

Syllabus of Ph.D Entrance test – Geoinformatics

Department of Geoinformatics, South Campus ,

Telangana University, Bhiknoor, NZB.,

Unit- I

Geomorphology: Interior of the earth, Earthquakes and Volcanoes, Weathering and Erosion; Land forms - Rivers, Glaciers, Wind, and Underground water.

Unit- II

Climatology and Oceanography: Structure and Composition of Atmosphere, Insolation, Temperature distribution and Heat Budget; Ocean -Temperature, Salinity and Circulations.

Unit- III

Socio-Economic Geography: Population trends and patterns and Migration; Resources and Industry and five year plan of India; Irrigation, Agriculture and resources of Andhra Pradesh; Green-house effect, ozone layer, Environmental movement.

Unit- IV

Urban Studies : Urbanization of India with reference to A.P ; Urban landuse model, Types of region and theories of regional development.

Unit-V

Fundamentals of Remote sensing: Electromagnetic Energy, Platforms – Types and their characteristics, Multispectral Imaging Sensors Systems - Spatial, Spectral, Temporal and Radiometric resolution; Earth resource Satellites.

Unit-VI

Concepts and Techniques of GIS : Types of Data used in G.I.S, Spatial (Vector and Raster data models) and Non-Spatial data, Geo-referencing and Geo-coding ; Digital Elevation Models.

Unit-VII

Concepts and Techniques of Surveying and Global Positioning System.

Unit-VIII

Fundamentals of Cartography : Types of scales, Maps and Projections - Generalization and Symbolization in cartography- Map design and layout; Cartographic techniques -Weather and Climatic.

Unit-IX

Digital Image Processing : Data Acquisition and Digital Image format : Pre- Processing, Enhancement; Contrast Manipulation ; Image Classification : Un- supervised Classification – Filtering, Generalization & Thematic Map Extraction; Supervised classification, Training Sites, Classifier's Accuracy of Estoniates.

Unit- X

Photogrammetry : Classification of Aerial Photographs, Geometric Aspects of Aerial Photos, Stereoscopic Vision, Depth Perception and Mosaics.