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**4th Sem./Branch : Civil Engineering
Subject : Water Supply & Waste Water Engineering
& Irrigation Engineering Drawing/ Public
Health Irrigation Engg Drawing**

Time : 3 Hrs. M.M. : 100

Section-A

Note : Multiple choice question. All Questions are Compulsory (10x2=20)

- Q.1 Define Sanitary Sewer.
- Q.2 Define Rainwater Harvesting.
- Q.3 Define Infiltration.
- Q.4 Draw the symbol of concrete.
- Q.5 Define Guide Bank.
- Q.6 Define Canal Head Regulator.
- Q.7 Define Free-board.
- Q.8 Explain types of Tube wells.
- Q.9 Define Refuse.
- Q.10 Define vent pipe.

Section-B

Note : All Questions are Compulsory (5x8=40)

- Q.11 Draw detailed section of Cavity well.
- Q.12 Draw the x-section of R.C.C. Sewer having 750 mm diameter.

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- Q.13 Draw any three views of a pedestal type wash basin.
- Q.14 Draw section plan X-section for a Septic tank for 15 users
- Q.15 Draw the plan, section of Gully trap.
- Q.16 Draw the Cross-section of Homogenous Earth Dam.
- Q.17 Draw the sectional plan and sectional elevation of Soak Pits, diameter = 1.5m and effective depth = 3m.
 - (a) Empty Soak pit (b) Filled Soak Pit
- Q.18 Draw a neat sketch of open well.

Section-C

Note : Long Answer type Questions. Attempt any two Question out of three Question. (2x20=40)

- Q.19 Draw the detailed plan of a bath room cum WC.
- Q.20 Draw the detailed plan, X-section of a manhole with the following data-

Data of upto invert level = 10.8 m

Pipe diameter = 100cm

Diameter of manhole = 2.0m

- Q.21 Draw the detailed elevation of one pipe system for drainage services of a building.

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