Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2152205 **Date:03/05/2017**

Subject Name: Mine Surveying

Time:02:30 PM to 05:00 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		**Short Questions**	**14**
	1	Expand GPS.	
	2	Expand GIS.	
	3	Define meridian.	
	4	Define remote sensing.	
	5	Method of correlation.	
	6	What is dip?	
	7	What is strike?	
	8	What is fold?	
	9	Define hanging compass.	
	10	What is fault?	
	11	Define underground surveying.	
	12	How many satellites at least are required in GPS.	
	13	What is seam?	
	14	Define deflection angle.	
Q.2	**(a)**	What is GIS? Explain.	**03**
	(b)	Describe the preparation and preservation of mine plan.	**04**
	(c)	Explain gyro-theodolite and its application.	**07**
		OR	
	(c)	Explain Miner's dial with sketch and also write their uses.	**07**
Q.3	**(a)**	What is Eidograph and Pentagraph?	**03**
	(b)	What is vertical curve? Explain type of vertical curves?	**04**
	(c)	Describe Measurement for scale of vertical photographs.	**07**
		OR	
Q.3	**(a)**	What is photogrammetry?	**03**
	(b)	Define GIS, GPS and remote sensing? Give application of GIS in surveying.	**04**
	(c)	Describe various legal requirements about mine plans.	**07**
Q.4	**(a)**	What is GPS?	**03**
	(b)	Explain the plannimeter and its working with neat sketch	**04**
	(c)	Explain tachometric method of Setting out of curves.	**07**
		OR	
Q.4	**(a)**	What is role of scale in surveying?	**03**
	(b)	Write a note on photograph v/s Map.	**04**
	(c)	Define faults. List out various types of fault and explain reverse fault with sketch.	**07**
Q.5	**(a)**	What are the IT tools used in surveying?	**03**
	(b)	Explain the elements of compound curve.	**04**
	(c)	What is tape triangulation method of stop surveying? When it is used?	**07**
		OR	

Q.5	**(a)**	What is clinometer? And Explain its uses.	**03**
	(b)	What is traversing? When is it used?	**04**
	(c)	Define the following terms with sketch: (1) Back Tangent & Second Tangent (2) Vertex (3) Point of Curve (4) Point of Tangency (5) Intersection Angle (6) Mid-ordinate (7) Length of curve.	**07**

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