

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.

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P. T. O.

Section—A

1. Write short notes on any *five* of the following in about **150** words each : $5 \times 4 = 20$
- (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 : $5 \times 6 = 30$
- (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.

$$5 \times 10 = 50$$

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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