

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 161301****Date: 24-05-2013****Subject Name: Municipal Engineering****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Highlight the factors affecting the selection of location for Intake works from rivers. **07**

(b) With the help of a neat sketch, write down the construction and working of air relief valves. **07**

Q.2 (a) With the help of neat sketch explain any system of water distribution and enlist its limitations. **07**

(b) Enlist and explain the factors affecting the demand of water. **07**

OR

(b) Prepare a list of pumps used in water supply and explain any two. **07**

Q.3 (a) Prepare a list of different types of valves used in water supply system. With the help of a neat sketch, explain any one type of valve. **07**

(b) Draw a neat sketch of canal intake and explain its working. **07**

OR

Q.3 (a) Write down the difference between: **07**

Combined sewerage system and separate sewerage system

Gravity system and pressurized system of water supply.

(b) Write down the difference between the surface water and ground water sources based on quantity and quality. **07**

Q.4 (a) With the help of a neat sketch, write down the construction and functions of a manhole. **07**

(b) Enlist and explain the factors affecting the quantity of storm water. **07**

OR

Q.4 (a) Give the definition of: **07**

Potable water (ii) Pure water (iii) water table (iv) Sewage (v) design period (vi)

Self cleansing velocity (vii) Non scouring velocity

(b) A 2.0m circular sewer is laid on a slope of 0.0008. If $n=0.013$ in Manning's formula, determine the discharge Q and velocity V when the sewer is flowing half full. **07**

Q.5 (a) Write a short note on Laying of Sewers. **07**

(b) Enlist the different types of material for sewers. Explain any two in detail. **07**

OR

Q.5 (a) Prepare a list of different types of joints in pipes. Explain any one type with a neat sketch. **07**

(b) Explain the demand of water for (i) Domestic purpose (ii) Commercial and Industrial Demand. **07**
