

## FACULTY OF SCIENCE

### M. Sc. (Geography)

The objective (Multiple Choice) as well as short answer type questions will be asked covering the following courses taught at Graduation level.

1. **Geomorphology** : Theories of the origin of the earth – Laplace, Chamberlin & Moulton, Big Bang; the constitution of the earth's interior; Isostasy; Wegener's theory and Plate Tectonics; earthquakes and volcanoes; Kober and Holmes theories of mountain building; the work of running water, glacier and wind; karst topography; concept of cycle of erosion of Davis and Penck.
2. **Climatology and Oceanography** : Composition and structure of the atmosphere; insolation and heat budget; horizontal and vertical distribution of temperature, pressure and wind; forms of precipitation and types of rainfall; classification and properties of air masses and fronts; tropical and temperate cyclones; Koppen's climatic classification; relief features of the ocean floor; vertical and horizontal distribution of salinity and temperature; tides and ocean currents; ocean deposits.
3. **Geography of Resources and its Utilization** : Soil formation and soil types; types of forest and forest products; production and distribution of iron ore, copper, coal, petroleum and hydro-power; solar energy; water conservation and future prospects; distribution, density and growth of world population; concept of optimum, over and under population; population resource regions of the world; production and distribution of wheat, rice, cotton, sugarcane and tea; industries – iron and steel, cotton textile and sugar, distribution and characteristics of primary; secondary and tertiary activities.
4. **Evolution of Geographical Thought** : Contribution of Strabo, Ptolemy, Al-Biruni, Ibn-Khaldun, Humboldt, Ritter, Ratzel and Vidal-de-la-Blache; environmental determinism, possibilism and stop and go determinism; quantitative revolution, behavioural geography, radical geography and welfare geography.
5. **Major World Environment** : Physical and human environment in equatorial, monsoon, hot desert, tropical and temperate grasslands, Mediterranean, tundra and taiga regions; air, water and soil pollution.
6. **Geography of India** : Structure and relief; evolution of extra peninsular drainage and its major river system; characteristics of peninsular drainage and its major river system; origin and development of monsoon and its mechanism; El-Nino and its effect on Indian weather; identification of flood prone areas and draught prone areas; types of forests and its distribution, characteristics and economic importance, deforestation and its consequences, social forestry and its significance, distribution and characteristics of soils in India; soil erosion and conservation; distribution and growth of population; agro – climate regions; the Green Revolution; distribution and production of rice, wheat, cotton and tea;

production and distribution of coal, petroleum, hydro-electricity and nuclear energy; localization factors and spatial pattern of major industries – iron and steel industry and cotton textile industry.

7. **Practical Aspects in Geography** : Nature and sources of geographic data; classification and significance of maps; definition, significance and types of scale; methods of showing relief; representation of population, agricultural and transport data by various Cartographic techniques including choropleth and isopleth; classification, identification, transformation and choice of map projections; measures of central tendency and dispersion – arithmetic mean, median, mode, standard deviation, co-efficient of variation; types and utility of aerial photographs, chief elements of aerial photo interpretation; application of remote sensing in geographical studies; remote sensing platform and sensors – active, passive and micro wave remote sensing.