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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, B.E. - Civil Engineering

Semester End Examination; Dec - 2017/Jan - 2018

Municipal and Rural Sanitation

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

- 1 a. Define sanitation and explain the need for protected water supply. 10
 b. Explain any ten drinking water quality standard with the limits. 10
 2 a. What are the precautions to be taken for the protection of well water? 10
 b. List out the types of pumps. Explain any one in brief with its salient features. 10

UNIT - II

- 3 a. What are the general methods to control communicable diseases? 10
 b. Define water borne and air borne diseases. Explain briefly. 10
 4 a. Write briefly about zoonosis occurrence and their control. 10
 b. Explain terminology and modes of communication of communicable diseases. 10

UNIT - III

- 5 a. Explain the concept of Eco-sanitation, with the components of sanitation. 10
 b. With a neat sketch, explain Aqua privy system. 10
 6 a. Explain the concept of rain water harvesting with its needs and uses. 10
 b. List out the methods of recharging ground water. Explain any two. 10

UNIT - IV

- 7 a. Explain the elements of management. Explain any one systems of collection based on mode of operation. 10
 b. Explain the methods of composting : 10
 i) Indore method ii) Bangalore method.
 8 a. Explain the process of land filling with its advantages and disadvantages. 10
 b. Write a note on transportation and disposal of refuse. 10

UNIT - V

- 9 a. Write the test conducted on milk quality, explain briefly each of it. 10
 b. Explain the effects of food adulteration and its control measures. 10
 10 a. Write a note on festival sanitation. 10
 b. Write a note on different types of diseases transmitted from swimming pools. 10