

# **GEOGRAPHY**

## **XI-XII (2020-21)**

### **(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(2020-21)**

**OneTheoryPaper**

**70Marks  
3Hours**

<b>Part</b>	<b>Units</b>	<b>No. of Periods</b>	<b>Marks</b>
<b>A</b>	<b>Fundamentals of Physical Geography</b>	<b>87</b>	<b>35 Marks</b>
	Unit-1: Geography as a discipline	06	<b>30</b>
	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	<b>5</b>
<b>B</b>	<b>India-Physical Environment</b>	<b>78</b>	<b>35 Marks</b>
	Unit-7: Introduction	04	<b>30</b>
	Unit-8: Physiography	28	
	Unit-9: Climate, vegetation and soil	28	
	Unit-10: Natural hazards and disasters	14	
	Map and Diagram	04	<b>5</b>
	<b>Total</b>	<b>165</b>	<b>70 Marks</b>
<b>C</b>	<b>Practical Work in Geography Part I</b>	<b>50</b>	<b>30 Marks</b>
	Unit-1: Fundamentals of Maps	20	<b>10 Marks</b>
	Unit-2: Topographic and Weather Maps	30	<b>15 Marks</b>
	Practical Record Book and Viva		<b>5 Marks</b>

## COURSE CONTENT

<b>Part A:</b>	<b>Fundamentals of Physical Geography</b>	<b>87Periods</b>
<b>Unit 1:</b>	<b>Geography as a Discipline</b> <ul style="list-style-type: none"> <li>□ Geography as an integrating discipline, as a science of spatial attributes</li> <li>□ Branches of Geography: Physical Geography and Human Geography</li> <li>□ Scope and Career Options (Non-evaluative)</li> </ul>	<b>06Periods</b>
<b>Unit 2:</b>	<b>The Earth</b> <ul style="list-style-type: none"> <li>□ Origin and evolution of the earth; interior of the earth</li> <li>□ Wegener's continental drift theory and plate tectonics</li> <li>□ Earthquakes and volcanoes: causes, types and effects</li> </ul>	<b>11Periods</b>
<b>Unit 3:</b>	<b>Landforms</b> <ul style="list-style-type: none"> <li>□ Rocks: major types of rocks and their characteristics</li> <li>□ Geomorphic processes: weathering; mass wasting; erosion and deposition; soil-formation</li> <li>□ Landforms and their evolution- Brief erosional and depositional features</li> </ul>	<b>20 Periods</b>
<b>Unit 4:</b>	<b>Climate</b> <ul style="list-style-type: none"> <li>□ Atmosphere- composition and structure; elements of weather and climate</li> <li>□ 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</li> <li>□ Pressure-pressure belts; winds-planetary, seasonal and local; air masses and fronts; tropical and extra tropical cyclones</li> <li>□ Precipitation-evaporation; condensation-dew, frost, fog,</li> </ul>	<b>30 Periods</b>

	<p>mist and cloud; rainfall-types and world distribution</p> <ul style="list-style-type: none"> <li>□ Climate and Global Concerns</li> </ul>	
<b>Unit 5:</b>	<p><b>Water (Oceans)</b></p> <ul style="list-style-type: none"> <li>□ Basics of Oceanography</li> <li>□ Oceans - distribution of temperature and salinity</li> <li>□ Movements of ocean water-waves, tides and currents; submarine reliefs</li> <li>□ Ocean resources and pollution</li> </ul>	<b>10 Periods</b>
<b>Unit 6:</b>	<p><b>Life on the Earth</b></p> <ul style="list-style-type: none"> <li>□ Biosphere - importance of plants and other organisms; biodiversity and conservation; ecosystem and ecological balance</li> </ul>	<b>07 Periods</b>
<b>Map work on identification of features based on 1 to 6 units on the outline Physical/Political map of the world.</b>		<b>05 Periods</b>
<b>Part B:</b>	<b>India-Physical Environment</b>	<b>78 Periods</b>
<b>Unit 7:</b>	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>□ Location, space relations, India's place in the world</li> </ul>	<b>04 Periods</b>
<b>Unit 8:</b>	<p><b>Physiography</b></p> <ul style="list-style-type: none"> <li>□ Structure and Relief; Physiographic Divisions</li> <li>□ Drainage systems: Concept of river basins, watershed; the Himalayan and the Peninsular rivers</li> </ul>	<b>28 Periods</b>
<b>Unit 9:</b>	<p><b>Climate, Vegetation and Soil</b></p> <ul style="list-style-type: none"> <li>□ 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</li> <li>□ Natural vegetation-forest types and distribution; wild life; conservation; biosphere reserves</li> <li>□ Soils - major types (ICAR's classification) and their distribution, soil degradation and conservation</li> </ul>	<b>28 Periods</b>
<b>Unit 10:</b>	<p><b>Hazards and Disasters: Causes, Consequences and Management</b></p> <ul style="list-style-type: none"> <li>□ Floods, Cloudbursts</li> <li>□ Droughts: types and impact</li> </ul>	<b>14 Periods</b>

	<ul style="list-style-type: none"> <li>□ Earthquakes and Tsunami</li> <li>□ Cyclones: features and impact</li> <li>□ Landslides</li> </ul>	
<b>Map Work of features based on above units for locating and labeling on the outline Political/Physical map of India</b>		<b>04 Periods</b>
<b>Part C:</b>	<b>Practical Work in Geography Part I</b>	<b>50 Periods</b>
<b>Unit 1:</b>	<b>Fundamentals of Maps</b> <ul style="list-style-type: none"> <li>□ Geo spatial data, Concept of Geographical data matrix; Point, line, area data</li> <li>□ Maps -types; scales-types; construction of simple linear scale, measuring distance; finding direction and use of symbols</li> <li>□ Map projection- Latitude, longitude and time, typology, construction and properties of projection: Conical with one standard parallel and Mercator's projection. (only two projections)</li> </ul>	<b>20 Periods</b>
<b>Unit 2:</b>	<b>Topographic and Weather Maps</b> <ul style="list-style-type: none"> <li>□ 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</li> <li>□ Aerial Photographs: Types and Geometry-vertical aerial photographs; difference between maps and aerial photographs; photo scale determination. Identification of physical and cultural features</li> <li>□ Satellite imageries, stages in remote sensing data-acquisition, platform and sensors and data products, (photographic and digital)</li> <li>□ Use of weather instruments: thermometer, wet and dry-bulb thermometer, barometer, wind vane, rain gauge</li> </ul>	<b>30 Periods</b>
	<b>Practical Record Book and Viva Voce Viva to be based on Practical Unit I and II only.</b>	

**COURSE STRUCTURE**  
**Class XII (2020-21)**

**One Theory Paper**

**3Hours**  
**70 Marks**

Part	Units	No. of Periods	Marks
<b>A</b>	<b>Fundamentals of Human Geography</b>	<b>90</b>	<b>35 Marks</b>
	Unit 1: Human Geography	05	<b>30</b>
	Unit 2: People	18	
	Unit 3: Human Activities	28	
	Unit 4: Transport, Communication and Trade	24	
	Unit 5: Human settlements	10	
	Map Work	05	<b>5</b>
<b>B</b>	<b>India: People and Economy</b>	<b>90</b>	<b>35 Marks</b>
	Unit 6: People	15	<b>30</b>
	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	<b>5</b>
	<b>Total</b>	<b>180</b>	<b>70 Marks</b>
<b>C</b>	<b>Practical Work in Geography Part II</b>	<b>40</b>	<b>30 Marks</b>
	Unit 1: Processing of Data and Thematic Mapping	25	<b>15</b>
	Unit 2: Field study or Spatial Information Technology	15	<b>10</b>
	Practical Record Book and Viva Voce		<b>5</b>

**COURSE CONTENT**

<b>Part A:</b>	<b>Fundamentals of Physical Geography</b>	<b>90Periods</b>
<b>Unit 1:</b>	<b>Human Geography: Nature and Scope</b>	<b>05Periods</b>
<b>Unit 2:</b>	<b>People</b> <ul style="list-style-type: none"> <li>□ Population-distribution, density and growth</li> <li>□ Population change-spatial patterns and structure; determinants of population change</li> </ul>	<b>18Periods</b>

	<ul style="list-style-type: none"> <li>□ Population Composition - age-sex ratio; rural-urban composition</li> <li>□ Human development - concept; selected indicators, international comparisons</li> </ul>	
<b>Unit 3:</b>	<p><b>Human Activities</b></p> <ul style="list-style-type: none"> <li>□ 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</li> <li>□ 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</li> <li>□ Tertiary activities-concept; trade, transport and tourism; services; people engaged in tertiary activities - some examples from selected countries</li> <li>□ Quaternary activities-concept; people engaged in quaternary activities - case study from selected countries</li> </ul>	<b>28 Periods</b>
<b>Unit 4:</b>	<p><b>Transport, Communication and Trade</b></p> <ul style="list-style-type: none"> <li>□ Land transport - roads, railways; trans-continental railways</li> <li>□ Water transport- inland waterways; major ocean routes</li> <li>□ Air transport- Intercontinental air routes</li> <li>□ Oil and gas pipelines</li> <li>□ Satellite communication and cyber space- importance and usage for geographical information; use of GPS</li> <li>□ International trade- bases and changing patterns; ports as gateways of international trade; role of WTO in international trade</li> </ul>	<b>24 Periods</b>
<b>Unit 5:</b>	<p><b>Human Settlements</b></p> <ul style="list-style-type: none"> <li>□ Settlement types - rural and urban; morphology of cities (case study); distribution of mega cities; problems of human settlements in developing countries</li> </ul>	<b>10 Periods</b>
<b>Map Work on identification of features based on 1-5 units on the outline Physical/Political map of World.</b>		<b>05 Periods</b>
<b>Part B:</b>	<b>India: People and Economy</b>	<b>90 Periods</b>

<b>Unit 6:</b>	<b>People</b> <ul style="list-style-type: none"> <li>□ Population: distribution, density and growth; composition of population - linguistic, religious; sex, rural-urban and occupational-regional variations in growth of population</li> <li>□ Migration: international, national-causes and consequences</li> <li>□ Human development: selected indicators and regional patterns</li> <li>□ Population, environment and development</li> </ul>	<b>15 Periods</b>
<b>Unit 7:</b>	<b>Human Settlements</b> <ul style="list-style-type: none"> <li>□ Rural settlements - types and distribution</li> <li>□ Urban settlements - types, distribution and functional classification</li> </ul>	<b>10 Periods</b>
<b>Unit 8:</b>	<b>Resources and Development</b> <ul style="list-style-type: none"> <li>□ 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</li> <li>□ Water resources-availability and utilization-irrigation, domestic, industrial and other uses; scarcity of water and conservation methods-rain water harvesting and watershed management</li> <li>□ 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</li> <li>□ 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</li> <li>□ Planning in India- target group area planning (case study); idea of sustainable development (case study)</li> </ul>	<b>30 Periods</b>
<b>Unit 9:</b>	<b>Transport, Communication and International Trade</b> <ul style="list-style-type: none"> <li>□ Transport and communication-roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication net works</li> </ul>	<b>15 Periods</b>



	<ul style="list-style-type: none"> <li>□ International trade- changing pattern of India's foreign trade; sea ports and their hinterland and airports</li> </ul>	
<b>Unit 10:</b>	<p><b>Geographical Perspective on selected issues and problems</b></p> <ul style="list-style-type: none"> <li>□ Environmental pollution; urban-waste disposal</li> <li>□ Urbanization, rural-urban migration; problems of slums</li> <li>□ Land degradation</li> </ul>	<b>15 Periods</b>
<b>Map work on locating and labeling of features based on above units on outline map of India.</b>		<b>05 Periods</b>
<b>Part C:</b>	<b>Practical Work in Geography Part II</b>	<b>40 Periods</b>
<b>Unit 1:</b>	<p><b>Processing of Data and Thematic Mapping</b></p> <ul style="list-style-type: none"> <li>□ Type and Sources of data: Primary, Secondary and other sources</li> <li>□ Tabulating and processing of data; calculation of averages, measures of central tendency</li> <li>□ Representation of data- construction of diagrams: bars, circles and flowchart; thematic maps; construction of dot; choropleth and isopleths maps</li> <li>□ Data analysis and generation of diagrams, graphs and other visual diagrams using computers</li> </ul>	<b>25 Periods</b>
<b>Unit 2:</b>	<p><b>Field Study or Spatial Information Technology</b></p> <ul style="list-style-type: none"> <li>□ <b>Field visit and study:</b> 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.</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>□ <b>Spatial Information Technology</b> Introduction to GIS; hardware requirements and software</li> </ul>	<b>15 Periods</b>

	modules; data formats; raster and vector data, data input, editing and topology building; data analysis; overlay and buffer.	
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**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

<b>COMPETENCIES</b>	<b>Total Marks and %</b> <b>70 Marks</b>
<b>DEMONSTRATE</b>	29marks- 41%
<b>APPLICATION</b>	26marks - 37%
<b>FORMULATE</b>	15marks - 22%
<b>TOTAL</b>	70marks - 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
	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, Valparaiso
	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"> <li>• State with highest level of urbanization and lowest level of urbanization</li> <li>• One state with highest level of HDI &amp; One lowest level of HDI</li> <li>• State with higher level of population density &amp; one state with lowest level of population density (2011)</li> <li>• Any city with more than 10 million population – Greater Mumbai, Delhi, Kolkata, Chennai, Bengaluru</li> </ul>
Unit - 8	Ch. 5 to 9	<p>Leading producing states of the following crops: (a) Rice (b) Wheat (c) Cotton (d) Jute (e) Sugarcane (f) Tea and (g) Coffee</p> <p><b>Mines:</b></p> <ul style="list-style-type: none"> <li>• Iron-ore mines: Mayurbhanj, Bailadila, Ratnagiri, Bellary</li> <li>• Manganese mines: Balaghat, Shimoga</li> <li>• Copper mines: Hazaribagh, Singhbhum, Khetari</li> <li>• Bauxite mines: Katni, Bilaspur and Koraput</li> <li>• Coal mines: Jharia, Bokaro, Raniganj, Neyveli</li> <li>• Oil Refineries: Mathura, Jamnager, Barauni</li> </ul> <p><b>Iron and Steel Plants:</b> Bhadravati, Bhilai, Bokaro, Durgapur, Rourkela and Jamshedpur</p> <p><b>Cotton Textile:</b> Surat, Varanasi, Murshidabad, Solapur and Coimbatore</p> <p><b>Software Technology Parks:</b> Gandhinagar, Shrinagar, Mohali, Noida, Indore, Hyderabad, Bengaluru and Major Industrial Regions</p>
Unit - 9	Ch. 10 - 11	<p>Transport:</p> <ul style="list-style-type: none"> <li>(i) Important nodes on north south corridor, East west corridor &amp; golden quadrilateral</li> <li>(ii) Major Sea Ports: Kandla, Mumbai, Marmagao, Kochi, Mangalore, Tuticorin, Chennai, Vishakhapatnam, Paradwip, Haldia</li> <li>(iii) International Air ports: Ahmedabad, Mumbai, Bengaluru, Chennai, Kolkata, Guwahati, Delhi, Amritsar, Thiruvananthapuram &amp; Hyderabad</li> </ul>
Unit-10	Ch.12	NIL