

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

**CLASS: MSC  
BRANCH: GEO-INFORMATICS**

**SEMESTER : II  
SESSION : SP/2025**

**SUBJECT: GI510R1 RESEARCH METHODS AND STATISTICS IN GEOINFORMATICS**

**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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		<b>CO</b>	<b>BL</b>
Q.1(a)	Describe two research problems involving geoinformatics tools at the National and International levels.	[5] 1	3
Q.1(b)	Describe three geographic data sources required in remote sensing and GIS-related studies.	[5] 1	3
Q.2(a)	Describe the benefits of field visits.	[5] 2	3
Q.2(b)	Describe the components of a research project.	[5] 2	3
Q.3(a)	What are the factors that introduce errors in sampling? How sampling error can be estimated?	[5] 3	3
Q.3(b)	In previous year, the farm produce were unhealthy to 10 per cent. This year by the add of fertilizer, farmer is expecting reduce proportion of unhealthy produce. A random sample of 400 was taken out of which 34 were unhealthy. Can you say that by the add of fertilizer has improved the produce? Test at 1 per cent level of significance.	[5] 3	4
Q.4(a)	Describe the differences between the structured, semi-structured, and unstructured interview with an example.	[5] 3	4
Q.4(b)	Describe the Universal Soil Loss Equation (USLE) used to estimate soil erosion.	[5] 3	4
Q.5(a)	Why effective communication is important for a project? Give a strategic plan for project communication.	[5] 4	4
Q.5(b)	What is the significance of use of citations? Give examples of numbered and APA style referencing.	[5] 4	3

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