GEOGRAPHY
XI-XII (2019-20)
(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 bettermanner.

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 coveredingreaterdetail.Studentswillbeexposedtodifferentmethodsusedingeographicalinvestigations.

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 analyse 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.

COURSE STRUCTURE
CLASS XI(2019-20)

OneTheoryPaper **70Marks**
3Hours

Part	Units	No. of Periods	Marks
A	**Fundamentals of Physical Geography**	**87**	**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	**165**	**70 Marks**
C	**Practical Work**	**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	87Periods
Unit 1:	**Geography as a Discipline** • 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)	06Periods
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	11Periods
Unit 3:	**Landforms** • 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** • 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	30 Periods
Unit 5:	**Water (Oceans)** • Basics of Oceanography	10 Periods

	□ 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** □ 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** □ Location, space relations, India's place in the world	**04 Periods**
Unit 8:	**Physiography** □ 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** □ 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** □ Floods, Cloudbursts □ Droughts: types and impact □ Earthquakes and Tsunami □ Cyclones: features and impact □ Landslides	**14 Periods**
Map Work of features based on above units for locating and labelling on the outlinePolitical/Physical map of India		**04 Periods**

Part C:	**Practical Work**	**50 Periods**
Unit 1:	**Fundamentals of Maps** • 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** • 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 (2019-20)

One TheoryPaper **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**	**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 Physical Geography**	**90Periods**
Unit 1:	**Human Geography:** Nature and Scope	**05Periods**
Unit 2:	**People** - Population-distribution, density and growth - Population change-spatial patterns and structure; determinants of population change - Population Composition - age-sex ratio; rural-urban	**18Periods**

	composition ▫ Human development - concept; selected indicators, international comparisons	
Unit 3:	**Human Activities** ▫ 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 ▫ Quatenary activities-concept; people engaged in quatenary activities - case study from selected countries	**28Periods**
Unit 4:	**Transport, Communication and Trade** ▫ 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** ▫ 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 outlinePhysical/Political map of World.		**05 Periods**
Part B:	**India: People and Economy**	**90 Periods**
Unit 6:	**People**	**15 Periods**

	□ 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	
Unit 7:	**Human Settlements** □ Rural settlements - types and distribution □ Urban settlements - types, distribution and functional classification	**10 Periods**
Unit 8:	**Resources and Development** □ 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** □ Transport and communication-roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication net works	**15 Periods**

	□ International trade- changing pattern of India's foreign trade; sea ports and their hinterland and airports	
Unit 10:	**Geographical Perspective on selected issues and problems** □ Environmental pollution; urban-waste disposal □ Urbanization, rural-urban migration; problems of slums □ Land degradation	**15 Periods**
Map work on locating and labelling of features based on above units on outline map of India.		**05 Periods**
Part C:	**Practical Work**	**40 Periods**
Unit 1:	**Processing of Data and Thematic Mapping** □ Type and Sources of data: Primary, Secondary and other sources □ Tabulating and processing of data; calculation of averages, measures of central tendency □ Representation of data- construction of diagrams: bars, circles and flowchart; thematic maps; construction of dot; choropleth and isopleths maps □ Data analysis and generation of diagrams, graphs and other visual diagrams using computers	**25 Periods**
Unit 2:	**Field Study or Spatial Information Technology** □ **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. **OR** □ **Spatial Information Technology** Introduction to GIS; hardware requirements and software modules; data formats; raster and vector data, data	**15 Periods**

	input, editing and topology building; data analysis; overlay and buffer.	

Prescribed Books:

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

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

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 faming
		5	Major areas of mixed farming of the World
		6	Major areas of Mediterraneanagriculture of the World
	Secondary Activities	1	Ruhr region, Silicon Valley, Appalachian region, Great lakesregion
Unit - 4	Ch. 8 to 9	2	Transcontinental Railways: Terminal Stations of transcontinentalrailways– Trans siberian, Trans Canadian, Tran 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, Durban 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, Jedda, Aden Africa: Johannesburg & Nairobi Europe: Moscow, London, Paris, Berlin and Rome North America: Chicago, New Orleans, Mexico City South America: Buenos Aires, Santiago Australia: Drarwin and Wellington
Unit - 5	Ch. 10		Mega cities of the world – Tokyo, Delhi, Shanghai, Mumbai, Saopaulo

India - People and Economy
Class XII-Textbook II (NCERT)
Map Items for locating and labelling only on the outline political map of India

Units - 6 & 7	Ch. 1 to 4	• State with highest level of urbanization and lowest level ofurbanization • One state with highest level of HDI & One lowest level ofHDI • Statewithhigherlevelofpopulation density &onestatewith lowest level of population density • One out migratingstate • One in migratingstate • Any city with more than 10 millionpopulation – Greater Mumbai, Delhi, Kolkata, Chennai, Bengaluru
Unit - 8	Ch. 5 to 9	Leading producing states of the following crops: (a) Rice (b) Wheat (c) Jowar (d) Cotton,(e) Jute (f) Sugarcane (g) Tea and (h) Coffee **Mines:** • 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, BaroniIndustries **Iron and Steel Plants:**Bhadravati, Bhilai, Bokaro, Durgapur, Rourkela and Jameshedpur **Cotton Textile:**Surat, Varanasi, Murshidabad, Solapur and Coimbatore **Software Technology Parks**: Gandhinagar, Shrinagar, Mohali, Noida, Indore, Hyderabad, Bengaluru and Major Industrial Regions
Unit - 9	Ch. 10 - 11	Transport: (i) Important nodes on north south corridor,eastwest corridor & goldenquadrieteral (ii) Major Sea Ports: Kandla, Mumbai, Marmagao, Kochi, Mangalore, Tuticorin, Chennai, Vishakhapatnam, Paradwip,Haldia (iii) International Air ports: Ahmedabad, Mumbai, Bengaluru, Chennai, Kolkata, Guwahati, Delhi, Amritsar, Thiruvananthapuram & Hyderabad
Unit-10	Ch.12	NIL