SAVITRIBAI PHULE PUNE UNIVERSITY

Geography T.Y.B.Sc. (Credit System)

Revised Syllabus (From June-2021)

Semester: VI

GG 366: Geoinformatics -II

Objectives:

1. To acquaint the students with new concepts and approaches in Geography
2. To familiarize the students with the wide application fields in Geography

No. of Credits: 02 **No. of Periods: 30**

Sr.No.	Topic	Sub-Topic	Learning Points	Periods
1	Introduction to Remote sensing	History and Development	1. Historical development 2. Definition 3. A tool for resource surveys Applications	07
2	Electromagnetic energy	Electromagnetic Radiation Electromagnetic Spectrum	1. Electromagnetic Radiation: Definition Properties of electromagnetic waves: velocity, wavelength, frequency. Atmospheric interactions, scattering, Reflection, emission, transmission. 2. Division of spectrum in various spectral regions Imaging Systems: Normal color photos, IR color photos IR scanners	08
3	Aerial Photography	Basic Concepts Geometry of Aerial Photographs	1. Aerial cameras 2. Types of photographs: vertical, oblique and terrestrial Aerial photographs 3. Central perspective projection, Photo nadir, air base, flying height, Scales, swing and tilts	07
4	Satellite Imaging & Image Interpretation	A) Types of Satellites by their orbital characteristics, Sensors and platforms ,scanners B) Image Interpretation	1. Geostationary and Sun Synchronous, Passive and active sensors ERTS, LANDSAT, SPOT, INSAT, IRS & IKONOS Satellite platforms, Optical mechanical scanners, Infrared scanners 2. Elements of interpretation, interpretation key	08

Reference Books:

1. Sabins Floyd (1987): Remote sensing: Principles and applications. Freeman and Company, London
2. Curran P. J. (1995): Principles of Remote Sensing, John Wiley and Sons, England,

3. Lillesand T. & Kiefer R.W. (2000): Remote sensing and Image Interpretation. John Wiley and Sons.
4. Online Learning CCRS Canada Centre for Remote Sensing http://landmap.mimas.ac.uk/ipc/ccrs/fundam_e.html NASA Remote Sensing Tutorial http://rst.gsfc.nasa.gov