

CBCS SCHEME

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15CT653

Sixth Semester B.E. Degree Examination, June/July 2018 Water Supply and Sanitation

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Discuss in brief different methods used for prediction of future population of a city, with reference to design of water supply system. (10 Marks)
b. List the factors affecting the design period. (06 Marks)

OR

- 2 a. Define Wholesome water. List the requirements of whole some water. (08 Marks)
b. Explain the effect of P^H on the distribution networks. (08 Marks)

Module-2

- 3 a. With neat sketch, explain water treatment flow chart. (08 Marks)
b. List the design criteria for plain sedimentation tank. (08 Marks)

OR

- 4 a. Explain limitations of Aeration. (08 Marks)
b. Design circular sedimentation basin to treat 3 million liters of water per day. Assume detention period = 4 hrs ; Velocity of flow = 10cm/min and other suitable data required. (08 Marks)

Module-3

- 5 a. Explain different forms of chlorination. (08 Marks)
b. Differentiate between Temporary and Permanent hardness. (08 Marks)

OR

- 6 a. Explain the mechanism of disinfection. (08 Marks)
b. Discuss in brief various methods of water distribution. (08 Marks)

Module-4

- 7 a. Explain different types of sewerage system. (08 Marks)
b. List the factors affecting Dry weather flow. (08 Marks)

OR

- 8 a. Explain different methods of sewage disposal. (06 Marks)
b. With neat sketch, explain oil and grease trap. (10 Marks)

Module-5

- 9 a. With neat sketch, explain flow diagram of municipal sewage treatment plant. (08 Marks)
b. Explain different types of grit chambers. (08 Marks)

OR

- 10 a. Explain in brief various methods used for aeration in the activated sludge process. (08 Marks)
b. Write the flow chart for sludge treatment and disposal. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. $42+8=50$, will be treated as malpractice.