

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2453

Roll No.

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B.Tech.

(SEMESTER-VI) THEORY EXAMINATION, 2012-13
RURAL WATER SUPPLY AND SANITATION

Time : 3 Hours]

[Total Marks : 100

SECTION – A

1. Attempt all question parts.

10 × 2 = 20

- (a) What is scope of sanitation in rural areas ?
- (b) Define the term Sanitation.
- (c) What are the various approaches of planning of water supply schemes in rural areas ?
- (d) Write short note on infiltration galleries.
- (e) Define multi-bottom settlers.
- (f) What are the advantages of slow sand filter ?
- (g) What do you understand about night soil ?
- (h) What are the methods available for collection of night soil ?
- (i) State the different methods of disposal of solid wastes.
- (j) Write short note on land filling.

SECTION – B

2. Attempt any five question parts :

5 × 6 = 30

- (a) (i) What are the advantages of a successful water supply project ?
- (ii) Enumerate the points to be included in a report for a water supply scheme.



- (b) Explain the specific practices and problems encountered in rural water supply.
- (c) Discuss the physical tests of solid waste.
- (d) Briefly explain diatomaceous earth filter and cloth filter.
- (e) Enumerate the salient features for planning of distribution system in rural areas.
- (f) Mention the various methods of disposal of effluent from septic tank. Describe one of them in detail.
- (g) Briefly explain the disposal of solid wastes.

SECTION – C

Attempt **all** questions :

$5 \times 10 = 50$

3. Attempt any **two** parts :

$2 \times 5 = 10$

- (a) What are the important points to be considered for a proposed water supply scheme ?
- (b) Explain logistic curve method.
- (c) What are the aspects to be considered at the time of selection of site for disposal of solid waste works ?

4. Attempt any **one** part :

10

- (a) Explain with neat sketch for the infiltration wells.
- (b) Write a short note on infiltration galleries.

5. Attempt any **one** part :

10

- (a) Describe in details about appurtenances and improved devices for use in rural water supply.
- (b) Discuss with neat sketch for slow sand filter and chlorine diffusion cartridges.

6. Attempt any **one** part :

10

- (a) Explain with neat sketch for the stabilization ponds.
- (b) Compare and contrast Septic tank with Imhoff tank in scope, function and performance.

7. Attempt any **two** parts :

5 × 2 = 10

- (a) Explain the meaning of disposal of solid waste by composting treatment and describe the actions involved in it.
 - (b) Explain the disposal of solid waste by using biogas plants with sketch.
 - (c) What are the conditions which are considered to be favourable for the disposal of solid waste by land filling ?
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