

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 | | | | | | | | | | | | | | | |
|------------|---|-----------|----|----|----|--------|---------|----|---------|---------|----|---------|--------|----|---------|--------|--|
| Q.1 | (a) Discuss Branches of Civil Engineering | 03 | | | | | | | | | | | | | | | |
| | (b) Enlist principles of planning and describe any one in detail | 04 | | | | | | | | | | | | | | | |
| | (c) Enlist different types of foundation and explain Open footing | 07 | | | | | | | | | | | | | | | |
| Q.2 | (a) Explain Application of Total station | 03 | | | | | | | | | | | | | | | |
| | (b) Explain features of smart cities | 04 | | | | | | | | | | | | | | | |
| | (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
0.450,0.560, 0.785,1.200,2.500,3.480,0.320,0.655,0.985,1.300 | 07 | | | | | | | | | | | | | | | |
| OR | | | | | | | | | | | | | | | | | |
| (c) | The following bearings were taken on a closed traverse ABCD find out internal angles and correct them if necessary | 07 | | | | | | | | | | | | | | | |
| | <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">Line</th> <th style="padding: 2px;">FB</th> <th style="padding: 2px;">BB</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">AB</td> <td style="padding: 2px;">55°30'</td> <td style="padding: 2px;">235°00'</td> </tr> <tr> <td style="padding: 2px;">BC</td> <td style="padding: 2px;">113°00'</td> <td style="padding: 2px;">293°30'</td> </tr> <tr> <td style="padding: 2px;">CD</td> <td style="padding: 2px;">190°00'</td> <td style="padding: 2px;">10°00'</td> </tr> <tr> <td style="padding: 2px;">DA</td> <td style="padding: 2px;">279°00'</td> <td style="padding: 2px;">99°00'</td> </tr> </tbody> </table> | Line | FB | BB | AB | 55°30' | 235°00' | BC | 113°00' | 293°30' | CD | 190°00' | 10°00' | DA | 279°00' | 99°00' | |
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| 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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