

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

CLASS: M Sc
BRANCH: Geoinformatics

SEMESTER : I
SESSION : MO/2023

SUBJECT: GI503 DIGITAL CARTOGRAPHY AND GPS

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Conventional cartography maps are better than digital cartography maps. Comment	[5]	1 4
Q.1(b)	What is the purpose of map projection? Which projection is suitable for projecting India and adjacent countries? Give reasons for your answers.	[5]	2 1
Q.2(a)	How can statistical data be projected on maps? Illustrate with an example.	[5]	3 3
Q.2(b)	Write shortly on how GNSS is a source of a data? Write about other sources of data which can be used as an input to digital cartography.	[5]	4 4
Q.3(a)	What is the RGB color cube? Explain with a figure.	[5]	3 1
Q.3(b)	Explain about map lettering. How important is it, justify.	[5]	3 5
Q.4(a)	What are the sources of error in range measurement? Write ways to minimize these errors.	[5]	4 3
Q.4(b)	Describe WGS-84 datum and diagrammatically show the cartesian coordinates of a point located in the northern hemisphere	[5]	4 3
Q.5(a)	Explain DGPS concept of surveying and describe approach of STOP and GO DGPS method.	[5]	5 3
Q.5(b)	Write criteria for establishing a reference /Base station Suggest surveying methods. Suggest DGPS surveying method for observing land subsidence with its procedure.	[5]	5 4

:::24/11/2023 E:::