

SARDAR PATEL UNIVERSITY
Programme: B.Sc
Semester: III
Syllabus with effect from: June-2012

Paper Code: US03CENV02	Total Credit: 3
Title of Paper: Fundamentals of Environmental Science	

Unit	Description in detail	Weightage (%)
I	Environment: Introduction, Scope, Components- Atmosphere, Hydrosphere, Lithosphere, Biosphere. Climatic factors- Light : Effect of light quality intensity and duration on plant and animal life Temperature: Effect of temperature, thermal stratification in lakes Rain fall, Humidity. Topographic factors: Height of mountain, direction, steepness of slope. Edaphic factors: soil composition, soil formation-weathering and pedogenesis, soil profile, soil erosion, various methods of soil conservation	25%
II	Atmosphere & Climate Change : Atmosphere- Composition, Vertical layers of the atmosphere, Greenhouse Gases and Global Climate Changes, Global Warming Potential, Possible Impact of Global Warming, Greenhouse Effect – Policy Response, Kyoto Protocol, EL NINO climatic cycles.	25%
III	Environmental Geology Igneous rocks, Metamorphic rocks and Sedimentary rocks: classification, Characteristics, Plate tectonics, Dip and strike, folds, Process of Folding, types of folds, joints, faults, conformity, unconformity and disconformity.	25%
IV	Global Ozone Problem : Ozone in atmosphere, Ozone depletion process, Ozone hole, worldwide Ozone trends, Montreal Protocol, Consequences of Ozone depletion – Human health, Terrestrial plants, Aquatic ecosystems, climate	25%

Basic Text & Reference Books:

- Environmental chemistry - A.K.De (1995) Eastern Wiley.
- Environmental chemistry - Stanley E. Manahan, Lewis Publishers
- Handbook of National parks, sanctuaries and Biosphere reserves in India - S.S.Negi (1995) Indus Pub.
- Environmental concerns and strategies - T.N.Khoshoo (1991) Ashish Pub. House New Delhi.
- Principles of Geomorphology - William D. Thornbury, New Age International Pub.
- A text book of Geology - P.K. Mukherjee, (2000) The world press pvt ltd.
- Physical geography - Savindra Singh, Prayag Pustak bhawan.
- The Nature and Properties of Soils - Nyle C. Brady. Prentice Hall Pub.

