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Question Paper Code: 99175

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Open elective

Computer Science and Engineering

19UCE975 - ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to ECE, EEE, EIE, MECH, IT, Chemical, AGRI & BME Engineering branches)

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Ecosystem is the basic functional unit of _____ CO1- U
(a) Biology (b) ophthalmology (c) Ecology (d) Chemistry
2. The organisms which directly depends on producers are CO1- U
(a) Autotrophs (b) Heterotrophs (c) Carnivores (d) Herbivores
3. The average value of soil density is---- CO1- U
(a) 2.65 Kg/m³ (b) 3 Kg/m³ (c) 2.5 Kg/m³ (d) 3.5 Kg/m³
4. The soil density varies greatly depending upon the CO1- U
(a) porosity (b) degree of weathering (c) organic content (d) permeability
5. The size of dust particles is----- CO1- U
(a) 0.5 to 100 μm (b) 1 to 150 μm (c) 1.5 to 200 μm (d) 1 to 200 μm
6. In India the daily per capita generation of municipal solid waste in small towns is CO1- U
(a) 100 g (b) 150 g (c) 200 g (d) 130 g
7. The BOD removal efficiency in Activated sludge process is about____ CO1- U
(a) 70-80% (b) 60-98% (c) 85-90% (d) 60-80%
8. The BOD removal efficiency in trickling filter is about____ CO1- U
(a) 70-80% (b) 60-98% (c) 40-50% (d) 60-80%

9. The situation where resource use has outpaced the sustainable capacity of the ecosystem is CO1- U
- (a) Sustainable use (b) Over consumption (c) Over Population (d) None
10. Shifting of people from a place to another is CO1- U
- (a) Resettlement (b) Migration (c) Shifting (d) Rehabilitation

PART – B (5 x 2= 10 Marks)

11. Explain the role of individual in pollution prevention? CO1- U
12. Mention what is Avogadro's number? CO1- U
13. List out the major environmental problems that threatens your nation? CO1- U
14. List out the merits and demerits of RO process CO4- U
15. Write a brief note about pollution control board. CO5- U

PART – C (5 x 16= 80 Marks)

16. (a) Explain the causes and effects of air, water and land pollution? Enumerate a few remedial measures. CO1- U (16)
- Or
- (b) Explain in detail about Structure of the Atmosphere. CO1- U (16)
17. (a) Explain in detail about the physical and chemical properties of water. CO1- U (16)
- Or
- (b) Explain about the types of microorganisms involved in biological treatment process. CO1- U (16)
18. (a) Summarize the major environmental problems that you come across in your daily life. CO1- U (16)
- Or
- (b) Explain briefly about climate change due to global warming and ozone layer depletion. CO1- U (16)
19. (a) Explain in detail about different types of clean technologies. CO1- U (16)
- Or
- (b) Give a detailed outline about classifications of wastes. CO1- U (16)

20. (a) How will you assess the impacts due to development of CO1- U (16)
environment?

Or

(b) Explain briefly about the pollution control act CO1- U (16)

