

GEOGRAPHY

XI-XII (2021-22)

(Code No. 029)

Geography is introduced as an elective subject at the senior secondary stage. After ten years of general education, students branch out at the beginning of this stage and are exposed to the rigors of the discipline for the first time. Being an entry point for the higher education, students choose Geography for pursuing their academic interest and, therefore, need a broader and deeper understanding of the subject. For others, geographical knowledge is useful in daily lives because it is a valuable medium for the education of young people. Its contribution lies in the content, cognitive processes, skills and values that Geography promotes and thus helps the students explore, understand and evaluate the environmental and social dimensions of the world in a better manner.

Since Geography explores the relationship between people and their environment, it includes studies of physical and human environments and their interactions at different scales-local, state/region, nation and the world. The fundamental principles responsible for the varieties in the distributional pattern of physical and human features and phenomena over the earth's surface need to be understood properly. Application of these principles would be taken up through selected case studies from the world and India. Thus, the physical and human environment of India and study of some issues from a geographical point of view will be covered in greater detail. Students will be exposed to different methods used in geographical investigations.

Objectives:

The course in Geography will help learners to:

- ▢ Familiarize with key concepts, terminology and core principles of Geography.
- ▢ Describe locations and correlate with Geographical Perspectives.
- ▢ List/describe what students might see, hear, and smell at a place.
- ▢ List/describe ways a place is linked with other places.
- ▢ Compare conditions and connections in one place to another.
- ▢ Analyze/describe how conditions in one place can affect nearby places.
- ▢ Identify regions as places that are similar or connected.
- ▢ Describe and interpret the spatial pattern features on a thematic map.
- ▢ Search for, recognize and understand the processes and patterns of the spatial arrangement of the natural features as well as human aspects and phenomena on the earth's surface.
- ▢ Understand and analyze the inter-relationship between physical and human environments and utilize such knowledge in reflecting on issues related to community.
- ▢ Apply geographical knowledge and methods of inquiry to emerging situations or problems at different levels-local, regional, national and global.

- Develop geographical skills, relating to collection, processing and analysis of spatial data/ information and preparation of report including maps and graphs and use of computers where ever possible; and to be sensitive to issues.
- The child will develop the competency to analyze, evaluate, interpret and apply the acquired knowledge to determine the environmental issues effectively.

COURSE STRUCTURE CLASS XI (2021-22)

One Theory Paper

**70Marks
3Hours**

Part	Units	No. of Periods	Marks
A	Fundamentals of Physical Geography	89	35 Marks
	Unit-1: Geography as a discipline	06	30
	Unit-2: The Earth	11	
	Unit-3: Landforms	20	
	Unit-4: Climate	30	
	Unit-5: Water (Oceans)	10	
	Unit-6: Life on the Earth	07	
	Map and diagram	05	5
B	India-Physical Environment	78	35 Marks
	Unit-7: Introduction	04	30
	Unit-8: Physiography	28	
	Unit-9: Climate, vegetation and soil	28	
	Unit-10: Natural hazards and disasters	14	
	Map and Diagram	04	5
	Total	167	70 Marks
C	Practical Work in Geography Part I	50	30 Marks
	Unit-1: Fundamentals of Maps	20	10 Marks
	Unit-2: Topographic and Weather Maps	30	15 Marks
	Practical Record Book and Viva		5 Marks

COURSE CONTENT

Part A:	Fundamentals of Physical Geography	89 Periods
Unit 1:	Geography as a Discipline <ul style="list-style-type: none"> ▢ 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) 	06 Periods
Unit 2:	The Earth 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	11 Periods
Unit 3:	Landforms <ul style="list-style-type: none"> ▢ 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 	20 Periods
Unit 4:	Climate <ul style="list-style-type: none"> ▢ 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 extra tropical cyclones 	30 Periods

▢

	<ul style="list-style-type: none"> □ Precipitation-evaporation; condensation-dew, frost, fog, mist and cloud; rainfall-types and world distribution □ Climate and Global Concerns 	
Unit 5:	Water (Oceans) <ul style="list-style-type: none"> □ Basics of Oceanography □ Oceans - distribution of temperature and salinity □ Movements of ocean water-waves, tides and currents; submarine reliefs □ Ocean resources and pollution 	10 Periods
Unit 6:	Life on the Earth <ul style="list-style-type: none"> □ Biosphere - importance of plants and other organisms; biodiversity and conservation; ecosystem and ecological balance 	07 Periods
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 <ul style="list-style-type: none"> □ Location, space relations, India's place in the world 	04 Periods
Unit 8:	Physiography <ul style="list-style-type: none"> □ Structure and Relief; Physiographic Divisions □ Drainage systems: Concept of river basins, watershed; the Himalayan and the Peninsular rivers 	28 Periods
Unit 9:	Climate, Vegetation and Soil <ul style="list-style-type: none"> □ 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; wild life; conservation; biosphere reserves □ Soils - major types (ICAR's classification) and their distribution, soil degradation and conservation 	28 Periods
Unit 10:	Hazards and Disasters: Causes, Consequences and Management <ul style="list-style-type: none"> □ Floods, Cloudbursts 	14 Periods

	<ul style="list-style-type: none"> ▫ Droughts: types and impact ▫ Earthquakes and Tsunami ▫ Cyclones: features and impact ▫ Landslides 	
Map Work of features based on above units for locating and labeling on the outline Political/Physical map of India		04 Periods
Part C:	Practical Work in Geography Part I	50 Periods
Unit 1:	Fundamentals of Maps <ul style="list-style-type: none"> ▫ 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) 	20 Periods
Unit 2:	Topographic and Weather Maps <ul style="list-style-type: none"> ▫ 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 and 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 	30 Periods
	Practical Record Book and Viva Voce Viva to be based on Practical Unit I and II only.	

COURSE STRUCTURE
Class XII (2021-22)

One Theory Paper

3Hours
70 Marks

Part	Units	No. of Periods	Marks
A	Fundamentals of Human Geography	90	35 Marks
	Unit 1: Human Geography	05	30
	Unit 2: People	18	
	Unit 3: Human Activities	28	
	Unit 4: Transport, Communication and Trade	24	
	Unit 5: Human settlements	10	
	Map Work	05	5
B	India: People and Economy	90	35 Marks
	Unit 6: People	15	30
	Unit 7: Human Settlements	10	
	Unit 8: Resources and Development	30	
	Unit 9: Transport, Communication and International Trade	15	
	Unit 10: Geographical Perspective on selected issues and problems	15	
	Map Work	05	5
	Total	180	70 Marks
C	Practical Work in Geography Part II	40	30 Marks
	Unit 1: Processing of Data and Thematic Mapping	25	15
	Unit 2: Field study or Spatial Information Technology	15	10
	Practical Record Book and Viva Voce		5

COURSE CONTENT

Part A:	Fundamentals of Human Geography	90 Periods
Unit 1:	Human Geography: Nature and Scope	05 Periods
Unit 2:	People □ Population-distribution, density and growth	18 Periods

	<ul style="list-style-type: none"> ▢ Population change-spatial patterns and structure; determinants of population change ▢ Population Composition - age-sex ratio; rural-urban composition ▢ Human development - concept; selected indicators, international comparisons 	
Unit 3:	Human Activities <ul style="list-style-type: none"> ▢ Primary activities - concept and changing trends; gathering, pastoral, mining, subsistence agriculture, modern agriculture; people engaged in agricultural and allied activities - some examples from selected countries ▢ Secondary activities-concept; manufacturing: types - household, small scale, large scale; agro based and mineral based industries; people engaged in secondary activities - some examples from selected countries ▢ Tertiary activities-concept; trade, transport and tourism; services; people engaged in tertiary activities - some examples from selected countries ▢ Quaternary activities-concept; people engaged in quaternary activities - case study from selected countries 	28 Periods
Unit 4:	Transport, Communication and Trade <ul style="list-style-type: none"> ▢ Land transport - roads, railways; trans-continental railways ▢ Water transport- inland waterways; major ocean routes ▢ Air transport- Intercontinental air routes ▢ Oil and gas pipelines ▢ Satellite communication and cyber space- importance and usage for geographical information; use of GPS ▢ International trade- bases and changing patterns; ports as gateways of international trade; role of WTO in international trade 	24 Periods
Unit 5:	Human Settlements <ul style="list-style-type: none"> ▢ Settlement types - rural and urban; morphology of cities (case study); distribution of mega cities; problems of human settlements in developing countries 	10 Periods
Map Work on identification of features based on 1-5 units on the outline Physical/Political map of World.		05 Periods

Part B:	India: People and Economy	90 Periods
Unit 6:	People <ul style="list-style-type: none"> ▢ Population: distribution, density and growth; composition of population - linguistic, religious; sex, rural-urban and occupational-regional variations in growth of population ▢ Migration: international, national-causes and consequences ▢ Human development: selected indicators and regional patterns ▢ Population, environment and development 	15 Periods
Unit 7:	Human Settlements <ul style="list-style-type: none"> ▢ Rural settlements - types and distribution ▢ Urban settlements - types, distribution and functional classification 	10 Periods
Unit 8:	Resources and Development <ul style="list-style-type: none"> ▢ Land resources- general land use; agricultural land use; geographical conditions and distribution of major crops (Wheat, Rice, Tea, Coffee, Cotton, Jute, Sugarcane and Rubber); agricultural development and problems ▢ Water resources-availability and utilization-irrigation, domestic, industrial and other uses; scarcity of water and conservation methods-rain water harvesting and watershed management ▢ Mineral and energy resources- distribution of metallic (Iron ore, Copper, Bauxite, Manganese); non-metallic (Mica, Salt) minerals; conventional (Coal, Petroleum, Natural gas and Hydroelectricity) and non-conventional energy sources (solar, wind, biogas) and conservation ▢ Industries - types, factors of industrial location; distribution and changing pattern of selected industries-iron and steel, cotton textiles, sugar, petrochemicals, and knowledge based industries; impact of liberalization, privatization and globalization on industrial location; industrial clusters ▢ Planning in India- target group area planning (case study); idea of sustainable development (case study) 	30 Periods
Unit 9:	Transport, Communication and International Trade <ul style="list-style-type: none"> ▢ Transport and communication-roads, railways, waterways 	15 Periods

	<p>and airways: oil and gas pipelines; Geographical information and communication net works</p> <p>▢ International trade- changing pattern of India's foreign trade; sea ports and their hinterland and airports</p>	
Unit 10:	<p>Geographical Perspective on selected issues and problems</p> <p>▢ Environmental pollution; urban-waste disposal</p> <p>▢ Urbanization, rural-urban migration; problems of slums</p> <p>▢ Land degradation</p>	15 Periods
Map work on locating and labeling of features based on above units on outline map of India.		05 Periods
Part C:	Practical Work in Geography Part II	40 Periods
Unit 1:	<p>Processing of Data and Thematic Mapping</p> <p>▢ Type and Sources of data: Primary, Secondary and other sources</p> <p>▢ Tabulating and processing of data; calculation of averages, measures of central tendency</p> <p>▢ Representation of data- construction of diagrams: bars, circles and flowchart; thematic maps; construction of dot; choropleth and isopleths maps</p> <p>▢ Data analysis and generation of diagrams, graphs and other visual diagrams using computers</p>	25 Periods
Unit 2:	<p>Field Study or Spatial Information Technology</p> <p>▢ Field visit and study: map orientation, observation and preparation of sketch; survey on any one of the local concerns; pollution, ground water changes, land use and land-use changes, poverty, energy issues, soil degradation, impact of floods and drought, catchment area of school, Market survey and Household survey (any one topic of local concern may be taken up for the study; observation and questionnaire survey may be adopted for the data collection; collected data may be tabulated and analyzed with diagrams and maps). Students can be given different topics to get more insight into various problems of society.</p> <p style="text-align: center;">OR</p>	15 Periods

	<p>□ Spatial Information Technology</p> <p>Introduction to GIS; hardware requirements and software modules; data formats; raster and vector data, data input, editing and topology building; data analysis; overlay and buffer.</p>	
--	--	--

Prescribed Books:

1. Fundamentals of Physical Geography, Class XI, Published by NCERT
2. India, Physical Environment, Class XI, Published by NCERT
3. Practical Work in Geography Part I, Class XI, Published by NCERT
4. Fundamentals of Human Geography, Class XII, Published by NCERT
5. India - People and Economy, Class XII, Published by NCERT
6. Practical Work in Geography Part II, Class XII, Published by NCERT

Note: The above textbooks are also available in Hindi medium.

QUESTION PAPER DESIGN GEOGRAPHY THEORY CLASS XI & XII

COMPETENCIES	Total Marks and % 70 Marks
DEMONSTRATE	26 marks- 37%
APPLICATION	26 marks - 37%
FORMULATE	18 marks – 26%
TOTAL	70 marks – 100%

Fundamentals of Human Geography
Class XII - Textbook I (NCERT)

Map Items for identification only on outline political map of the World.

Unit-1	Ch.-1	Nil	
Unit-2	Ch. 2 to 4	1	The largest country in each continent in terms of area
Unit-3	Ch. 5 to 7	1	Areas of subsistence gathering
	Primary Activities	2	Major areas of nomadic herding of the world
		3	Major areas of commercial livestock rearing
		4	Major areas of extensive commercial grain farming
		5	Major areas of mixed farming of the World
	Secondary Activities	1	Ruhr region, Silicon Valley, Appalachian region, Great lakes region
Unit - 4	Ch. 8 to 9	2	Transcontinental Railways: Terminal Stations of transcontinental railways– Trans Siberian, Trans Canadian, Trans-Australian Railways
		3	Major Sea Ports :
			Europe: North Cape, London, Hamburg
			North America: Vancouver, San Francisco, New Orleans
			South America: Rio De Janeiro, Colon, Valparaíso
			Africa: Suez and Cape Town
			Asia: Yokohama, Shanghai, Hong Kong, Aden, Karachi, Kolkata
			Australia: Perth, Sydney, Melbourne
		4.	Inland Waterways: Suez canal, Panama canal, Rhine waterway and St. Lawrence Seaway
		5.	Major Airports:
			Asia: Tokyo, Beijing, Mumbai, Jeddah, Aden
			Africa: Johannesburg & Nairobi
			Europe: Moscow, London, Paris, Berlin and Rome
			North America: Chicago, New Orleans, Mexico City
			South America: Buenos Aires, Santiago
			Australia: Darwin and Wellington
Unit - 5	Ch. 10		Mega cities of the world – Tokyo, Delhi, Shanghai, Mumbai, Sao Paulo

India - People and Economy
Class XII-Textbook II (NCERT)

Map Items for locating and labeling only on the outline political map of India

Units - 6 & 7	Ch. 1 to 4	<ul style="list-style-type: none"> State with highest level of urbanization and lowest level of urbanization One state with highest level of HDI & One lowest level of HDI State with higher level of population density & one state with lowest level of population density (2011) Any city with more than 10 million population – Greater Mumbai, Delhi, Kolkata, Chennai, Bengaluru
Unit - 8	Ch. 5 to 9	<p>Leading producing states of the following crops:</p> <p>(a) Rice (b) Wheat (c) Cotton (d) Jute (e) Sugarcane (f) Tea and (g) Coffee</p> <p>Mines:</p> <ul style="list-style-type: none"> Iron-ore mines: Mayurbhanj, Bailadila, Ratnagiri, Bellary Manganese mines: Balaghat, Shimoga Copper mines: Hazaribagh, Singhbhum, Khetari Bauxite mines: Katni, Bilaspur and Koraput Coal mines: Jharia, Bokaro, Raniganj, Neyveli Oil Refineries: Mathura, Jamnager, Barauni <p>Iron and Steel Plants: Bhadravati, Bhilai, Bokaro, Durgapur, Rourkela and Jamshedpur</p> <p>Cotton Textile: Surat, Varanasi, Murshidabad, Solapur and Coimbatore</p> <p>Software Technology Parks: Gandhinagar, Srinagar, Mohali, Noida, Indore, Hyderabad, Bengaluru and Major Industrial Regions</p>
Unit - 9	Ch. 10 - 11	<p>Transport:</p> <p>(i) Important nodes on north south corridor, East west corridor & golden quadrilateral</p> <p>(ii) Major Sea Ports: Kandla, Mumbai, Marmagao, Kochi, Mangalore, Tuticorin, Chennai, Vishakhapatnam, Paradwip, Haldia</p> <p>(iii) International Air ports: Ahmedabad, Mumbai, Bengaluru, Chennai, Kolkata, Guwahati, Delhi, Amritsar, Thiruvananthapuram & Hyderabad</p>
Unit-10	Ch.12	NIL