Seat No.: _____   Enrolment No._____

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**

Line	FB	BB
AB	55º30'	235º00'
BC	113º00'	293º30'
CD	190º00'	10º00'
DA	279º00'	99º00'

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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GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– I & II (NEW) EXAMINATION – WINTER 2019

Subject Code: 3110004   **Date: 08/01/2020**
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 the impact of infrastructural development on economy of country.	**03**
	(b)	Enlist various types of cement and discuss the properties of any two.	**04**
	(c)	Define Remote Sensing. Give the applications of remote sensing.	**07**
Q.2	**(a)**	Define the following terms: a) Datum b) Change Point c) Contour Interval	**03**
	(b)	Explain site plan and key plan.	**04**
	(c)	Enlist various building services and objectives of building services.	**07**
		OR	
	(c)	Draw a detailed sketch of a cross section of a wall showing the components of the building.	**07**
Q.3	**(a)**	Give necessity of town planning.	**03**
	(b)	Differentiate between plane survey and geodetic survey.	**04**
	(c)	Enumerate various principles of planning and explain any two in detail.	**07**
		OR	
Q.3	**(a)**	Draw traffic signals for (i) speed limit (ii) No parking	**03**
	(b)	What are the benefits of Green building	**04**
	(c)	Briefly outline causes characteristics and effects of slum.	**07**
Q.4	**(a)**	Enlist Instruments used in chain surveying	**03**
	(b)	Write short note on FSI	**04**
	(c)	Describe water borne diseases with control measures.	**07**
		OR	
Q.4	**(a)**	Give difference between Surveyors and prismatic compass.	**03**
	(b)	Give full form of: a) DPC b) MH c) FSL d) BBCC	**04**
	(c)	Explain various aids and devices used to control and regulate traffic.	**07**
Q.5	**(a)**	Differentiate between W.C.B and Q.B system.	**03**
	(b)	Explain with sketch the use of Line ranger.	**04**
	(c)	Write short note on BRTS	**07**
		OR	
Q.5	**(a)**	Describe with sketches characteristics of contours.	**03**
	(b)	Write short note on origin of towns.	**04**
	(c)	Given below are the bearings of lines of a closed traverse ABCD. Calculate the interior angles.	**07**

Line	F.B
AB	N45°E
BC	N75°E
CD	S35°W
DA	N65°W

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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GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–I &II (NEW) EXAMINATION – SUMMER-2019

Subject Code: 3110004   **Date: 11/06/2019**

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 Role of Civil Engineer in society.	03
	(b)	Explain traffic signals in brief.	04
	(c)	Enlist various types of civil engineering materials. Discuss types, properties and uses of cement.	07
Q.2	**(a)**	What is FSI? Discuss in brief.	03
	(b)	Write a short note on low cost housing.	04
	(c)	Enlist and explain principles of planning.	07
		OR	
	(c)	Discuss objects and advantages of zoning.	07
Q.3	**(a)**	What is building services? Explain in brief.	03
	(b)	Draw any four symbols used in electrical layout.	04
	(c)	Enlist and explain various types of loads acting on building.	07
		OR	
Q.3	**(a)**	What is nominal dimensions for door and window?	03
	(b)	What are different types of brick bonds? Explain any one.	04
	(c)	Explain with neat sketch various components of building & its functions.	07
Q.4	**(a)**	Enlist various instruments used in linear measurement.	03
	(b)	What is whole circle bearing and quadrantal bearing?	04
	(c)	Explain methods of levelling.	07
		OR	
Q.4	**(a)**	Define: Contour, Meridian, Bearing.	03
	(b)	Draw a neat sketch of a theodolite showing its various parts.	04
	(c)	Explain chaining on plane ground.	07
Q.5	**(a)**	Explain smart city and its features.	03
	(b)	Compare BRTS and Metro.	04
	(c)	Discuss Heritage structures & its conservations.	07
		OR	
Q.5	**(a)**	Explain solid waste management system in brief.	03
	(b)	Write a short note on rain water harvesting systems.	04
	(c)	Describe mass transportation systems.	07

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GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER–I & II(NEW)EXAMINATION – SUMMER 2022

Subject Code:3110004   **Date:08-08-2022**

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)**	What is a role of civil engineer in the society?	**03**
	(b)	Explain the important pillars of smart city.	**04**
	(c)	The following bearings were taken on a closed traverse PQRS find out internal angles and correct them if necessary	**07**

Line	FB	BB
PQ	40°00'	220°00'
QR	80°25'	260°25'
RS	145°50'	325°50'
SP	270°50'	90°50'

Q.2	**(a)**	Why the town planning is essential and necessary?	**03**
	(b)	Explain the primary divisions of surveying.	**04**
	(c)	Explain the classification of buildings in detail.	**07**

OR

	(c)	Explain the classification of surveying in detail.	**07**

Q.3	**(a)**	Explain the types of meridians.	**03**
	(b)	What points are to be kept in mind while selecting the site for a residential building?	**04**
	(c)	Explain in detail features of smart city	**07**

OR

Q.3	**(a)**	Enlist and explain types of bearing with neat sketch.	**03**
	(b)	Discuss the types of traffic signs and draw traffic sign for speed limit, no-parking and cross road.	**04**
	(c)	Explain the principles of building planning.	**07**

Q.4	**(a)**	Write the advantages and dis advantages of riverfront development.	**03**
	(b)	Write a short note on growth of towns.	**04**
	(c)	Explain the impact of industrial development on the economy of the country.	**07**

OR

Q.4	**(a)**	What is solid waste management? Discuss in brief the classification of solid waste.	**03**
	(b)	Discuss the concept of smart city.	**04**
	(c)	Enlist types of bonds in masonry. Draw a neat sketch of english bond and explain it	**07**

Q.5	**(a)**	Discuss the main reasons for the slum formation.	**03**

(b) Discuss in brief the scope of civil engineering according to field of work. **04**

(c) Explain with neat sketch key plan, site plan, and layout plan. **07**

OR

Q.5 (a) What is the concept of BRTS? Discuss its advantages and dis advantages. **03**

(b) Define zoning. Write objectives and principles of zoning. **04**

(c) What are the properties of good bricks? Discuss the classification of bricks. **07**

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