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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**B.Tech IV Year I Semester Supplementary Examinations July-2022****ENVIRONMENTAL ENGINEERING**

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)**UNIT-I**

- 1 a List out the various methods of population forecasting and explain any two methods in detail. **6M**
b Draw the flow chart of public water supply system. **6M**
- OR**
- 2 The populations of 5 decades from 1960 to 2000 are given below in table. Find out the population 2010, 2020 & 2035 beyond the last known decade. By **12M**
(i) Arithmetic increase method
(ii) Geometrical method

Year	1960	1970	1980	1990	2000
Population	25000	28000	34000	42000	47000

UNIT-II

- 3 a Draw the layout and general outline of surface and subsurface water treatment plant. **6M**
b Briefly explain the Lime soda or Zeolite process of water softening. **6M**
- OR**
- 4 a Write short notes on methods of coagulant feeding. **6M**
b List the types of chlorination and explain break point chlorination in detail. **6M**

UNIT-III

- 5 a With neat sketch, explain the different types of layouts of city water distribution system. **6M**
b Compare between conservancy system and water carriage system. **6M**
- OR**
- 6 a Discuss in brief the various factors affecting the dry weather flow. **6M**
b Write a note on different types of sewer. **6M**

UNIT-IV

- 7 a Design a primary sedimentation for treating 1 MLD of wastewater. Make suitable assumptions. **6M**
b Draw the schematic diagram of typical sewage treatment plant and explain it. **6M**
- OR**
- 8 a Compare between the conventional rate filter and high rate filter. **6M**
b Mention the advantages and disadvantages of oxidation ponds. **6M**

UNIT-V

- 9 a What do you understand by 'sludge digestion'? **6M**
b Explain the methods of dewatering the sludge on sludge drying beds. **6M**
- OR**
- 10 a Mention the various methods of sludge disposal and explain any two methods of sludge disposal. **6M**
b With neat sketch, explain the process of dispersion trench. **6M**

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