

Five - Year Integrated M.Sc. Examinations 2023

Semester-VII

Course: EES-4-7-1 (2016)

(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) Relief displacement
 - (b) Atmospheric window
 - (c) UAV
 - (d) Polarisation in Radar system
 - (e) Land Use/Land Cover classification system with remote sensing data
 - (f) NavIC

4 x 4 = 16
2.
 - (a) What do you mean by 'remote sensing platform'? Describe the characteristics of different types of platforms used in remote sensing.
 - (b) Why the earth observation satellites are generally placed in sun-synchronous orbits?

12+4 = 16
3.
 - (a) Compare the properties and application of Optical sensor, Microwave sensor and Thermal sensor.
 - (b) Write a note on hyperspectral remote sensing.

12 + 4 = 16
4.
 - (a) What is image overlap in aerial photography? How it is related to stereoscopy?
 - (b) How the scale of an aerial photograph can be determined?

12 + 4 = 16
5.
 - (a) Explain the utility of FCC in multispectral remote sensing.
 - (b) Discuss the fundamentals of visual image interpretation.

4 + 12 = 16
6. What are raster and vector data models in GIS. Compare their advantages and disadvantages.

8 + 8 = 16
7. Discuss the application of Remote sensing and GIS in water resource management.