

Five - Year Integrated M.Sc. Examinations 2024

Semester-VII

Paper: EES-4-7-1

(Remote Sensing and GIS)

Time: 4 hours

Full Marks: 80

Questions are of values 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) Stereoscopic vision
 - (b) Absorption bands
 - (c) Active sensor
 - (d) Raster data model
 - (e) Precision agriculture
 - (f) Kinetic and Radiant temperature

$4 \times 4 = 16$
2.
 - (a) Define 'remote sensing'? Discuss the advantages and limitations of satellite based remote sensing.
 - (b) Discuss the steps involved in remote sensing technique. What are the ideal conditions for remote sensing?

$(2+4+2) + (6+2) = 16$
3.
 - (a) What do you mean by remote sensing data? Explain the different data formats used to store remote sensing data.
 - (b) Discuss the different types of resolutions used in remote sensing data with examples.

$(4+4) + 8 = 16$
4.
 - (a) How aerial photographs are taken? How can the scale of an aerial photograph be determined?
 - (b) Describe the system parameter and terrain parameters of radar image.

$(4+4) + (4+4) = 16$
5.
 - (a) What are Radiometric and Geometric corrections?
 - (b) Discuss the differences between the supervised and unsupervised method of image classification.

$8 + 8 = 16$
6.
 - (a) What are the key components of disaster management?
 - (b) Discuss the role of Geospatial technology in natural disaster management.

$4 + 12 = 16$
7.
 - (a) Distinguish between sun-synchronous and geo-synchronous satellites?
 - (b) What are GNSS (Global Navigation Satellite Systems) and what are their utilities?

$8 + 8 = 16$