

A-0868

Total Pages : 3

Roll No.

ENSE-656/EVS-607

**RS, GIS AND GPS : BASIC AND
APPLICATIONS**

M.Sc. Environmental Science (MSCES)

Examination, June 2025

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into two (02) Sections 'A' and 'B'. Attempt the questions contained in these sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

Long Answer Type Questions 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. Describe digital photogrammetry, its techniques, and its applications.
2. What is aerial photography? What are its basic concepts? How did aerial photography evolve? Explain in detail.
3. Define remote sensing. Write a detail account of data acquisition process, and applications of remote sensing.
4. Explain the following terms in detail :
 - (A) Satellite
 - (B) Remote Sensing Platforms
 - (C) Polar Orbit
 - (D) Sun-Synchronous Orbit
 - (E) Optical Sensors
 - (F) Microwave Sensors
5. What is digital image processing in remote sensing? Explain in detail.

Section–B

Short Answer Type Questions 4×8=32

Note :– Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is GIS? Discuss its components briefly.
2. Write short notes on:
 - (A) Rural Settlement
 - (B) Urban Settlement

- (C) Urbanization
 - (D) Migratory/ Transhumance Villages
3. What is a landslide? How geospatial technologies (RS & GIS) help in landslide management?
 4. What is a watershed? What factors determine the geomorphologic characteristics of a watershed?
 5. Explain how geographic information systems and remote sensing are used in wildlife mapping.
 6. Explain the any four terms:
 - (A) Digital Elevation Model (DEM)
 - (B) Biodiversity
 - (C) Hill Shading
 - (D) Contour
 - (E) Triangulated Irregular Network (TIN)
 - (F) Slope and aspect
 7. How do technologies such as Remote Sensing (RS), Geographic Information Systems (GIS), and Global Positioning Systems (GPS) assist in the mapping and management of land resources like soil, forests, crops, and livestock?
 8. What is the spaghetti and topology model in vector data? Explain.
