



B.E DEGREE EXAMINATIONS: NOV 2015

(Regulation 2013)

Fifth Semester

AUTOMOBILE ENGINEERING

U13GST001 : Environmental Science and Engineering

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The world faces water - energy crisis because _____
 - a) Surging population
 - b) Changing life style and evolving consumption patterns
 - c) Shortages and the resulting escalation of prices leading to economic disorder
 - d) All the above
2. Chipko movement is related to -----
3. Chemosynthesis refers to -----
 - a) Decomposition of organic matter
 - b) Hydrothermal vents
 - c) Unidirectional energy flow
 - d) Production of food by bacteria
4. Ecomark means -----
5. Eutrophication is
 - a) Soil quality status
 - b) the result of accumulation of nutrients in water bodies
 - c) a process in carbon cycle
 - d) a water purification technique.
6. IUCN represents -----

7. Consider the following steps in Hydrosere succession

1. Floating stage
2. Climax forest
3. Woodland stage
4. Sedge marsh stage
5. Submerged stage

The correct sequence of steps is

- | | |
|--------------|--------------|
| a) 1,2,3,4,5 | b) 3,5,1,4,2 |
| c) 5,1,4,3,2 | d) 4,1,5,3,2 |

8. Three mile island disaster is related to -----

9. pH of the acid rain is

- | | |
|------------|--------------|
| a) 7 | b) Below 5.6 |
| c) Above 6 | d) 8 |

10. Doubling time of Population can be calculated using $T_d = \text{-----}$

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

11. What are the advantages of hybrid cotton?

12. Mining is hazardous to environment – Justify.

13. What is meant by red data book?

14. What is EL-NINO?

15. List four point sources of water pollution.

16. Define the term sustainable development

17. Differentiate rehabilitation and resettlement

18. State any four salient features of the universal declaration of human rights by UN

19. List any four family welfare programme.

20. What are the tests performed to detect HIV?

PART C (5 x 14 = 70 Marks)
(Answer not more than 400 words)

Q.No. 21 is Compulsory

21. a) i) Discuss the consequences of deforestation and provide solutions to prevent deforestation (8)
- ii) List the causes for conflicts over water and discuss one interstate water conflict (6)

22. a) i) Explain the strategy that could be adopted to conserve biodiversity (8)
- ii) State the different types of aquatic ecosystem and trace the energy flow in different trophic levels using any one of the aquatic ecosystem. (6)

(OR)

- b) i) Describe the structure and function of various components of an ecosystem. (8)
- ii) List the different threats faced by biodiversity (6)

23. a) Enumerate the causes, effects and control measures of air pollution

(OR)

- b) i) Illustrate with a case study of your own choice on disaster management techniques adopted to **overcome** the complications instituted to the society and environment by natural disasters (8)
- ii) Write a note on radioactive pollution (6)

24. a) i) Along with the objectives mention the laws that have been framed for environmental protection (8)
- ii) How is Solid wastes generated in urban areas and what are the effects of improper disposal of municipal solid wastes? (6)

(OR)

- b) i) Discuss on the wasteland reclamation (8)
- ii) Write briefly on the community participation in environment management programmes. (6)

25. a) i) Discuss the threats faced by the environment due to the development of IT solutions leading to new electronic gadgets like computers. (8)
- ii) What are environmental and social impacts due to population explosion? (6)

(OR)

- b) i) Deterioration of Environment leads to deterioration of human health. (8)
Justify
- ii) List and discuss the different child welfare programmes initiated by the Indian government for the welfare of the society (6)
