

Five-Year Integrated M.Sc. Examination 2021-22

Sem-VII

Earth and Environmental Science

Paper: EES-4-7-1

Subject: Remote Sensing and GIS

Time: 4 hours

Full Marks: 80

Questions are of value as indicated in the margin.

Answer **question No. 1** and **any four** from the rest.

1. Write short notes on **any four** of the following.
 - a) Atmospheric windows
 - b) Radiometric resolution
 - c) Multispectral Sensor
 - d) Raster data model
 - e) Hazard zonation map
 - f) Stereoscopy

4x4 = 16
2. What are the different types of Remote Sensing Platform? Describe the orbital characteristics of earth observation (remote sensing), communication, and navigation satellites.

4+12 = 16
3.
 - a) What are the basic differences among Optical, Thermal and Microwave Remote Sensing?
 - b) Discuss the application areas of Thermal Remote Sensing.

12+4 = 16
4. What are the elements of image interpretation? How these elements help us to interpret remote sensing imagery?

16
5. Briefly discuss the four categories of digital image processing functions.

16
6. What is a GIS (Geographic Information System)? Describe its functions and applications.

4+12 = 16
7. Discuss the application of Remote sensing and GIS in any two of the following:
 - a) Water resource Management
 - b) Forestry
 - c) Agriculture

8+8 = 16