

Total Pages—5 **PG/IIIS/RSG/304.1&304.2/24**
(CBCS)

M. Sc. 3rd Semester Examination, 2024

REMOTE SENSING AND GIS

*(Advanced Remote Sensing and Areas of
Applications)*

PAPER — RSG-304.1 & 304.2

Full Marks : 50

Time : 2 hours

Answer all questions

The figures in the right hand margin indicate marks

*Candidates are required to give their answers in
their own words as far as practicable*

Illustrate the answers wherever necessary

PAPER — RSG-304.1

(Advanced Remote Sensing Techniques)

[Marks : 20]

(Turn Over)

(2)

GROUP—A

Answer any **two** questions of the following :

2×2

1. What is a non-imaging microwave sensor ?
2. How does supervised classification differ from unsupervised classification ?
3. What are the challenges associated with hyperspectral remote sensing ?
4. What is Radiant temperature of an object ?

GROUP—B

Answer any **two** questions of the following :

4×2

5. Write a short note on 'Blackbody'.
6. Explain the main components of a LIDAR system.

(3)

7. Write a short note on Stefan-Boltzman Law.
8. Compare parametric and non parametric classifier in image classification.

GROUP – C

Answer any **one** question of the following : 8×1

9. Discuss about the three most frequently used classification algorithms in supervised classification techniques.
10. What are the key differences between multi-spectral and hyperspectral remote sensing ? Discuss about application areas of hyperspectral remote sensing. 4 + 4

PAPER – RSG-304.2

(*Application of Geo-informatics*)

[*Marks : 20*]

(4)

GROUP—A

Answer any **two** questions of the following : 2×2

11. What is weathering ?
12. Define about Earth's mantle.
13. What is applied geomorphology ?
14. What landforms are highest in the continent ?

GROUP—B

Answer any **two** questions from the following :

15. Define aggradation, its causes and effect. 4×2
16. What are the different geomorphological processes acting on earth surface ?
17. Briefly discuss any drainage patterns of your choice with suitable diagrams.

18. How can geo-informatics be used to distinguish between a canyon and a gorge and what are the key morphological differences between these two landforms ?

GROUP – C

Answer any one question from the following :
8 × 1

19. Briefly explain different elements of Visual interpretation keys for satellite image interpretation.
20. Describe how satellite imagery helps in mapping and analyzing flood-affected regions.

[Internal Assessment — 10 Marks]

