

**2022**

**M.Sc.**

**2nd Semester Examination**  
**REMOTE SENSING AND GIS**  
**PAPER—RSG-204**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

**RSG-204.1**  
**FUNDAMENTALS OF REMOTE SENSING**  
**& PHOTOGRAMMETRY**

**Group - A**

Answer any *two* questions.

2×2

1. What is False Colour Composite ?

2. Differentiate between geostationary orbit and sun-synchronous orbit.
3. Advantages of photogrammetry over on the ground observation.
4. Define fiducial marks and principal point.

**Group - B**

Answer any *two* questions.

2×4

5. Elucidate the nature of the Electromagnetic Radiation (EMR).
6. Briefly explain the role of relief distortion and height determination from a single photograph.
7. Why end lap is necessary for stereoscopic viewing ?  
What is anaglyph and its use. 2+2
8. Define Charge-Coupled Device (CCD). Discuss the application of geometry and ground coverage of aerial photographs. 2+2

**Group - C**Answer any *one* question.

1×8

9. Briefly discuss about the characteristics and process of Remote Sensing System in the earth's system components.
10. Discuss Human Stereoscopy. How stereoscopy applied to aerial photography? Differentiate between analog and digital photogrammetry. 3+2+3

**RSG-204.2****FUNDAMENTALS OF GEOGRAPHIC INFORMATION SYSTEM & NAVIGATIONAL SATELLITE SYSTEM****Group - A**Answer any *two* questions.

2×2

1. What is Geospatial data in GIS?
2. How many satellites are in use in GPS?
3. What do you mean by NAVSTAR GPS?
4. Write two differences of *NAVIC* and *GNSS*.

**Group - B**

Answer any *two* questions. 2×4

5. Discuss about the procedure and importance of Geo-referencing in GIS.
6. Compare between the raster and vector data structure with suitable illustration.
7. Discuss about the space segments of Global Navigational Satellite System (GNSS).
8. Discuss briefly about different applications of GNSS in surveying and mapping purpose.

**Group - C**

Answer any *one* question. 1×8

9. Explain major components of GIS with examples. Write down some advantages of GIS. 6+2
10. Write a short note on IRNSS. Discuss about signal characteristics and operational concept of GNSS. 3+5

[Internal assessment - 10]