India to provide for the conservation of forests and for matters connected therewith or ancillary or incidental thereto. It was further amended in 1988.[1] This law extends to the whole of India. It was enacted by Parliament of India to control further deforestation of Forest Areas in India. The act came into force on 25 October 1980.

9. What is Environment (Protection) Act 1986?

The Environment (Protection) Act, 1986 authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds.

10. Define Water Act.

The Water Act is enacted with the objective of prevention & control of pollution in India. The Act aims at the maintaining or restoring the wholesome nature of water for the establishment of Boards and to vest them with such powers so as to enable them to carry out the purposes of the Act.

11. Define Water (Prevention & Control of Pollution) Act, 1974.

Water (Prevention & Control of Pollution) Act, 1974 is a comprehensive legislation that regulates agencies responsible for checking on water pollution and ambit of pollution control boards both at the centre and states. The Water (Prevention & Control of Pollution) Act, 1974 was adopted by the Indian parliament with the aim of prevention and control of Water Pollution in India

12. What are the salient features of Air [Protection] Act?

Advice the Central government on matters pertaining to air and air pollution.

Advice and support State Boards in carrying out their functions.

Carry out research related to air pollution.

Through mass media, spread awareness and information about air and air pollution.

13. Define Air Act.

An Act to provide for the prevention, control and abatement of air pollution, for the establishment, with a view to carrying out the aforesaid purposes, of Boards, for conferring



on and assigning to such Boards powers and functions relating thereto and for matters connected therewith.

14. What is hazardous waste?

Hazardous waste means any waste, which by reason of characteristics, such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger to health, or environment. It comprises the waste generated during the manufacturing processes of the commercial products such as industries involved in petroleum refining, production of pharmaceuticals, petroleum, paint, aluminium, electronic products etc.

15. List The importance of Hazardous waste Management.

Scientific disposal of hazardous waste through collection, storage, packaging, transportation and treatment, in an environmentally sound manner minimises the adverse impact on human health and on the environment. The hazardous waste can be disposed at captive treatment facility installed by the individual waste generators or at Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs). There are 40 Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs) available in 17 States/UTs.

16. Define landslides.

A landslide or landslip is a geological phenomenon which includes a wide range of ground movement, such as rock falls, deep failure of slopes and shallow debris flows, which can occur in offshore, coastal and onshore environments. Although the action of gravity is the primary driving force for a landslide to occur, there are other contributing factors affecting the original slope stability.

17. Mention the typical effects of deforestation.

Humans have always and probably always will depended on forests to a lesser or greater degree. Trees provide food, shelter from the elements and predators not just to humans but the vast majority of life on land. Unfortunately the forests resources and appeal is its downfall.

18. Define National Environment Policy.

National Environment Policy (NEP) - Ministry of Environment and Forests (2006) A document that emphasizes on conservation, prevention of degradation and equity of natural resources. ... It argues that environmental degradation often leads to poverty and poor health outcomes among populations.

19. What are the steps to reduce the Land Degradation?

The following steps will be taken to reduce land degradation:

- (i) Encourage adoption of science based and traditional sustainable land use practices through research and development.



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- (ii) Pilot scale demonstrations and farmers' training. (iii) Promote reclamation of wasteland and degraded forest land through formulation and adoption of multi-stakeholder partnerships involving the land owning agency, local communities and investors.
- (iv) To reduce desertification through action plans.

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20. Discuss about Environmental Issues.

Environmental issues are harmful effects of human activity on the biophysical environment. Environmental protection is a practice of protecting the natural environment on the individual, organizational or governmental levels, for the benefit of both the environment and humans. Environmentalism, a social and environmental movement, addresses environmental issues through advocacy, education and activism.

PART-B

1. Explain in detail about the Environmental Impacts and Sustainable Development.
2. Discuss about the types of natural Environments? Explain in detail.
3. Describe Environmental Impact Assessment and its functions using Flowchart
4. Examine the Policies of Environment.
5. Describe the International Conferences and conventions of Environment
6. Illustrate the Indian Environmental Acts.
7. Show the impact of National Environment Policy
8. Describe the Acts and Notifications of EIA.
9. Brief about decision making Bodies of EIA.
10. Summarize the Environmental Resources and Issues.



1. Define Soil Contamination.

Soil contamination or soil pollution as part of land degradation is caused by the presence of xenobiotics (human-made) chemicals or other alteration in the natural soil environment. It is typically caused by industrial activity, agricultural chemicals or improper disposal of waste.

2. How to assess Biodiversity ?

When scientists assess an area's biodiversity, they look at species richness (how many different species there are) and relative abundance (the number of organisms each species has). ... Others have made their mark as invasive species. They survey aquatic creatures in the water, and make censuses of trees in the forest.

3. Define water environment.

Water that is allocated and managed specifically to improve the health of rivers, wetlands and floodplains is known as water for the environment. Rivers, creeks and wetlands play a vital role in sustaining healthy communities and economies.

4. State about the Air Environment.

Air Environment is an environmental consulting and research company specialising in air quality, meteorology and climatology. We are a group of experienced scientists, all trusted experts in our fields, who pride ourselves on taking a thoughtful and rigorous approach to environmental research.

5. Define Noise Environment.

Environmental noise is defined as unwanted or harmful outdoor sound created by human activity, such as noise emitted by means of transport, road traffic, rail traffic, air traffic and industrial activity. From: Environmental Noise Pollution, 2014.

6. Tell about Biological Environment.

The biological environment includes all the natural biological factors that depend upon the natural resources. Eg. Human beings, animals, birds. Thus water is considered as not a part of the biological environment

7. Analyse about Land Environment.

Land use involves the management and modification of natural environment or wilderness into built environment such as settlements and semi-natural habitats such as arable fields, pastures, and managed woods.

8. What is socio economic environment?

These systems and structures impact the distribution of resources, money and power in a community and around the world. This distribution, known as the socioeconomic environment, shapes how communities and individuals can gain the resources needed to meet their basic human needs.

9. Highlight the health environment.

Environmental health is the branch of public health concerned with all aspects of the natural and built environment affecting human health. Environmental health is focused on the natural and built environments for the benefit of human health.



10. Differentiate between insitu and exsitu conservation of biodiversity. (NOV/DEC 2012)

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In-situ conservation: It involves protection of fauna and flora within its natural habitat, where the species normally occurs is called in-situ conservation.

Ex-situ conservation: It involves protection of fauna and flora outside the natural habitats.

11. State the significance and scope of environmental education. (NOV/DEC 2008)

- To get an awareness and sensitivity to the total environment and its related problems.
- To motivate the active participation in environmental protection and improvement.
- To develop skills for identifying and solving environmental problems.
- To know the necessity of conservation of natural resources

12. What is ecological succession? (NOV/DEC 2008)

The progressive replacement of one community by another community till the development of stable community in a particular area is called ecological succession.

13. What are endangered and endemic species? (MAY/JUNE 2009)

ENDANGERED SPECIES: A species is said to be endangered, when its number has been reduced to a critical level. Unless it is protected and conserved, it is in immediate danger of extinction.

ENDEMIC SPECIES: The species, which are found only in a particular region are known as endemic species.

14. What do you understand by the term flora and fauna?

FLORA: Plants present in a particular region or period

FAUNA: Animals present in a particular region or period.

15. "India is a mega diversity nation"- Account.

India is one among the 12 mega diversity countries in the world. It has 89450 animal species accounting for 7.31% of the global faunal species and 47000 plant species which accounts for 10.8% of the world floral species. The loss of biodiversity or endemism is 33%.

16. What is bio diversity?

Biodiversity is defined as the variety and variability among all groups living organism and the ecosystem in which they occur.

17. Define the terms producers and consumers.

PRODUCERS: Producers synthesize their food themselves through photosynthesis.

CONSUMERS: Consumers are organisms which cannot prepare their own food and depends directly or indirectly on the producers .



18. Define environmental science.

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Environmental science is the study of the environment its biotic and abiotic components and their interrelationship.

19. What are the characteristics of desert ecosystem.

- The desert air is dry and the climate is hot
- Annual rainfall is less than 25cm
- The soil is very poor in nutrients and organic matter
- Vegetation is poor

20. What are autotrophic and heterotrophic components of an ecosystem? Give examples. (NOV/DEC 2008)

AUTOTROPHIC COMPONENTS: The members of autotrophic components are producers, which autotrophs. They develop energy from sunlight and make organic compounds from inorganic substances. EX: Green plants, algae, bacteria,.

HETEROTROPHIC COMPONENTS: the members of heterotrophic components are consumers, which are heterotrophs. They consume producers.

PART-B

1. Define ecosystem. Give an account of the structure and function of an ecosystem.
2. (i) Explain the concepts of food chain, food web, ecological pyramids.
(ii) Discuss the threats faced by Indian biodiversity.
3. Describe the structure and function of forest, desert aquatic and grassland eco system
4. Discuss the biodiversity at global, national and local levels
5. Write about Insitu and Exsitu conservation of biodiversity
6. Explain the role of producers, consumers and decomposers in an ecosystem.
7. Name and discuss the values that assigned to biodiversity.



1. Give four important sources of air pollution.

- Carbon monoxide
- Nitrogen dioxide
- Sulphur dioxide
- Photochemical smog

2. Give two effects of noise pollution on human being.

- Noise pollution affects human health, comfort and efficiency.
- It causes muscles to contract leading to nervous breakdown, tension.
- Loss of hearing, psychological and pathological disorder

3. What do you understand by soil pollution?

Contamination of soil by human and natural activities which may cause harmful effects on living beings.

4. What are the causes of noise pollution?

- Industrial noise
- Transport noise
- Neighbourhood noise

5. Define recycling

Recycling is the reprocessing of discarded materials into new useful products.

Example: Old aluminum cans and glass bottles are melted and recast into new cans and bottles

6. What is marine pollution?

The discharge of waste substances into sea resulting in harm to living resources, hazards to human health, hindrance to fishery and impairment of quality for use of sea water.

7. Define BOD₅.

BOD is the amount of oxygen required for the biological decomposition of organic matter present in the water.

8. What is photochemical smog?

The brownish smoke like appearance that frequently forms on clear, sunny days over large cities with significant amounts of traffic.

9. Define thermal pollution .



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It is defined as the addition of excess of undesirable heat to water that makes it harmful to man, animal or aquatic life or otherwise causes significant departures from the normal activities of aquatic communities in the water.

10 Mention the sources of water pollution.

- Infectious agents
- Oxygen demanding wastes
- Inorganic chemicals
- Organic chemicals
- Sediment
- Radioactive materials

11. What are the sources of radioactive pollution.

- Natural sources: Cosmic rays, soil, rocks, air, food
- Manmade sources: Nuclear power plants, X-rays, diagnostic kits.

12. What are coral reefs? Why are they important?

Coral reefs which are the most productive eco-system. They provide support more than one millions species, feeding, breeding and nursery areas to fish and shell fish, offer medicines.

13. Define hazardous wastes.

Wastes like toxic chemicals, radioactive (or) biological substances which contribute to an increase in mortality or in serious irreversible illness to human health and environment are called hazardous wastes.

14. What are the types of solid wastes?

- Municipal wastes
- Industrial wastes
- Hazardous wastes

15. Give any four methods to control noise pollution.

- Source control
- Transmission path intervention
- Receptor control
- Oiling

16. How nuclear hazards can be disposed safely?

Nuclear hazards are disposed safely by dumping them in a big concrete tank and throwing it in a deep sea.

17. What is mean by non-point pollution.



Large land areas or airsheds that pollute water by runoff, subsurface flow is called non-point pollution. They cannot be traced to any site of discharge.

18. What are landslides

The movement of earthy materials like coherent rock, mud, soil and debris from higher region to lower region due to gravitational pull is called landslides.

19. What are the roles of women in environmental protection?

- In rural areas, women plant trees and grass, grow vegetables with the drip-irrigation method in order to save water.
- In urban areas they go shopping using cloth bags to reduce white pollution
- Women refuse to use disposal products to save energy and resources
- Women reduce the amount of trash they dispose of so as to recycle natural sources.

20. State the role and responsibility of an individual in the prevention of pollution.

- Plant more trees
- Use water, energy and other resources efficiently
- Use CFC free refrigerators
- Reduce deforestation

PART-B

1. Define air pollution. What are the sources of air pollution? Explain the approach to control air pollution.

2.(i) Define flood. What are the causes? What are the measures to control the flood disaster?

(ii) Discuss the methods of solid waste disposal

3. Explain the causes, effects and control measures of water pollution

4. Explain the various disaster management measures during cyclone, earthquakes and landslides.

5. Explain the sources and effects of soil and marine pollution

6. Discuss in detail about role of an individual in prevention of pollution

7. Explain in detail Sources, effects and control effects noise, thermal and nuclear hazards



1. Define the term 'Acid rain'.

The presence of excessive acids in rain water is known as acid rain.

2. What are the urban problems related to energy?

- Residential and commercial lightings
- Transportation means including, motor cycle, car and public transport for moving from residence to work place.
- Industries using large proportion of energy.
- Control and prevention of pollution, need more energy dependent technologies.

3. What is rain water harvesting?

Rain water harvesting is a technique of capturing and storing of rain water for further utilization.

4. Define sustainable development.

Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

5. Give the effects of global warming.

- Effect on sea level
- Effect on agriculture and forestry
- Effect on water resources
- Effect on terrestrial ecosystems.

6. How to overcoming global warming in India?

- Plant more trees
- Shift from coal to natural gas
- Adopt sustainable agriculture
- Stabilize population growth
- Efficiently remove CO_2 from smoke stacks.

7. What are the air pollution and prevention control acts in India and mention at least four?

- The central board may lay down the standards for the quality of air.
- The central board coordinates and settle disputes between state boards, in addition to providing technical assistance and guidance to state boards.
- The state boards are empowered to lay down the standards for emissions of air pollutants from industrial units or automobiles or other sources.

8. Define urbanization.



Urbanization is the movement of human population from rural areas to urban areas for the want of better education, communication, health, employment.

9. What are the significance of sustainable development?

- Development appropriate technology
- Reduce, recycle, reuse
- Providing environmental education and awareness
- Consumption of renewable energy resources
- Conservation of non renewable resources
- Population control

10. State the effects of acid rain.

- Acid rain has been found to be dangerous to the living organism as it can destroy life. Human nervous system, respiratory system and digestive system are affected by acid rain.
- It also causes the premature death from heart and lung disorders such as asthma and bronchitis.
- Acid rain corrodes houses, monuments, statues, bridges and fences.

11. Mention the issues involved in enforcement of environmental legislation.

- Air and water pollution by industries
- Forestry
- Land resources
- Urbanization
- Waste management

12. What are the advantages of rain water harvesting?

- Reduction in the use of current for pumping water
- Mitigating the effects of droughts and achieving drought proofing
- Increasing the availability of water from well
- Rise in ground water levels
- Minimizing the soil erosion and flood hazards

13. Write the consequences of ozone layer depletion .

- Effect on human health
- Effect on aquatic life
- Effect on materials
- Effect on climate

14. State the drawbacks of pollution related acts.

- The penalties in the act is very small when compared to the damage caused by the big industries due to pollution.
- A person cannot directly file a petition in the court.



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- For small unit it is very expensive to install effluent treatment plant
- Litigation, related to environment is expensive, since it involves technical knowledge.

15. What is meant by environmental audit?

Environmental audits are intended to quantify environmental performance and environmental position. In this way they perform analogous function to financial audits. It also aims to define what needs to be done to improve on indicators of such performances and position.

16. How CFC are accumulated in atmosphere?

- Aerosol propellants
- Cleaning solvents
- Refrigerants
- Foam plastic blowing agent

17. What is mean by greenhouse gases?

Green house gases are gases (CO_2 , CH_4 , CFC) present in the atmosphere, which absorb heat and do not radiate, cause increase in atmospheric and global temperature. It is similar to the warming effect observed in the green house made of green glass.

18. What is mean by ISO 14000?

ISO 14000 is the environmental management standards which exist to help organizations minimize how their operations negatively affect the environment and comply with applicable laws and regulations.

19. What is Dobson unit

The amount of atmospheric ozone is measured by Dobson spectrometer and is expressed in Dobson units. 1DU is equivalent to a 0.01mm thickness of pure ozone at density it posses if it is brought to the ground level pressure.

20. What is the need for water conservation?

- Better life styles need more fresh water
- As the population increases requirement of water is more
- Over exploitation water leads to drought
- Agricultural and industrial activities require more fresh water.

PART-B

1. Explain the phenomenon of global warming and factors contributing it

2. Name the laws that have been formed for environmental protection. Mention the objectives of each act

3. Explain the effects of nuclear accidents with two case studies.



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4. Write short notes on (i) Role of NGO (ii) Acid rain (iii) Ozone layer depletion (iv) Water conservation
5. (i) Explain in brief about the Indian pollution regulations
(ii) Describe the functions of state board and central board according to pollution Control.
6. (i) Explain the 'Ozone' and Ozone layer depletion.
(ii) Discuss the energy requirement in detail for sustaining urban life
7. (i) What is rain water harvesting? How are the rain water Harvesting methods classified? Briefly explain
(ii) Explain in detail about resettlement and rehabilitation of people





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UNIT V CASE STUDIES
PART-A

1).what are the causes of water loss?

1. seepage from the canal
2. over irrigation of field
3. heavy surface runoff

2) what are ways of water loss in the canal?

1. seepage loss
2. evaporation loss

3) What are factors on which seepage loss depends?

- position of water table
- porosity of sub-soil
- porosity of soil
- extend of absorbing medium

4) What are two different condition of seepage?

- 1.perculation
- 2.absorption

5. What are the remedial measures for losses?

- 1.efficient surface drainage
- 2..restriction of irrigation
3. change in crop pattern

6) What are the advantages of irrigation water managements?

- 1 .achievement of optimum irrigation efficiency
- 2.economical and efficient operation and maintenace of irrigation system
- 3.equitable distribution of supplies to irrigators especially at the end

7) Discuss some components of water management?



1. water shed management
2. land management
3. rain water management
4. reservoir management

8) What are the types of cross drainage works?

1. C.D works carrying canal over the drainage
2. C.D works carrying canal over the canal
3. C.D works admitting the drainage water into the canal

9) What is canal head works?

When a permanent canal system is taken off from the river some works are to be provided at the off take to care of irregularities in river flow condition. Since these works are constructed at the point of take off, that is at the head of the canal system they are termed as canal headworks.

10) What is diversion headworks?

The main object of the canal headworks is to divert the water from the river into the canal. So it is sometimes termed as diversion headworks.

11) Where the canal headworks are located?

The canal headworks are located in the sub-mountainous stage.

12) What are all the considerations needed before selecting the canal headworks?

1. Economical considerations
2. Functional considerations
3. Structural considerations

13) What are all the components of canal headworks?

1. Weir or an anicut
2. Divide wall
3. Under sluices or scouring sluices
4. Fish ladder
5. Head regulator for a canal



6.Silt exclusion device

7.River training works

14) Differentiate between a weir and the barrage.

Barrage :It is a low obstructive barrier constructed across the river. Gates are provided on the crest of the barrier.

Weir : All small obstructions are simply termed as weirs. The obstructions may be falling shettres or trained gates or drum gates.

15) Why training works are provided?

When a river is very wide some training is to be done before constructing the headworks.

The aim of training works is to induce the flow of water along the desired bank or channel without causing abrupt changes. Generally guide banks, marginal bunds and sometimes spurs are provided for the purpose.

16) Define diversion headwork.

Any hydraulic structure, which offers water to the offtaking canal, is called diversion headwork.

17) What is gravity dam?

A structure which is designed in such a way that its own weight resist external forces and it is more durable .

18)Define stream line.

It represent the path along which the water flows through the subsoil.at a given point in upstream of hydraulic structure will travel its ownpath &will represented the stream line.

19). Types of aeration tanks.

1.air diffusion

2.mechanical aeration

3.combined “ “



20) Limitations of blighs creep theory.

1. no difference b/w hzl & vtl creep
2. hzl distance b/w pipe line is greater than 2 times the depth

PART B

1. What is the necessity of river training works?
2. Describe in brief different types of river training works?
3. What is mean by guide banks? what are their functions and effects?
4. State the necessity and location of canal falls?
5. Briefly explain about classification of canals?
6. Briefly explain about on-farm-development works?
7. What is the need for water user's association?
8. What is the need for optimisation of water use?
9. Briefly explain about percolation pond?
10. Discuss the role of farmers in water management.