Faculty of Engineering & Technology

Eighth Semester B.E. (Civil)/Eighth Semester

B.E. P.T. (Civil) Examination

APPLIED REMOTE SENSING & GIS

(Elective—III)

Sections—A & B

Time—Three Hours] [Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

(1) Answer **THREE** questions from Section A and **THREE** questions from Section B.

(2) Assume suitable data wherever necessary.

(3) Illustrate your answers wherever necessary with the help of neat sketches.

SECTION—A

1. (a) What is Remote Sensing ? Discuss the basic principle of remote sensing with a neat sketch. 7

(b) What do you understand by Electromagnetic spectrum ? Describe various wavelength regions useful in remote sensing technique. 6

2. (a) What are different types of platforms ? Describe the space borne platforms in detail. 7

   (b) What are digital formats ? Give an account of different types of digital data formats. 6

3. (a) What do you understand by image interpretation ? Describe various elements of image interpretation. 7

   (b) Write a note on vertical exaggeration. 6

4. Differentiate between : 14

   (a) Path and row

   (b) Passive and active sensors

   (c) Roll, pitch and yaw.

5. Write short notes on (any **THREE**) : 13

   (a) DN value and Pixel

   (b) Atmospheric windows

   (c) Thermal scanners

   (d) Stereoscope.

SECTION—B

6. What do you understand by digital image classification ? Describe various steps of supervised classification with suitable sketches. 13

7. Discuss the following : 14

   (a) Radiometric errors

   (b) Image enhancement.

8. (a) What is GIS ? Describe various components of GIS. 7

   (b) Discuss the advantages and disadvantages of raster and vector data formats. 6

9. Discuss the application of remote sensing technique in water resources management. Add a note on various types of drainage patterns. 13

10. Write short notes on (any **THREE**) : 13

    (a) Path radiance

    (b) Band ratioing

    (c) Attributes

    (d) Topology.