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

CLASS: MTECH **SEMESTER : I**
BRANCH: RS **SESSION : MO/19**

SUBJECT: RS501: PRINCIPLES OF REMOTE SENSING AND DIGITAL SATELLITE IMAGE
TIME: 3:00 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.

Q.1(a)	Does Scatter have any role in Remote Sensing? Illustrate the different types of Scattering in the atmosphere.	[5]
Q.1(b)	For identification of the Human beings fingerprints are used. What is its analogue in Identification of objects in Remote Sensing? Explain accompanied with illustration.	[5]
Q.2(a)	Compare the advantages and disadvantages between photograph and imagery acquired through Aerial and Satellite platform respectively.	[5]
Q.2(b)	Give the working of along track scanners.	[5]
Q.3(a)	Classify Passive sensors.	[2]
Q.3(b)	Explain the terms related to the various angles for a microwave sensor.	[2]
Q.3(b)	State the Wien's Displacement law. What is its significance in Remote Sensing?	[2]
Q.3(d)	Give two applications of microwave Remote Sensing in the Military area.	[4]
Q.4(a)	What is the importance of enhancing satellite images digitally? Explain the importance of averaging.	[5]
Q.4(b)	Apply the Sobel filter for the following Data: 33 45 66 45 15 72 54 43 66	[5]
Q.5(a)	How can a Remote Sensing image be classified for an unknown territory? Discuss an appropriate method for it.	[5]
Q.5(b)	What do you understand by 'Signatures' while classifying images.	[5]

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