

# SYLLABUS

## GEOGRAPHY CLASS-XI

Time : 3 Hrs.

	One Theory Paper	70 Marks
Part A	FUNDAMENTALS OF PHYSICAL GEOGRAPHY	35 Marks
	Unit-1 : Geography as a discipline	30
	Unit-2 : The Earth	
	Unit-3 : Landforms	
	Unit-4 : Climate	
	Unit-5 : Water (Oceans)	
	Unit-6 : Life on the Earth	
	Map and Diagram	5
Part B	INDIA—PHYSICAL ENVIRONMENT	
	Unit-7 : Introduction	30
	Unit-8 : Physiography	
	Unit-9 : Climate, Vegetation and Soils	
	Unit-10 : Natural hazards and Disasters	
	Map and Diagram	5
Part C	PRACTICAL WORK	30 Marks
	Unit-1 : Fundamentals of Maps	10
	Unit-2 : Topographic and Weather Maps	15
	Practical Record Book and Viva	5

### PART A: FUNDAMENTALS OF PHYSICAL GEOGRAPHY

(89 Periods)

#### Unit 1 : Geography as a Discipline

(06 Periods)

- Geography as an integrating discipline, as a science of spatial attributes.
- Branches of Geography; Physical Geography and Human Geography.
- Scope and Career Options (Non-evaluative)

#### Unit 2 : The Earth

(11 Periods)

- Origin and evolution of the earth; Interior of the earth;
- Wegener's continental drift theory and plate tectonics;
- Earthquakes and volcanoes: causes, types and effects.

### Unit 3 : Landforms

(20 Periods)

- Rocks : major types of rocks and their characteristics.
- Geomorphic processes—weathering, mass wasting, erosion and deposition, soil-formation.
- Landforms and their evolution. Brief erosional and depositional features.

### Unit 4 : Climate

(30 Periods)

- Atmosphere—composition and structure; elements of weather and climate.
- Insolation—angle of incidence and distribution; heat budget of the earth—heating and cooling of atmosphere (conduction, convection, terrestrial radiation and advection); temperature—factors controlling temperature, distribution of temperature—horizontal and vertical, inversion of temperature.
- Pressure—pressure belts; winds—planetary, seasonal and local; air masses and fronts; tropical and extratropical cyclones.
- Precipitation—evaporation; condensation—dew, frost, fog, mist and cloud; rainfall—types and world distribution.
- Climate and Global Concerns.

### Unit 5 : Water (Oceans)

(10 Periods)

- Basics of Oceanography
- Oceans—distribution of temperature and salinity.
- Movements of ocean water—waves, tides and currents; submarine reliefs.
- Ocean resources and pollution.

### Unit 6 : Life on the Earth

(07 Periods)

- Biosphere—importance of plants and other organisms; biodiversity and conservation; ecosystem and ecological balance.

Map Work on identification of features based on 1 to 6 units on the outline/Physical/Political map of the world.

(05 Periods)

## PART B: INDIA—PHYSICAL ENVIRONMENT

(78 Periods)

### Unit 7 : Introduction

(04 Periods)

- Location, space relations, India's place in the world.

### Unit 8 : Physiography

(28 Periods)

- Structure and Relief; Physiographic Divisions.
- Drainage systems : Concept of river basins, watershed; the Himalayan and the Peninsular rivers.

### Unit 9 : Climate, Vegetation and Soils

(28 Periods)

- Weather and climate—spatial and temporal distribution of temperature, pressure winds and rainfall, Indian monsoon : mechanism, onset and withdrawal, variability of rainfalls—spatial and temporal, use of weather charts.
- Natural vegetation—forest types and distribution; wildlife; conservation; biosphere reserves.
- Soils—major types (ICAR's classification) and their distribution, soil degradation and conservation.

### Unit 10 : Hazards and Disasters : Causes, Consequences and Management

(14 Periods)

- Floods, Cloud bursts
- Droughts: types and impact
- Earthquakes and Tsunami



- Cyclones: features and impact
- Landslides

**Map Work of features based on above units for locating and labelling on the Outline/ Political/ Physical map of India.** (04 Periods)

## **PART C: PRACTICAL WORK** (50 Periods)

### **Unit 1 : Fundamentals of Maps** (20 Periods)

- Geo spatial data, Concept of Geographical data matrix; Point, line, area data.
- **Maps**—types; scales—types; construction of simple linear scale, measuring distance, finding direction and use of symbols.
- **Map projection**—Latitude, longitude and time, typology, construction and properties of projection: Conical with one standard parallel and Mercator's projection. (Only two projections)

### **Unit 2 : Topographic and Weather Maps** (30 Periods)

- Study of topographic maps (1 : 50,000 or 1 : 25,000 Survey of India maps); contour cross section and identification of landforms—slopes, hills, valleys, waterfalls, cliffs; distribution of settlements.
- Aerial Photographs : Types & Geometry—vertical aerial photographs; difference between maps and aerial photographs; photo scale determination. Identification of physical and cultural features.
- Satellite imageries, stages in remote sensing data—acquisition, platform and sensors and data products (photographic and digital).
- Use of weather instruments: thermometer, wet and dry-bulb thermometer, barometer, wind vane, rain gauge.

### **Practical Record Book and Viva Voce**

Viva to be based on Practical Unit I and II only.