AQ – 2695

Fourth Semester M. E. (Civil) Env. Engg. Examination

Elective 4 SCEE 4

RS AND GIS IN ENV. ENGG.

Paper – 4 SCEE 3

P. Pages : 2

Time : Three Hours] [Max. Marks : 80

Note : (1) Separate answer book must be used for each section in the subject Geology, Engineering material of civil branch and Separate answer book must be used for Section A and B in Pharmacy and Cosmetic Tech.
(2) All questions carry marks as indicated.
(3) Due credit will be given to neatness and adequate dimensions.
(4) Answer **Three** questions from Section A and **Three** questions from Section B.
(5) Use pen of Blue/Black ink/refill only for writing the answer book.

SECTION A

1. (a) Explain the fields of application of photogrametry. 7

   (b) What is remote sensing ? What are their advantages and limitation ? Explain in detail. 7

2. (a) Write in detail about atmospheric window. 7

   (b) Write a short note on : Digital Data Format and RS Data. 6

3. (a) What is thermal remote sensing ? State wavelengths utilized in thermal sensing. Describe areas of application using thermal data for information extraction. 7

   (b) What do you mean by Resolution of sensor? Describe various types of resolution with suitable examples. 6

4. Define RADAR.What are the different components of radar system ? Explain Radar image characteristics. 13

5. Explain in detail :—

   (a) Geometric errors in satellite data.

   (b) Ground control points.

   (c) Spectral signature curve. 13

SECTION B

6. (a) What is GIS ? What are the various steps involved in GIS analysis ? Explain with diagram. 7

   (b) How integrated approach of RS and GIS can be employed for watershed management and land use/land cover studies ?. Explain with example. 7

7. Explain the methodology of assigning geographic co-ordinates to satellite data. Explain the steps involved in it. 13

8. What are the components of GIS ? Explain Raster and Vector data structure. 13

9. Explain how GIS system may be used as resources management tool. Explain in detail the structure of GIS explaining the features and topography. 13

10. "Geoinformatics is a tool for spatial data management aimed at better resource planning." Comment on the statement giving suitable examples. 13