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**Question Paper Code: 49125**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

Elective

Civil Engineering

14UCE925- ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to all branches)

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The system of interaction of organisms with the surrounding is called  
(a) Ecology                      (b) Ecosystem                      (c) Environment                      (d) Biodiversity
2. What is a another major factor for the loss of water  
(a) Industrial wastage                      (b) Evaporation  
(c) Human existence                      (d) Domestic wastage
3. The type of chemical bond in water is  
(a) Covalent bond      (b) Electrovalent bond      (c) Hydrogen bond      (d) Ionic bond
4. The pressure exerted by the evaporated molecules on the surface of water is called  
(a) Vapour pressure                      (b) Hydrostatic pressure  
(c) Vacuum pressure                      (d) Atmospheric pressure
5. What are major issues that contribute for global warming  
(a) Green house                      (b) Earth quake  
(c) Carbon mono-oxide                      (d) Burning of plastics

6. Ozone layer depletion is mainly due to -----
- (a)  $\text{NO}_x$                       (b)  $\text{CO}_x$  &  $\text{SO}_x$                       (c) CFC's                      (d) All of the above
7. ----- seeks to reduce negative impact of chemistry on the environment by preventing Pollution is as its source
- (a) Biochemistry                      (b) Green chemistry  
(c) Environmental chemistry                      (d) Analytical chemistry
8. Along which chemical makes a radionuclides much more dangerously radio active
- (a) Uranium                      (b) Plutonium                      (c) Phosphorus                      (d) None of these
9. What is the key element of environmental impact assessment
- (a) Skimming                      (b) Settling                      (c) Priming                      (d) Scoping
10. Which of the following is one of the benefits of environmental impact assessment
- (a) Mitigating                      (b) obtaining environmental statements  
(c) Maintenance of biodiversity                      (d) Screening

PART - B (5 x 2 = 10 Marks)

11. What are autotrophs and heterotrophs?
12. What is boiling point of water?
13. Point out few threats that cause biodiversity losses
14. Why nuclear hazards are so dangerous?
15. What is meant by environmental impact assessment?

PART - C (5 x 16 = 80 Marks)

16. (a) Explain about energy flow in the ecosystem. (16)
- Or
- (b) Explain in detail about the concept of sustainable development . (16)
17. (a) What do you understand by water as a dispersing medium. (16)

(b) Explain the objectives of Environmental quality analysis and discuss some of the policies which improve Environmental Sustainability (16)

18. (a) (i) List the Country level issues on current environment ? (10)  
(ii) Describe about global warming. (6)

Or

(b) Discuss in detail about the impacts of solid waste disposal (16)

19. (a) Describe the significance of cleaner technologies and factors influencing them. (16)

Or

(b) Classify the waste minimization techniques in detail? (16)

20. (a) Explain in detail about the pollution control boards and pollution control acts (16)

Or

(b) Explain about polluter –pays principle. (16)

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