

SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Environmental Science)
Semester: VI
Syllabus with Effect from: November-2013

Paper Code: US06CENV04	Total Credit: 3
Title of Paper: Oceanography & Remote Sensing	

Unit	Description in detail	Weightage (%)
I	Oceanography Definition, Distribution of world land and water bodies, Oceans nomenclature; shape, size and volume. Relief of the ocean floor - continental shelf, continental slope, mid ocean ridge, gyot, sea mount, Deep sea plain & Trenches. Temperature and salinity of ocean water - horizontal and vertical, Tide-origin. Tidal waves - spring and neap tides. Oceanic deposits - classification.	25%
II	Hydrology Hydrology definition, evolution and importance, world hydrological cycle, Elements - precipitation, evaporation, transpiration, infiltration, run off and ground water, Ground water distribution and movements (Darcy's Law) and hydraulic conductivity.	25%
III	Remote Sensing Introduction, Definition, electromagnetic radiation, image - elements, Principle, Types of Remote sensing-Satellite Remote Sensing, satellite image and its interpretation, Indian satellite, Microwave Remote Sensing - RADAR.	25%
IV	Application of Remote Sensing in Environment Science: Application of remote sensing in agriculture, forestry, biodiversity management, weather monitoring, Atmospheric studies, Geospheric survey, Hydrospheric studies, Cryospheric studies, Environmental applications, Spatial information system, Land use and land cover mapping, wasteland management, natural disaster. Geographic information System(GIS) - Definition, Components of GIS Application of GIS, Global positioning System	25%

Basic Text & Reference Books:

- Oceanography - TOM Garrison
- Fundamentals of Remote Sensing, NCERT
- Remote Sensing and Image Interpretation: Lillesand and Kiefer, John Wiley and Sons
- Oceanography - Savin dra Singh - Prayag pustak bhavan Pub.
- Hydrology - david Keith Todd, John Wiley and Sons

