

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

CLASS: M.SC.  
BRANCH: MGI

SEMESTER : I  
SESSION : MO/18

SUBJECT: GI501 PRINCIPLES OF REMOTE SENSING

TIME: 03:00

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) Explain the significance of Atmospheric Windows. [4]  
Q.1(b) It is required to determine the chlorophyll type and content of vegetation present in an urban area every month. Evaluate the roles of different types of resolutions in performing this task. [6]
- Q.2(a) Describe the difference between the geo-synchronous and sun-synchronous satellites. [5]  
Q.2(b) Compare between opto-mechanical and pushbroom sensors. [5]
- Q.3(a) Illustrate two applications of BSQ data format. [4]  
Q.3(b) Describe the different types of open data sources. [6]
- Q.4(a) Explain the thermal response pattern of the following landuse types in a sunny and clear day: dry agricultural land, irrigated agricultural land, and agricultural land with standing healthy and green crop. [6]  
Q.4(b) Explain the effect of surface roughness on the radar backscatter. [4]
- Q.5(a) Explain the significance of ground truth radiometry in the analysis and interpretation of remote sensing images. [5]  
Q.5(b) Explain three applications each of optical and thermal remote sensing in the field of agriculture. [5]

\*\*\*\*\*26.11.18\*\*\*\*\*M