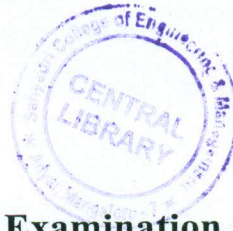


USN

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|



10CV666

Sixth Semester B.E. Degree Examination, June/July 2017
Rural Water Supply and Sanitation

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. Briefly explain the various sources of water being practicing in rural area. (06 Marks)
 b. List the water borne diseases and their controlling measures. (08 Marks)
 c. Discuss the health significance and limits of the following parameters :
 i) Fluoride ii) Nitrates iii) Sulphate iv) Chloride. (06 Marks)
- 2 a. What is Defluoridation? Explain Nalagonda technique for removal of fluoride, with neat sketch. (10 Marks)
 b. Define Disinfection. Explain the break point chlorination with graphical representation. (10 Marks)
- 3 a. Explain the following with neat sketch : i) Aqua privy ii) Two pit latrines. (10 Marks)
 b. Design a septic tank and soak well for the following data :
 i) No. of people = 100 ii) Sewage / capita / day = 120 litres
 iii) Desludging period = 1 year iv) Percolation rate = 1250l/m³/day
 v) Length to width ratio of septic tank = 4 : 1 vi) Detention period = 24 hours
 vii) Rate of sludge deposited = 30litres/capita/year viii) Depth of septic tank = 1.5m
 ix) Depth of soak pit = 2m x) Free board = 0.3m. (10 Marks)
- 4 a. Explain the disposal of storm water and sullage disposal in rural areas. (10 Marks)
 b. What is Rain water harvesting? Discuss briefly with sketches how the rain water is being harvested from roof top. (10 Marks)

PART - B

- 5 a. Explain the different methods of communication of communicable diseases with examples. (10 Marks)
 b. Define Communicable diseases and explain the general methods of control of communicable diseases. (10 Marks)
- 6 Explain the following :
 a. Salvaging.
 b. Dumping in low lands.
 c. Composting.
 d. Biogas plant. (20 Marks)
- 7 a. Explain all the essentials necessary to obtain the objectives of milk sanitation. (08 Marks)
 b. Describe the important points to be considered for planning the construction of a cow shed. (04 Marks)
 c. Explain any two method of pasteurization. (08 Marks)
- 8 a. Explain the life cycle of a mosquito. (08 Marks)
 b. Mention the diseases transmitted by mosquito. (04 Marks)
 c. Explain the various fly control measures. (08 Marks)

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.