

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE –SEMESTER 1&2(NEW SYLLABUS) EXAMINATION- WINTER 2018**

**Subject Code: 3110004**

**Date: 10-01-2019**

**Subject Name: BASIC CIVIL 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.

- |   | Marks     |
|---|-----------|
| <b>Q.1</b> (a) Discuss Branches of Civil Engineering  | <b>03</b> |
| (b) Enlist principles of planning and describe any one in detail  | <b>04</b> |
| (c) Enlist different types of foundation and explain Open footing   | <b>07</b> |
| <b>Q.2</b> (a) Explain Application of Total station   | <b>03</b> |
| (b) Explain features of smart cities  | <b>04</b> |
| (c) The following sequential readings were taken on a sloping ground . The first reading was taken on a BM of 50.000 m . Find out RL of each point and apply arithmetical check<br>0.450,0.560, 0.785,1.200,2.500,3.480,0.320,0.655,0.985,1.300 | <b>07</b> |

**OR**

- (c) The following bearings were taken on a closed traverse ABCD find out internal angles and correct them if necessary **07**

Line	FB	BB
AB	55°30'	235°00'
BC	113°00'	293°30'
CD	190°00'	10°00'
DA	279°00'	99°00'

- Q.3** (a) Enlist Instruments used in chain surveying **03**  
(b) Draw sketch of Dumpy level and show all parts **04**  
(c) Give classification of solid waste and describe why its segregation in wet and dry is necessary ? **07**

**OR**

- Q.3** (a) Describe primary division of surveying **03**  
(b) Draw traffic signals for (i) speed limit (ii) No parking **04**  
(c) Which are the water quality standards . Give values of water quality standard for PH and Total dissolved solids as per IS 10500:2012 **07**
- Q.4** (a) Describe house water connection with sketch **03**  
(b) Give difference between Surveyors and prismatic compass **04**  
(c) Enlist different bonds of Brick and Describe English bond in detail **07**

**OR**

- Q.4** (a) Draw sketch of RCC beam **03**  
(b) Explain Aim ,objectives and key features of BRTS **04**  
(c) Explain Energy efficient Building **07**

- Q.5** (a) As a Civil Engineer discuss your role in society **03**

- (b) Explain physical and chemical properties of cement **04**
- (c) Describes characteristics of contour in brief **07**

**OR**

- Q.5**
- (a) Give application of Remote sensing **03**
  - (b) Give Dimension of Modular Brick and discuss characteristics of first class brick **04**
  - (c) Explain concept and functions of smart cities . **07**

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