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

13380 : Environmental Science and Chemistry : 1 SCEE 1

P. Pages : 1

Time : Three Hours

AX - 3390

Max. Marks : 80

Notes : 1. Answer **three** question from Section A and **three** question from Section B.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.

SECTION – A

1. a) Explain with neat sketch waste cycle in an agrarian society. **7**

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

2. a) What is Climate? Explain climate variability. **7**

b) What is Eutrophication? How can it be avoided? **7**

3. a) Explain energy flow in ecosystem. **6**

b) What is limnology? What are the elements of limnology? **7**

4. a) What is green house effect? Explain the causes and effects. **7**

b) Explain the following : **6**
i) Chlorofluorocarbon
ii) Carbon dioxide

5. a) Explain the principle of solubility product and state their application. **7**

b) Explain about chemical equilibrium and way of shifting it. **6**

SECTION – B

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

b) Explain about organic compounds of interest to environmental engineering. **7**

7. a) Explain CNP cycle under aerobic reactions. **7**

b) Explain the concept of B.O.D., C.O.D. & T.O.C. **7**

8. a) Explain water structure and anomalous behavior of water. **6**

b) What is disinfection? What are the different methods of disinfection of water? Explain the chemistry involved in it. **7**

9. a) Explain Fluoridation & De-fluoridation of water. **7**

b) Explain the causes of Iron present in water and its control. **6**

10. Explain in detailed composition & characterization of sewage. **13**

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