QP Code: S253A044 Reg. No | | | | | | | | | | | AY 23

Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)

B. Tech (Third Semester – Regular & Supplementary) Examinations, November 2025

23BCVPC23003-Surveying

(Civil Engineering)

Time: 3 hrs Maximum: 60 Marks

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions

	Question	CO #	Blooms Level
a.	What is a station in chain surveying?	CO1	K1
b.	Name the main parts of a compass.	CO2	K1
c.	Define Whole Circle Bearing (W.C.B.) and Reduced Bearing (R.B.).	CO3	K1
d.	What is remote sensing? Name its two main types.	CO4	K1
e.	Differentiate between the vector data model and raster data model in GIS.	CO5	K1

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** The Questions

	Question	Marks	CO #	Blooms Level
2. a.	Classify surveying based on purpose of surveying.	5	CO1	K1
b.	Draw and explain parts of a chain.	5	CO1	K1
	(OR)			
c.	Classify surveying based on place of surveying..	5	CO1	K2
d.	Explain the step-by-step procedure of how chain surveying will be conducted.	5	CO1	K3
3.a.	How is a compass set in the field?	5	CO2	K1
b.	Explain the step-by-step procedure of compass survey.	5	CO2	K2
	(OR)			
c.	Differentiate chain and compass surveying?	5	CO2	K3
d.	The following **fore bearings (F.B.)** were observed using a prismatic compass:	5	CO2	K3

Line	AB	BC	CD	DE	EA
Fore Bearing	60° 00′	110° 00′	190° 00′	260° 00′	330° 00′

Find the included angles at A, B, C, D and E.

	Question	Marks	CO #	Blooms Level
4.a.	Draw and explain parts of a telescope.	5	CO3	K2
b.	Explain principal of levelling and types of levelling.	5	CO3	K2
	(OR)			
c.	Differentiate Height of Instrument Method and Rise and Fall Method.	5	CO3	K3
d.	The following readings were taken on a continuously sloping ground 0.780,1.535, 1.955, 2.430, 2.985, 3.480, 1.155, 1.960, 2.365, 3.640, 0.935, 1.045, 1.630, 2.545. the R.L is 180.750. calculate the other reduced levels	5	CO3	K3
5.a.	Explain how to find out height of a tower when base is inaccessible and both stations are on the different vertical plane.	5	CO4	K2
b.	What Is a Contour? Explain Its Engineering Uses.	5	CO4	K1
	(OR)			
c.	Explain the characteristics of contour lines with neat sketches.	10	CO4	K2
6.a.	Draw and explain the elements of simple circular curve.	5	CO5	K3

b.	What are the different types of platforms used in remote sensing.	5	CO5	K2
	(OR)			
c.	Explain visual image interpretation.	5	CO5	K2
d.	Explain about GIS data models.	5	CO5	K1

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