



Name :

Roll No. :

Invigilator's Signature :

**CS/PGDGI/SEM-1/DGI-101/2010-11
2010-11**

PRINCIPLES OF REMOTE SENSING

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP – A

(Objective Type Questions)

Answer any *ten* of the following.

10 × 1 = 10

1. Answer very briefly the following questions :

- i) What is approximate wavelength range of visible spectrum ?
- ii) What does SLAR stand for ?
- iii) What is IFOV ?
- iv) Write on spatial resolution of Cartosat-1 PAN camera.
- v) In which part of EMR is highest reflection of vegetation found ?
- vi) What does LIDAR stand for ?
- vii) In which orbit is a remote sensing (Resource) satellite generally launched ?
- viii) What are primary colours ?



- ix) Landsat-3 satellite is used in what method of scanning ?
- x) Which satellite system is used to record all weather information ?
- xi) Name two satellites which are having stereo-viewing capability.
- xii) What is the minimum requirement of forward overlap in aerial photographs for getting stereo-viewing under stereoscope ?

GROUP – B

(Short Answer Type Questions)

Write short notes on any *three* of the following. $3 \times 5 = 15$

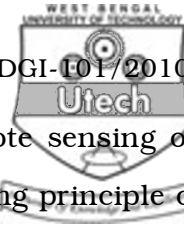
- 2. Active and passive remote sensing.
- 3. Spectral signature.
- 4. Kepler's laws of motion.
- 5. Tilt and drift in A.P.
- 6. Geostationary satellite.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. Define remote sensing. What are different stages of an ideal remote sensing system ? Discuss energy interaction with earth surface features with suitable sketches and their importance in remote sensing. $2 + 6 + 7$



8. What are the advantages of microwave remote sensing over optical remote sensing ? Describe the working principle of a radar system. What are main application areas of thermal remote sensing ? 5 + 5 + 5
9. What are different types of aerial photographs according to the direction of the camera axis ? What are the different methods for calculation of scale from aerial photographs ? 7 + 8
10. What is image interpretation ? What are the important elements of image interpretation ? Illustrate different elements for identification of earth surface features. 2 + 5 + 8
11. What are different types of platforms in remote sensing ? Describe cross-track scanning system. Write a brief account on sensor characteristics of IRS-P6 satellite. 7 + 3 + 5
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