

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2151306****Date:07/12/2018****Subject Name:Municipal Engineering****Time: 10:30 AM TO 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) Explain the term "Design period" 03
(b) Explain the terms : (i) Coefficient of runoff (ii) Time of concentration (iii) Black water (iv) Grey water 04
(c) Enlist the types of layout for distribution system and explain any two. 07
- Q.2** (a) Enlist the different type of pipe materials and explain any one. 03
(b) With the help of a neat sketch explain different types of springs. 04
(c) Write a short note on Drop manhole along with a neat sketch 07
- OR**
- (c) With the help of a neat sketch, explain the River intake, 07
- Q.3** (a) Explain lake as a source of water considering the quality and quantity of water. 03
(b) Enlist the different types of water demand of city or town and explain any one. 04
(c) With the help of net sketch write a short note on Centrifugal pumps along with its advantages and disadvantages. 07
- OR**
- Q.3** (a) Write a note on infiltration wells. 03
(b) Differentiate between gravity system and pumping system for water supply. 04
(c) Enlist and explain the factors affecting water demand 07
- Q.4** (a) Define the terms : Invert, Sewer, Sewerage 03
(b) Write a short note on Fire Hydrants 04
(c) Write short notes on: 07
(1) Sluice valves
(2) Air relief valves
- OR**
- Q.4** (a) Explain the difference between drains and sewers. 03
(b) Enlist the factors affecting the quantity of storm water. 04
(c) Differentiate between Separate and combined Sewerage system 07
- Q.5** (a) Explain the term self cleansing velocity in sewer. 03
(b) Explain the difference between one pipe and two pipe system of plumbing. 04
(c) With the help of a neat sketch explain inverted siphon. 07
- OR**
- Q.5** (a) Enlist the requirements of a good trap. 03
(b) Write a note on 'laying of sewers' 04
(c) What are storm relief works ? Explain any one with a neat sketch. 07