

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

Branch – ENVIRONMENTAL SCIENCE

REMOTE SENSING & GIS IN ENVIRONMENTAL MANAGEMENT

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Landsat was launched by _____.
(i) ISRO (ii) DRDO
(iii) Russia (iv) NASA
- 2 In the EM spectrum gamma rays have
(i) Low frequency high wavelength (ii) High frequency low wavelength
(iii) Low frequency low wavelength (iv) High frequency high wavelength
- 3 Altitude at which geostationary satellite is located?
(i) 10000 km altitude (ii) 56000 km altitude
(iii) 36000 km altitude (iv) 20000 km altitude
- 4 K-means clustering is a _____.
(i) Unsupervised algorithm (ii) Supervised algorithm
(iii) Satellite (iv) None of these
- 5 Units of chlorophyll data in oceanography is _____.
(i) Kg/cubic meter of seawater (ii) gm/cubic meter of seawater
(iii) mg/cubic meter of seawater (iv) None of these

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a) Classify the types of maps used in GIS.
OR
b) Discuss the various applications of remote sensing.
- 7 a) State the principle of spectral reflectance curve analysis.
OR
b) Enumerate the limitations of remote sensing.
- 8 a) Illustrate the role of satellites in meteorology.
OR
b) What are sensors? Explain about resolution of sensors.
- 9 a) Differentiate between GIS systems and remote sensing.
OR
b) Describe the working mechanism of GPS and satellite system.
- 10 a) Discuss the role of remote sensing in disaster management.
OR
b) How does the GIS System used for wildlife corridor mapping? Explain.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a) Assess the recent trends and growth of remote sensing in present world.
OR
b) Critically analyze the advancements in geospatial technology and software used.
- 12 a) Interpret the wavelength – frequency-energy relationship of EMR.
OR
b) Explain the role of remote sensing on biodiversity conservation.
- 13 a) Categorize the types of aerial photographs in spatial analysis.
OR
b) Classify the types and characteristics of various sensors.
- 14 a) Elaborate the GIS systems and its components.
OR
b) Evaluate the significance of NDVI in coastal zone analysis.
- 15 a) How to detect the land use and land cover change pattern using GIS? Explain.
OR
b) Compare the GIS applications in watershed and utility management.

Z-Z-Z

END