

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2024****Subject Code:3152208****Date:21-05-2024****Subject Name:Mine Surveying II****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.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

Q.1	(a) Define curve ranging. Explain direct and indirect method of curve ranging.	03
	(b) Explain procedure for shaft plumbing.	04
	(c) Explain the setting out of curve by two theodolite method.	07
Q.2	(a) Define photogrammetry with its advantages.	03
	(b) Discuss the various purposes of correlation surveying in mines.	04
	(c) Explain the methods of stope surveying.	07
OR		
	(c) Discuss the construction and various uses of Miner's Dial with neat sketch.	07
Q.3	(a) Explain various types and uses of Curves.	03
	(b) Explain elements of simple curve with neat sketch.	04
	(c) Define correlation survey. Enumerate the different methods of correlation of surface and underground surveys. What should be the accuracy in such surveys?	07
OR		
Q.3	(a) Explain designation of curve.	03
	(b) Differentiate between photographs and map.	04
	(c) Describe approximate alignment method of correlation survey. Explain the precautions to be taken in work.	07
Q.4	(a) Explain terrestrial photogrammetry. Describe the field work of terrestrial photogrammetry.	03
	(b) Discuss the application of photogrammetry in mining industry.	04
	(c) Define tilt distortion. Discuss the advantages & disadvantages of photogrammetric mapping.	07
OR		
Q.4	(a) Explain aerial photogrammetry and its advantages.	03
	(b) Describe the various stages of aerial photogrammetry.	04
	(c) Define aerial camera. Explain the various parts of aerial camera.	07
Q.5	(a) Define remote sensing. Discuss the basic concepts and components of remote sensing.	03
	(b) Discuss the applications of remote sensing in mining.	04
	(c) Explain the basic concepts and principles of GIS & GPS.	07
OR		
Q.5	(a) Discuss the legal requirements about mine plans and sections.	03
	(b) Explain the symbols used for preparation of mine plans and sections.	04
	(c) Explain the different types of mine models.	07
