No. of Printed Pages : 5 **MGG–012**

M. SC. (GEOGRAPHY)

(MSCGG)

Term-End Examination

June, 2025

MGG-012 : INTRODUCTION TO REMOTE SENSING

Time : 3 Hours *Maximum Marks : 100*

Note : *Question Nos.* ***1*** *and* ***2*** *are compulsory. Attempt any* ***five*** *out of seven questions from question nos. 3 to 9. Marks are indicated against each question.*

Section—A

1. Write short notes on any *five* of the following in about **150** words each : 5×4=20

   (i) Framing System

   (ii) Spectral properties of soil

   (iii) Sonar Remote Sensing

   (iv) Navigational satellites

   (v) Kinetic *vs*. Radiant temperature

   (vi) Multispectral image

   (vii) Supervised Classification

Section—B

2. Attempt any *five* questions. Your answer should be in about **250** words each : 5×6=30

   (i) What is Electromagnetic Spectrum (EMS) ? Discuss the characteristics of electromagnetic waves. Illustrate your answer with diagram.

(ii) What is visual interpretation keys ? Discuss *two* types of interpretation keys.

(iii) Discuss *three* key centres and institutions of Indian Space Research Organisation along with their roles.

(iv) What is remotely sensed data product ? Classify the remotely sensed data products on the basis of level of processing/enhancement.

(v) What is hyperspectral remote sensing ? Briefly discuss its applications and challenges.

(vi) Define digital image interpretation. Briefly discuss *four* types of resolution which help to evaluate the quality and characteristics of remotely sensed data.

(vii) Describe the applications of remote sensing in monitoring developmental activities with examples.

Section—C

Note : Attempt any *five* questions. Your answer should be in about **500** words each.

5×10=50

3. Describe the definition of Electromagnetic Radiation (EMR). Throw light on its *two* components with suitable diagram.
4. What is remote sensing platform ? Discuss in detail the terrestrial or ground-based platforms.
5. Write a detailed account on optical camera and aerial photography.
6. Give an overview of types of remotely sensed data product.

7. What is polarization in microwave remote sensing ? Explain *three* types of polarization with suitable diagram.

8. Discuss in detail the multiband concept of image interpretation.

9. Write in detail about the applications of remote sensing in water resource management.

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