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MGG-012

M. SC. (GEOGRAPHY)

(MSCGG)

Term-End Examination

December, 2025

**MGG-012 : INTRODUCTION TO REMOTE
SENSING**

Time : 3 Hours

Maximum Marks : 100

Note : *Question Nos. 1 and 2 are compulsory.*

*Attempt any **five** 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) Scanning system
 - (ii) Spectral properties of water
 - (iii) Radar remote sensing

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- (iv) Weather satellites
- (v) Surface roughness of the target
- (vi) Multi-direction concept of image interpretation
- (vii) Image fusion techniques

Section—B

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

- (i) What is reflection ? Differentiate between specular and diffuse reflection with diagram.
- (ii) Describe the challenges of ground truthing.

- (iii) Explain any *three* remote sensing applications developed by Indian Space Research Organisation (ISRO).
- (iv) Discuss the general guidelines used to select remotely sensed data based on the extent of area and scale of operation.
- (v) Briefly discuss the hyperspectral data products.
- (vi) What is False Colour Composite (FCC) ? Briefly explain the advantages and applications of FCC with examples.
- (vii) Briefly discuss the applications of remote sensing in drone mapping dealing with human aspects.

Section—C

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

$$5 \times 10 = 50$$

3. Write a detailed account on terms and definitions of remote sensing.
4. What is remote sensing platform ? Describe in detail the air-borne platform.
5. Discuss in detail the general characteristics of remote sensors.
6. Write in detail about the Indian source of remotely sensed data.
7. What is microwave remote sensing ? Describe active and passive microwave remote sensing. Illustrate your answer with suitable diagrams.

8. Write a detailed account on the key advantages of aerial photography.
9. Discuss in detail the applications of remote sensing in forest resource management.

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