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**Question Paper Code: 49016**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

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 another major factor for the loss of water  
(a) Industrial wastage                      (b) Evaporation  
(c) Human existence                      (d) Domestic wastage
3. At present National Ambient Air Quality standards exist for how much number criteria pollutants  
(a) 8                      (b) 11                      (c) 6                      (d) None of the above
4. What is the process that allows the particles to settle down by help of gravity  
(a) Screening and grit removal                      (b) Rapid mixing  
(c) Sludge processing                      (d) Primary sedimentation
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. Which sector in U.S accounts for a significant factor for all forms pollutants except for sulfur oxides  
(a) Industrial sector (b) Medical sector (c) Transportation sector (d) All the above
7. Waste generated from electronic industry is called  
(a) Bio-medical waste (b) e-waste (c) Solid waste (d) Liquid waste
8. Along which chemical makes a radionuclides much more dangerously radio active  
(a) Uranium (b) Plutonium (c) Phosphorus (d)None of these
9. Which are the two atmospheric layers show decrease in temperature with increase in altitude  
(a) Stratosphere and mesosphere (b) Mesosphere and thermosphere  
(c) Troposphere and mesosphere (d) All the above
10. According to which act delineates two of the wastes  
(a) MSW (b) RCRA (c) Materials recovery act (d) NIMBY

PART - B (5 x 2 = 10 Marks)

11. Write the structure of desert ecosystem with an example?
12. What is boiling point of water?
13. What do you understand by Soil Pollution?
14. Why nuclear hazards are so dangerous?
15. What is meant by environmental impact assessment?

PART - C (5 x 16 = 80 Marks)

16. (a) Describe energy flow and material cycling in ecosystem . (16)

Or

- (b) Explain in detail about the concept of sustainable development . (16)

17. (a) Explain in detail about chemistry ,physics and biology properties of water, air, land (16)

Or

(b) Explain the stress on the chemistry, physical and biological impact on water, air and land? (16)

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

Or

(b) What are the Hazardous waste and biomedical waste ,air pollution due to industries and vehicles ? (16)

19. (a) Principles of physics , chemistry and biology in engineering interventions such as waste treatment ? (16)

Or

(b) Explain in detail about the waste minimization techniques? (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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