Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–1/2 EXAMINATION – WINTER 2021

Subject Code:3110004   **Date:25/03/2022**
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.**
4. **Simple and non-programmable scientific calculators are allowed.**

			Marks
Q.1	**(a)**	Write basic unit of measurements of length, area and volume in British and Metric system.	**03**
	(b)	What are the properties of good stone.	**04**
	(c)	What is intersection? Explain two broad groups of intersections with neat sketches.	**07**
Q.2	**(a)**	Describe various principles of zoning.	**03**
	(b)	Draw and explain with neat sketch of an exogenous tree and show its component parts.	**04**
	(c)	Explain chemical characteristics of waste water.	**07**

OR

	(c)	What are the elementary principles of building planning? Describe any two.	**07**
Q.3	**(a)**	Discuss importance of land use planning.	**03**
	(b)	Write the general features of earthquake resistant building. Explain any one.	**04**
	(c)	The following consecutive readings were taken with a dumpy level along a chain line at a common interval of 5m. The position of the instrument was changed after 3rd, 7th and 10th readings. Draw out the form of a level book and enter the readings properly. Assume RL of 1st point as 50.0 meter. Calculate RL of all the points and apply usual checks. Use HI method. The readings are 0.350, 0.580,0.645,1.850,1.935,2.450,1.750,0.360,0.720,1.200,0.920,0.630.	**07**

OR

Q.3	**(a)**	Discuss functional requirements of residential building.	**03**
	(b)	Draw any four symbols used in electrical layout.	**04**
	(c)	Discuss characteristics of contours with suitable sketches.	**07**
Q.4	**(a)**	Write types of offsets.	**03**
	(b)	What are different types of brick bonds? Explain any one.	**04**
	(c)	Explain various principles of river front development.	**07**

OR

Q.4	**(a)**	Functions and application of GIS.	**03**
	(b)	What do you mean by green building? Write its objectives.	**04**
	(c)	The following are the F.B & B.B of lines of a closed traverse. Calculate the interior angles of the traverse.	**07**

LINE	FB	BB
AB	150˚15'	330˚15'
BC	20˚30'	200˚30'
CD	295˚45'	115˚45'
DE	218˚	38˚
EA	120˚30'	300˚30'

Q.5	**(a)**	Write importance and objectives of providing house drainage.	**03**
	(b)	What are the main reasons for the formation of slums?	**04**
	(c)	Explain classification of buildings based on structure.	**07**

OR

Q.5	**(a)**	Define smart city. Which are the factors required to become a smart city?	**03**
	(b)	Write various methods of disposal of solid waste. Explain land filling.	**04**
	(c)	Write short note on BRTS.	**07**

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