

Class XI

One Theory Paper	3 Hours	70 Marks
Part A. Fundamentals of Physical Geography		35 (Marks)
Unit-1: Geography as a discipline		3
Unit-2: The Earth		5
Unit-3: Landforms		8
Unit-4: Climate		10
Unit-5: Water (Oceans)		4
Unit-6: Life on the Earth		3
Unit-7: Map work		2
Part B. India- Physical Environment		35 (Marks)
Unit-8: Introduction		3
Unit-9: Physiography		10
Unit-10: Climate, vegetation and soil		10
Unit-11: Natural hazards and Disasters		9
Unit-12: Map Work		3
Part C. Practical Work	3 Hours	30 Marks
Unit-1: Fundamentals of Maps		10
Unit-2: Topographic and Weather Maps		15
Unit-3 : Practical Record Book & Viva		5

Unit-1: Geography as a Discipline **(Periods 3)**

- Geography as an integrating discipline, as a science of spatial attributes;
- Branches of geography; importance of physical geography.

Unit-2: The Earth **(Periods 10)**

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

Unit-3: Landforms **(Periods 18)**

- Rocks: major types of rocks and their characteristics;
- Landforms and their evolution
- Geomorphic processes: weathering, mass wasting, erosion and deposition; soil-formation

Unit 4: Climate **(Periods 30)**

- 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.
- World climates-classification (Koeppen and Thornthwaite), greenhouse effect, global warming and climatic changes.

Unit 5: Water (Oceans) **(Periods 8)**

- Hydrological Cycle.
- Oceans - distribution of temperature and salinity; movements of ocean water-waves, tides and currents; submarine reliefs.

Unit 6: Life on the Earth **(Periods 6)**

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

Unit 7: Map work on identification of features based on the above units on the outline political map of the world.

Part B. India - Physical Environment **65 Periods**

Unit 8: Introduction **(Periods 3)**

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

Unit 9: Physiography **(Periods 23)**

- Structure and Relief;
- Drainage systems: concept of watershed; the Himalayan and the Peninsular;
- Physiographic divisions.

Unit 10: Climate, Vegetation and Soil **(23 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; Climatic types (Koeppen)

- Natural vegetation-forest types and distribution; wild life; conservation; biosphere reserves;
- Soils - major types (ICAR's classification) and their distribution, soil degradation and conservation.

Unit 11: Natural Hazards and Disasters: Causes, Consequences and Management (One case study to be introduced for each topic)
(Periods 16)

- Floods, Clouds bursts and droughts
- Earthquakes and Tsunami
- Cyclones
- Landslides

Unit 12: Map Work of features based on above units for locating and labelling on the Outline Political map of India.

C. Practical Work (40 Periods)

Unit 1: Fundamentals of Maps (12 Periods)

- Maps -types; scales-types; construction of simple linear scale, measuring distance; finding direction and use of symbols.
- Latitude, longitude and time.
- Map projection- typology, construction and properties of projection : Conical with one standard parallel and Mercator's projection.

Unit 2: Topographic and Weather Maps (28 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, waterfall, cliffs; distribution of settlements.
- Aerial Photographs: Types & Geometry-vertical aerial photographs; difference between maps & aerial photographs; photo scale determination.
- Satellite imageries, stages in remote sensing data-acquisition, platform & sensors and data products, (photographic & digital).
- Identification of physical & cultural features from aerial photographs & satellite imageries.
- Use of weather instruments: thermometer, wet and dry-bulb thermometer, barometer, wind vane, raingauge.
- Use of weather charts: describing pressure, wind and rainfall distribution.

Unit 3: Practical Record Book and Vivavoce'.