

PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch – ENVIRONMENTAL SCIENCE

REMOTE SENSING AND GIS IN ENVIRONMENTAL MANAGEMENT

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry **EQUAL** marks

$$(10 \times 1 = 10)$$

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks $(5 \times 7 = 35)$

Question No.	Question	K Level	CO
11.a.	“Remote sensing”- A part of an Applied Physics. Justify.	K5	CO2
	(OR)		
11.b.	Explain the significance of coordinate systems in mapping and GIS.	K4	CO2
12.a.	Inspect atmospheric interactions of electromagnetic radiation and their significance in remote sensing.		
	(OR)	K4	CO2
12.b.	Analyze spectral reflectance curve for vegetation, soil, and water.		
13.a.	Compare between LEO, MEO and GEO.	K4	CO2
	(OR)		
13.b.	Examine in detail about different types of aerial photographs.	K5	CO3
14.a.	Assess the significance of Digital Elevation Models (DEMs) in GIS.		
	(OR)	K5	CO3
14.b.	Evaluate the suitability of raster and vector data for environmental modeling and decision-making.		
15.a.	Discuss the role of Remote Sensing and GIS in land use and land cover change detection.	K6	CO2
	(OR)		
15.b.	Elaborate the application of Remote Sensing and GIS in hazards and disaster management.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks $(3 \times 10 = 30)$

Question No.	Question	K Level	CO
16	Classify different types of maps used in geospatial studies.	K4	CO1
17	Analyze the key steps in the remote sensing process with the help of neat labeled diagram.	K4	CO2
18	Appraise the operation of a whiskbroom scanner with the help of a diagram. Explain how it is different from push broom scanner.	K5	CO2
19	Explain the importance of digital image processing steps in extracting meaningful information from satellite imagery.	K5	CO3
20	Discuss the application of Remote Sensing and GIS in watershed management.	K6	CO2