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**PG CBCS**  
**MA/M.Sc. Semester-IV Examination, 2022**  
**DEPARTMENT OF GEOGRAPHY**  
**PAPER: GEO 404D**  
**(REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEM)**  
**Full Marks: 40** **Time: 2 Hours**

**Write the answer for each unit in separate sheet**

The figures in the right-hand margin indicate full marks.  
 Candidates are required to give their answers in their own words as far as practicable.

**UNIT: 404D.1**

**ADVANCED REMOTE SENSING**

**Marks: 20**

**GROUP-A**

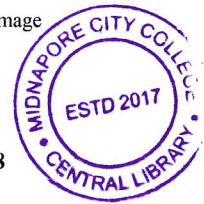
- 1. Answer any one question:** **1×8=8**
- a) How is hyperspectral remote sensing different from multispectral remote sensing? What are the major applications of hyperspectral remote sensing?
  - b) Explain in brief the spatial interpolation and intensity interpolation techniques in image processing.

**GROUP-B**

- 2. Answer any two questions:** **2×4=8**
- a) Discuss the use of different thermal sensors.
  - b) What do you mean by Spectral Enhancement Technique? Give example.
  - c) Write a short note on the elements of visual image interpretation.
  - d) Explain the role of Micro-wave remote sensing system in agricultural mapping?

**GROUP-C**

- 3. Answer any two questions:** **2×2=4**
- a) What is emissivity?
  - b) Write down the application of LIDAR.
  - c) What do you mean by hyperspectral cube?
  - d) Define image transformation.



*(Turn Over)*

(2)

**UNIT: 404D.2**

**ADVANCED GIS AND APPLICATIONS OF REMOTE SENSING**

**Marks: 20**

**GROUP-A**

**1. Answer any one question:**

**1×8=8**

- a) Explain the role of remote sensing data in geomorphological mapping.
- b) Briefly discuss the role of NSDI in regional planning and disaster management in India.

**GROUP-B**

**2. Answer any two questions:**

**2×4=8**

- a) Write a short note on the components of Web GIS.
- b) Describe the working principle of GPS.
- c) What is the importance of map projection in GIS?
- d) Explain the process of 3D mapping on GIS platform?

**GROUP-C**

**3. Answer any two questions:**

**2×2=4**

- a) What is Meta data?
- b) What is real time GIS?
- c) Explain the importance of buffering.
- d) Differentiate between GPS and DGPS.

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