

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

**CLASS: M.TECH.
BRANCH: REMOTE SENSING**

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

SUBJECT: RS521 DATA SOURCES, STATISTICS AND RESEARCH METHODS IN GEOSPATIAL DOMAIN

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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Q.1(a)	What were the considerations of USGS Science strategy in data integration and beyond? Give a concise account of Landsat Global Archive Consolidation (LGAC)	[5] 4	3
Q.1(b)	How can national portals like Bhuvan (NRSC), MOSDAC and India-WRIS be useful for geospatial research? Give a brief account of each of the above portals.	[5] 4	3
Q.2(a)	How can field visit and field report be helpful in research? Elaborate on its preparation requirements and format.	[5] 2	3
Q.2(b)	Describe a research report and its types.	[5] 2	4
Q.3(a)	Under what conditions would you prefer the following sampling methods: 1. A probability sample? 2. A non-probability sample? 3. A stratified sample? 4. A cluster sample?	[5] 3	3
Q.3(b)	Determine the size of the sample for estimating the yield for the universe with N = 5000 based on the following information: 1. The variance is 4 gm 2. Estimate should be within 0.8 gm of the true average yield with 99% probability (z = 2.57)	[5] 3	4
Q.4(a)	What are objectives and types of Research? Elaborate	[5] 4	2
Q.4(b)	Explain qualitative and quantitative research? What are the different types of research to suit specific needs of the researchers?	[5] 4	3
Q.5(a)	What is the significance of project communication? Give an example of communication media for different stakeholders.	[5] 4	2
Q.5(b)	What is plagiarism? What are the regulations implemented to check the plagiarism in India?	[5] 4	2

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