CC-12: Remote Sensing and GIS

❒ Objective Questions

1. What is remote sensing (RS)?
2. Name two types of RS satellites.
3. What is the function of a sensor in remote sensing?
4. What is spatial resolution in remote sensing?
5. Name one sensor used in the IRS mission.
6. What is the significance of Landsat in remote sensing?
7. What is a False Colour Composite (FCC)?
8. What is LISS-3 in the context of IRS?
9. What is the purpose of image referencing schemes in remote sensing?
10. What is image interpretation in remote sensing?
11. What is land use land cover (LULC) mapping?
12. What is the difference between spatial and non-spatial data?
13. What is a raster data structure in GIS?
14. Define vector data in GIS.
15. What is the purpose of an attribute table in GIS?
16. What is overlay analysis in GIS?
17. What is GNSS?
18. What is waypoint collection in GNSS?
19. How are waypoints transferred to GIS?
20. What is the use of GNSS data in area and length calculations?

❒ Short Answer Questions

1. Explain the principles of remote sensing.

2. What are the different types of remote sensing satellites and their applications?
3. What are the key characteristics of IRS and Landsat missions?
4. What is the significance of sensor resolutions in remote sensing?
5. How are False Colour Composites prepared from satellite data?
6. Explain the process of image interpretation in remote sensing.
7. How is land use land cover (LULC) mapping done using satellite images?
8. Differentiate between raster and vector data in GIS.
9. What is the role of attribute tables in GIS data management?
10. Explain the principles of overlay analysis in GIS.
11. What are the main components of a Global Navigation Satellite System (GNSS)?
12. How are waypoints collected using GNSS technology?
13. Explain the process of transferring GNSS waypoints to GIS.
14. How is GNSS data used to calculate area and length in GIS?
15. Discuss the importance of GNSS in geographical studies.

❒ **Broad/Essay Questions**

1. Discuss the principles of remote sensing and the role of different types of satellites and sensors in data acquisition.
2. Explain the significance of sensor resolutions in remote sensing with reference to IRS and Landsat missions.
3. Discuss the process of preparing False Colour Composites using IRS LISS-3 and Landsat TM and OLI data.
4. Explain the principles of image interpretation in remote sensing and how LULC inventories are prepared from satellite images.
5. Compare and contrast raster and vector data structures in GIS, and explain their applications in geographical analysis.

6. Discuss the principles of preparing attribute tables in GIS and the significance of data manipulation and overlay analysis.
7. Explain the principles of GNSS positioning and the process of waypoint collection in geographical field studies.
8. Discuss the process of transferring waypoints to GIS and how GNSS data is used for area and length calculations in geographical analysis.
9. Analyze the role of remote sensing and GIS in environmental monitoring and land use planning.
10. Discuss the integration of remote sensing data with GIS technology for spatial analysis and decision-making in geographical studies.