

Department of Land Resource Management

Central University of Jharkhand

Syllabus for Walk-in-Entrance Test

Course: 2 years M.Sc. in Geoinformatics

Earth system, origin of earth, shape and its atmosphere, interior of earth and its composition, Weathering and erosion, soil formation, composition and types in India, agriculture, pattern of crops in India, Earthquakes, nature of seismic waves, their intensity and magnitude scale, origin of earthquake and Volcanoes, causes of volcanism. Basic principles of geomorphology, drainage pattern, geological work of wind, glacier, river, alluvial plains, delta, underground water and ocean. Ocean currents, monsoon winds, La-Nina, El-Nino concept. Rock types, distribution in India, metallic and non-metallic ore minerals; Distribution of coal and petroleum in India.

Plate Tectonics: concept, plate margins, relation to earthquake & volcanism, Geological hazards: earthquakes, volcanism, landslides, avalanches, floods, droughts; Tsunami and Cyclone.

watershed management, land use planning, management of water resources, origin of groundwater; vertical distribution of groundwater. Types of aquifers, water bearing properties of rocks. Sustainable Development, climate change, natural resource management.

Fundamentals of Remote sensing & GIS: Remote sensing systems, remote sensing sensors, Types of Indian and Foreign Remote Sensing Satellites, sensor resolution, components of GIS, GPS, SGPS, DEM. Programming Language.

Maps types, elements and uses, map scale, types and application, Map projections.
