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ESS 455

**Second Semester M.Sc. Degree Examination, September/October 2022
(CBCS)
ENVIRONMENTAL SCIENCE
Remote Sensing and GIS**

Time : 3 Hours

Max. Marks : 70

I. Write short notes on **any four** of the following (**not exceeding 2 pages each**) :
(4×4=16)

- 1) Spatial resolution
- 2) Thermal sensor
- 3) Different types of platforms used for remote sensing.
- 4) Geo-stationary orbit
- 5) Digital image data formats
- 6) CRZ

II. Write explanatory notes on **any five** of the following (**not exceeding 3 pages each**) :
(5×6=30)

- 7) Give the spectral range, bands, resolution of MSS/PAN/WiFS in Landsat4 and IRS 1-C.
- 8) Explain the operation of along-track and across-track scanners.
- 9) Elements of image interpretation.
- 10) Biophysical modeling
- 11) Types of geometric errors
- 12) Various components of GIS
- 13) Draw a neat sketch of EMR and indicate UV, visible and IR portion.

III. Answer **any two** of the following (**not exceeding 8 pages each**) : **(2×12=24)**

- 14) Explain the interaction of EMR with vegetation, soil and water.
 - 15) Describe the methods of photogrammetry in detail.
 - 16) Explain GIS and its uses for environmental monitoring.
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