

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

CLASS: IMSC
BRANCH: MATHS & COMP.

SEMESTER : V
SESSION : MO/19

SUBJECT: SGI1001 PRINCIPLES OF REMOTE SENSING
TIME: 3 HOURS

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 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) List the advantages of Remote Sensing Data. [2]
Q.1(b) Explain 'Atmospheric Windows'. [4]
Q.1(c) What are different resolutions of satellite data? Write the usability of temporal resolution. [6]
- Q.2(a) How can ordinary Cameras be modified into aerial Cameras? [2]
Q.2(b) Classify Active Sensors. [4]
Q.2(c) Explain the working of a Push Broom Scanner. [6]
- Q.3(a) What are different sensors on board Resources at satellite? [2]
Q.3(b) What are Sun-Synchronous satellites? Explain with appropriate figure. [4]
Q.3(c) Differentiate between Sun-synchronous and Geo-synchronous satellites. [6]
- Q.4(a) What is Flight Planning? [2]
Q.4(b) What do you understand by Stereoscopic Parallax? Explain the Parallax equation. [4]
Q.4(c) Explain the term Relief Displacement with Illustration. [6]
- Q.5(a) Explain the term Interior Orientation. [2]
Q.5(b) What are the elements of Interior Orientation? [4]
Q.5(c) Draw the figures of Model Deformation and relative orientation due to Shift in Kappa. [6]
- Q.6(a) Give an example of use of Thermal Imagery in Remote Sensing. [2]
Q.6(b) Define Thermal Capacity and Thermal Conductivity. [4]
Q.6(c) What are advantages of microwave imaging? [6]
- Q.7(a) Write level-2 LULC classification system. How are different LULC classes interpreted on satellite images? [6]
Q.7(b) Give the application of remote sensing in the field of Forestry. [6]

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