M.E. First Semester (Civil (Environmental Engg.)) (P.T.) (CGS)

13380 : Environmental Science and Chemistry : 1 SCEE 1

P. Pages : 1 | AU - 3211

Time : Three Hours | Max. Marks : 80

Notes : 1. All question carry equal marks.
2. Answer **three** question from Section A and **three** question from Section B.

SECTION – A

1. a) Discuss about major atmospheric regions with temperature and pressure profit. **7**

b) What is eutrophication? How it can be prevented. **6**

2. Explain in detailed about climatology and meteorology with reference to Basic atmospheric properties, energy output and input and wind stability and turbulence. **14**

3. a) Explain energy flow in Ecosystem. **7**

b) What are the elements of limnology. **6**

4. a) Explain the following. **6**
i) Green house effect. ii) Ozone hole.

b) Explain diverse ion effect with suitable example. **7**

5. Explain the following. **13**
i) Butter solution and indicator. ii) Amphoteric hydroxides.
iii) Chemical equilibrium and ways of shitting it.

SECTION – B

6. a) Explain breakdown and synthesis of carbohydrates under aerobic conditions. **7**

b) What are extra cellular and intracellular enzymes? Discuss their requirements and functions of biochemical process. **7**

7. Discuss the following. **13**
i) Coagulation ii) Fluoridation & defluoridation iii) Softening

8. a) Explain the concept of B.O.D, C.O.D and T.O.C. **6**

b) The BOD of a sewage incubated for one day at 30°C has been founded to be 130 mg/lit. What will be the 5-day 20°C BOD? Assume $K_1 = 0.1$ at 20°C. **7**

9. a) Explain water structure and anomalous behovior of water. **6**

b) Explain about composition and characteristics of sewage. **7**

10. a) Discuss the working and construction of gas chromatograph. **6**

b) Explain the use of orsat apparatus for analysis of gases from digester. **7**

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