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# GIS-502/DGIS-502

## Fundamentals of Photogrammetry and Remote Sensing (MAGIS/MSCGIS/DGIS/CGIS)

1st Semester Examination, 2023 (June)

#### Time : 2 Hours]

#### 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 answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### SECTION–A (Long Answer Type Questions)

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.

(2×19=38)

1. Differentiate between satellite remote sensing versus Aerial photography? Present brief historical perspective of remote sensing in India?

- **2.** Describe electromagnetic Radiation (EMR) and physical basis of EMR? Elaborate the interaction of EMR with atmosphere?
- **3.** Describe the factors that influence aerial photography? What are the different types of aerial photography?
- 4. Discuss the requirements and applications of stereoscopic aerial photographs? Define parallax and write note on measurement of height at aerial photos?
- 5. What are the preliminary aids for remote sensing image interpretation? Explain the sequential activities in image interpretation techniques.

#### SECTION-B

#### (Short Answer Type Questions)

- **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. (4×8=32)
- **1.** Explain electromagnetic spectrum along with its principal divisions and relevance to remote sensing?
- 2. What is scattering? Describe the different types of scattering?

- **3.** What do you mean by satellite orbit? Explain the sun-synchronous orbit and geostationary orbit?
- 4. Explain the elements of aerial photograph interpretation?
- 5. Write short note on the history of aerial photography?
- **6.** What is relief displacement? Write notes on lens distortion and tilt distortions?
- **7.** Explain Instantaneous Field of View (IFOV) and spatial resolution? How spatial resolution influence different field of image applications?
- **8.** What do you mean by remote sensing data interpretation? Explain Ground Truth Collection and its relevance in data interpretation?