

--	--	--	--	--	--	--	--	--	--



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

(An Autonomous Institution affiliated to VTU, Belgaum)

Sixth Semester, B.E. - Civil Engineering

Semester End Examination; June/July - 2015

Rural Water supply and Sanitation

Time: 3 hrs

Max. Marks: 100

Note: i) Answer any **FIVE** full questions, selecting at least **TWO** full questions from **each part**.
ii) Assume missing data, if any suitably.

PART - A

1. a. Discuss in detail the importance and need for protected water supply. 10
- b. List all the water borne diseases with their causative organisms. 5
- c. Explain in brief the method of well water protection. 5
2. a. Discuss in detail defluoridation using Nalgonda Technique. 10
- b. Explain hardness and Iron removal processes. 10
3. a. With the aid of a neat sketch explain the functioning of Aqua privy. 10
- b. Explain briefly aerobic and anaerobic methods of composting. 10
4. a. Describe conservancy system and water carriage system with merits and demerits. 10
- b. Describe Rain water harvesting for recharging ground water. 10

PART - B

5. a. Explain in detail modes of transmission and general methods of control of communicable diseases. 10
- b. Describe the functioning of goober gas plant with neat diagram. 10
6. Explain the following :
 - i) Garbage and rubbish
 - ii) Incineration 20
 - iii) Dung disposal
 - iv) Transportation of refuse
7. a. Explain HTST method of pasteurization with a line diagram. 10
- b. Discuss cattle borne diseases and their control measures. 10
8. a. Describe the life cycle of mosquito and housefly. 10
- b. Explain the diseases caused by Insects and their control measures. 10