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Reg. No. : | | | | | | | | | |

Question Paper Code: 99175

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

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. Interlocking pattern of various food chains is called --------   CO1- U

   (a) food chain   (b) food web   (c) energy flow   (d) tropical levels

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/m^3 (b)3 Kg/m^3 (c)2.5 Kg/m^3 (d)3.5 Kg/m^3

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. Give two effects of Ozone layer depletion.   CO1- U

12. Mention what is Avogadro's number   CO1- U

13. List out the major environmental problems that threats 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 in detail about carbon cycles in Ecosystem with neat sketch   CO1- U   (16)

Or

(b) Explain in detail about components of environment.   CO1- U   (16)

17. (a) Explain in detail about environment quality objectives and policies on new projects with their impacts.   CO1- U   (16)

Or

(b) Explain about the types of microorganisms involved in biological treatment process.   CO1- U   (16)

18. (a) Discuss about the sources and effects of water pollution. Also suggest remedial measures to reduce water pollution.   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) Explain about the process, contents and benefits of EIA.   CO1- U   (16)

Or

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

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