

Printed pages: 01

Sub Code: NCE024

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**B. TECH.**  
**(SEM -VD) THEORY EXAMINATION 2017-18**  
**RURAL WATER SUPPLY AND SANITATION**

Time: 3 Hours

Total Marks: 100

Note: Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

Attempt all questions in brief.

2 x 10 = 20

- a. What are various devices available for rural water supply?
- b. Discuss the factors influencing per capita demand.
- c. What are the issues of rural water supply?
- d. Which is the best method of refuse disposal for a small organized community?
- e. Mention any four diseases which may spread by contaminated milk.
- f. State the advantages of septic tank.
- g. What do mean by rural community?
- h. Define sanitation.
- i. Write short note on bio gas.
- j. Define design population.

**SECTION B**

2. Attempt any three of the following:

10 x 3 = 30

- a. Explain in details about occupational hazards in various public buildings.
- b. What are the advantages, disadvantages and use of the stabilization pond?
- c. What are the important points to be considered for proposed water supply scheme?
- d. Explain with neat sketch infiltration galleries in detail.
- e. Explain logistic curve method.

**SECTION C**

3. Attempt any one part of the following:

10 x 1 = 10

- (a) What are infiltration wells? Explain with neat diagram.
- (b) Explain the following types of refuse, (i) Garbage (ii) Rubbish (iii) Ashes

4. Attempt any one part of the following:

10 x 1 = 10

- (a) Discuss the various techniques for rural water supply.
- (b) Explain the National Rural Drinking Water program.

5. Attempt any one part of the following:

10 x 1 = 10

- (a) Explain in detail about solid waste management.
- (b) Discuss with neat sketch for slow sand filter and chlorine diffusion cartridges.

6. Attempt any one part of the following:

10 x 1 = 10

- (a) Explain the treatment of solid waste by using bio-gas plant.
- (b) What is the role of government for rural sanitation? What are the National Policies which govern rural water supply?

7. Attempt any one part of the following:

10 x 1 = 10

- (a) Explain the trenching and composting methods in detail.
- (b) Explain epidemiological aspects of water quality in detail.