18ESP14

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Third Semester)

Branch – **ENVIRONMENTAL SCIENCE**

REMOTE SENSING AND GIS APPLICATIONS 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. Which of following is/are elements of visual interpretation?
   (i) Contrast stretch (ii) Spline
   (iii) Density slicing (iv) Texture

2. ..... scanner system is also called as along track scanner system.
   (i) Push Broom (ii) Whisk Broom
   (iii) Pull Broom (iv) Aster Broom

3. What is SAR?
   (i) Synthetic Aperture Radar (ii) Synthetic Array Radar
   (iii) Synthetic Apron Radar (iv) Synchronous Aspire Radar

4. ..... is a group of methodologies applied in optimal site selection or suitability modeling.
   (i) Interpolation (ii) Digitizing
   (iii) Overlay Analysis (iv) Buffering

5. Which of the following are applications of network analysis?
   (i) Flood routing (ii) Line in polygon overlay
   (iii) Spatial search and query (iv) Image classification

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6. a) Classify the types of remote sensing.
   OR
   b) State the about different types of aerial photographs.

7. a) What is multispectral scanning? Discuss.
   OR
   b) List out the satellites launched for meteorological applications.

8. a) Discuss the thermal remote sensing with examples.
   OR
   b) Describe about SAR with diagram.

9. a) Classify the existing GIS software's in India.
   OR
   b) Explain in detail about GPS with its application.

10. a) Discuss the role of GIS and Remote sensing in water resource management.
    OR
    b) Explain the role of GIS on Land use/Land cover mapping.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11. a) Evaluate the details on fundamentals of remote sensing.

OR

b) What is electromagnetic spectrum in remote sensing? Discuss with diagram.

12. a) How are satellites used to observe the ocean? Justify.

OR

b) List out the Landsat series with the applications.

13. a) Explain the principle of RADAR.

OR

b) Discuss about visual image interpretation and its merits and demerits.

14. a) Discuss in detail about image classification.

OR

b) Summarize in detail about attribute data and spatial data.

15. a) Elucidate the application of GIS and remote sensing in flood management.

OR

b) Explain in detail about the application of GIS and remote sensing in disaster ~~resource~~ management.

Z-Z-Z END