

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

**CLASS: M.SC.
BRANCH: GEO-INFORMATICS**

**SEMESTER : I
SESSION :MO/2023**

SUBJECT: GI504R1 ADVANCED IMAGE ACQUISITION & INTERPRETATION FOR ENVIRONMENTAL MAPPING

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)	Describe the differences between igneous, sedimentary, and metamorphic rocks and write two examples from each.	[6] [CO1]	[BL3]
Q.1(b)	Describe the difference between normal fault and reverse fault with suitable diagrams.	[4] [CO1]	[BL3]
Q.2(a)	Discuss the differences between the selection key and the elimination key with the help of suitable examples.	[6] [CO2]	[BL3]
Q.2(b)	Two different LULCs show similar tones and similar textures on the image of a specific spectral band acquired in a particular season. Determine the spectral band and two LULCs. Give suitable reason(s) for your answer.	[4] [CO2]	[BL5]
Q.3(a)	Describe in detail about any Indian Online Satellite data dissemination systems and their applications.	[5] [CO3]	[BL5]
Q.3(b)	Explain the significance of ESA's Sentinel data in remote sensing applications.	[5] [CO3]	[BL5]
Q.4(a)	What is the full form of LIDAR? What is the name of the popular LIDAR data format?	[2] [CO4]	[BL1]
Q.4(b)	Write the main differences between LIDAR and RADAR.	[3] [CO4]	[BL5]
Q.4(c)	What is IMU? Explain the details of its components.	[5] [CO4]	[BL4]
Q.5(a)	Write the importance of different sensors in different segments like agriculture, defense, etc.	[5] [CO5]	[BL2]
Q.5(b)	Describe the importance of high spatial and temporal resolution data with examples.	[5] [CO5]	[BL5]

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