23/05/15

TCE-405 33 Printed Pages : 3

Paper ID & Roll No. to be filled in your Answer Book

Roll No. | | | | | | | | | | |

B.Tech. (CE) (IV Semester)

End Semester Examination 2015

ENVIRONMENT ENGINEERING

Time: 2.00 Hours] *[Total Marks: 50*

Note: Attempt all questions. Each question carry equal marks.

Q1. Attempt any four of the following: (3x4 = 12)

(a) What do you mean by the per capita demand?

(b) what is meant by water hammer?

(c) Explain expansion joints with neat sketch

(d) Define pressure relief valves and gate valves

(e) What is the purpose of sanitation?

Q2. Attempt any four of the following: (3x4 = 12)

(a) Explain any three methods of estimating the future population of a city.

(b) What is dry or conservancy system of collection of wastewater?

(c) What are the common sources of water for water supply scheme.

(d) What are gravity and pressure conduits?

(e) Write hot water installation.

Q3. Attempt any Two of the following: (6.5×2 = 13)

(a) Determine the velocity of the flow in a sewer running one half full. The sewer is laid at 1 in 550 slope. The diameter of the sewer is 150 cm. Also determine the discharge flowing through the sewer. Assume N= 0.012 in manning's formula.

(b) Briefly explain with neat sketch the methods of laying and testing of water supply pipelines

(c) In two periods of 20 years a town has grown from 35,000 to 78,000 and then to 1, 15,000 Determine, (i) the saturation population (ii) the equation of logistic curve.

(d) Discuss the variation rate sewage .what are its effects on design of sewer?

Q4. Attempt any Two of the following: (6.5×2 = 13)

(a) What is to be supplied to a town of population of 1.5 lakh. If the water works is situated at a lower elevation of 50 m than the water level in the source. Determine the size of the gravity main to convey the water from source to the water work, if the length of the gravity main is 25 km, and the per capita demand of the town is 150 lpcd. Take f=0.075

(b) What are the methods used in distribution system to supply water? Explain with neat sketch with advantage and disadvantages.

(c) Explain the Newton –Raphson Methods used for pipe network analysis in water distribution system

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