

B.E. (All Branches) 1st Semester Final Examination, 2013

CE-101 Environment and Ecology

Full Marks: 35

Time: 2 Hours

Answer any five questions

1. a) Mention the components of environment.
b) Define biogeochemical cycle.
c) Briefly discuss nitrogen cycle
(1+2+4=7)
2. a) Why the biomass content gradually reduces for subsequent trophic levels?
b) Explain the process of biomagnification of toxins through the food chain and its possible impact.
c) What important role do the decomposers play in an ecosystem?
(1+3+3=7)
3. a) Name the principal terrestrial biomes.
b) Write a short note on tropical rainforest.
c) What is a wetland? Describe importance of wetlands.
(1+3+3=7)
4. a) What is eutrophication?
b) Distinguish between an oligotrophic and eutrophic lake.
c) Briefly discuss about suitable strategies to control eutrophication.
(1+3+3=7)
5. a) Mention the most common constituents of alkalinity, and hardness and their impacts. Mention a method of removal of hardness from water.
b) Discuss the impacts of nitrate and arsenic in drinking water supplies.
c) Define the terms BOD and COD. What is indicator organism for microbiological water quality assessment?
(3+3+1=7)
6. a) What are primary and secondary air pollutants? Give example of each.
b) Mention the different engineering systems for controlling particulate matter in emissions. Describe any one of them.
c) What are common sources of sulphur dioxide in the atmosphere? How some of the gases of the atmosphere cause global warming?
(1+2+4=7)

7. a) Mention the sources and characteristics of solid waste.
- b) What are the problems associated with open dumping of solid wastes?
- c) Describe the process of sanitary land filling as an improved disposal system of municipal solid waste.

(1+3+3=7)

8. a) Define different noise levels
- b) 'Cracker A' when bursts generates a sound of 90 dB. What will be the resultant sound level when two such 'crackers A' burst simultaneously with another 'cracker B' that itself generates sound of 100 dB?
- c) Define continuous, intermittent and impulsive sound. How the equivalent continuous level (L_{eq}) is defined for a fluctuating noise situation?

(1+3+3=7)
