

6th SEMESTER
(SKILL ENHANCEMENT COURSE)
(GEOLOGY)

GL617S: FUNDAMENTALS OF REMOTE SENSING

CREDITS: THEORY: 2, PRACTICAL: 2

THEORY (2 CREDITS)

Unit-1

Photo-geology: Aerial photography, types of aerial photographs, flight procedures, the significance of scale, mosaics, sources of photographs. Geologic interpretation, tone, colour, texture, landforms, drainage pattern, soil and vegetation.

Unit-2

Introduction to remote sensing. Radiation Laws, basic concepts of Electromagnetic radiation (EMR). EMR interaction with atmosphere-scattering - absorption - atmospheric windows; EMR interaction with Earth surface features - spectral response factors with different earth features.

PRACTICAL

Unit-1

Image subset, Landuse and landcover mapping, image geo-referencing. Spectral behaviour of different land cover features.

Unit-2

Sensors, active and passive: platforms - scanning mechanism, orbiting mechanics. Satellite systems: IRS, LANDSAT. Resolutions -Spectral, Spatial, radiometric and temporal. Application of remote sensing in soils, lithological and geomorphological mapping.

BOOKS RECOMMENDED

- Miller, V.C. Photogeology, 1961, Me Graw Hill, New York
- Moffit, F.H. and Mikhail, E.M. (1980) photogrammetry, Harper and row.