



Printed Pages : 2

CE – 034

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0039

Roll No.

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B. Tech.

(SEM. VIII) EXAMINATION, 2006-07

REMOTE SENSING IN CIVIL ENGINEERING

Time : 3 Hours]

[Total Marks : 100

Note : Answer all questions.

1 Answer any **four** parts of the following : **5×4=20**

- a) Explain the terms spatial resolution, spectral resolution and radiometric resolution.
- b) What do you mean by photo interpretation keys? Explain them.
- c) Why ground truth verification is required? What is the criterion for grand truth collection?
- d) Discuss various techniques of photo interpretation?
- e) What are the characteristics of a good photographic image?
- f) How a civil engineer will select a site for highway project using remote sensing imaging?

2 Answer any **two** parts of the following : **10×2=20**

- a) What is electromagnetic radiation? Show useful portions of electromagnetic spectrum for various sensing systems.

- b) Discuss spectral reflectance curves for water and vegetation.
- c) What is the utility of sensor in remote sensing? Explain various types of sensors.

3 Answer any **two** parts of the following : **10×2=20**

- a) Describe various multi-concepts used for analysis of remote sensing data.
- b) How scale of image and image resolution affect the visual interpretation of an image?
- c) Describe the importance of visible band in electromagnetic spectrum. Also describe the band ranges for satellite images in visible region.

4 Answer any **two** parts of the following : **10×2=20**

- a) Discuss the role of remote sensing for estimating post flood damage.
- b) How could you assess natural vegetation quantitatively and qualitatively in an area using remote sensing data ?
- c) In air pollution studies remote sensing plays an important role justify.

5 Write short notes on any **four** of the following : **5×4= 20**

- a) Sun synchronous satellite
- b) Satellite data
- c) Merits of satellite imagery
- d) Format of digital data
- e) Indian Remote Sensing Satellite.
- f) Characteristics of any one satellite.