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Question Paper Code: 99175

B.E./B.Tech. DEGREE EXAMINATION, NOV 2022

Open elective

Computer Science and Engineering

19UCE975 - ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to ECE, EEE, MECH,IT, Chemical, AGRI, BME,CSBS & Biotechnology
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) 0.5to 100 μm (b) 1to 150 μm (c) 1.5to 200 μm (d) 1to 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)

