

**WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION
SYLLABUS FOR CLASSES XI AND XII**

SUBJECT : GEOGRAPHY (GEGR)

Syllabus
for
Higher Secondary Course in Geography
under
West Bengal Council of Higher Secondary Education
(as per NCERT Guidelines for NEP 2020)

Class XI

Effective from
Academic Session 2024-2025

Objectives of H.S. Geography Course

Objective 1: Familiarize with basic concepts and core contents of Geography and examine man environment relationship.

Objective 2: Description and interpretation of spatial pattern of features on thematic maps with location, time and space.

Objective 3: Understanding the physico-cultural relationship with respect to different environmental adaptations.

Objective 4: Apply geographical knowledge and skills of inquiry to emerging situations and problems at different levels, i.e. local, regional, national and international.

Objective 5: Develop geographical skills to collect primary data from field survey and preparation of field based project report either manually or using computer based techniques whichever possible.

Learning Outcomes of H.S. Geography Course

LO1: Understanding the Geosystems: Students will accrue a comprehensive understanding of the basics of man-environment interactions at global, regional, and local scales.

LO2: Synthesizing Environmental and Sustainability issues: Students will be able to synthesize social and environmental issues and grasp the know-hows of sustainable development.

LO3: Acquiring Skills of Geographical Analysis: Students will acquire fundamentals of geospatial skills and geographical instrument handling capabilities to analyze geographical problems.

Detailed Semester-wise Syllabus

Class XI: 1st Semester – I

Course Code: GEGR

Course Type: (Theory)

FULL MARKS: 15

HOURS: 34

SUB-TOPIC: FUNDAMENTALS OF PHYSICAL GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Geography as a discipline: Definition, nature and classification of Geography; Scope and content of Physical Geography	03
Unit 2	I. Origin of Earth: Classical theories (Kant, Jean and Jeffrey); Modern theory (Big Bang theory) II. Interior of the Earth: Sources of information regarding the Earth's interior; Application of Seismology for analyzing Earth's interior; Layering of the earth	09
Unit 3	Geomorphic Processes: Endogenic processes – Definition, concept, and types; Vulcanicity (Definition, concept, causes, and types of vulcanicity; associated landforms; global distribution of volcanoes); Earthquake (Concept and definition of earthquake related aspects; causes, and consequences; measuring instruments and scale; global earthquake prone zones with special reference to India; Seaquake and Tsunami) Exogenic processes – Definition, concept, and types	14
Unit 4	Weather and Climate: Composition and structure of the Atmosphere: gaseous, liquid, and solid components of atmosphere; Layering of atmosphere based on thermal characteristics and elemental distribution; Importance of Ozonosphere; Causes and consequences of Ozone depletion	08

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 12

HOURS: 26

SUB-TOPIC: FUNDAMENTALS OF HUMAN GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Scope and Content of Human Geography: Concept of man-environmental relationship; Fields and sub-fields of Human Geography	04
Unit 2	Economic Geography: Classification of Economic activities – Primary, Secondary, Tertiary, Quaternary, and Quinary sectors with characteristics and examples Primary Activities – Hunting and gathering; Pastoralism; Agriculture (Subsistence, Commercial, Mixed, Market gardening, and Dairy farming); Production-wise distribution of important cash crop of two globally leading countries (except India) – coffee, sugarcane, and cotton; Mining: types and environmental problems	22

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 08

HOURS: 20

SUB-TOPIC: GEOGRAPHY OF INDIA

Unit No.	Unit Content	Hours
Unit 1	India as a country: Geographical location; Size; Administrative setup; Neighbouring countries	02
Unit 2	India – Structure and Physiography: Physiographic divisions of India with special reference to Tectonic provinces (Peninsular; Extra-peninsular; Indo-Gangetic; Coastal plains and Islands)	10
Unit 3	India – Drainage systems: Drainage systems of India with reference to flow directions and perennality (The Himalayan drainage system; The Peninsular drainage system); Usages and sharing of river water	08

Class XI: Semester -II

Course Code: GEGR

Course Type: (Theory)

FULL MARKS: 15

HOURS: 30

SUB-TOPIC: FUNDAMENTALS OF PHYSICAL GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Concept of Isostasy: Concept of Isostatic anomalies; Theories of Airy and Pratt; Isostatic Adjustments; Cymatogeny	04
Unit 2	Geomorphic processes: Endogenic Processes – Folding and faulting (mechanism, structure, and types) Exogenic processes – Weathering (Definition, types, and resultant features); Soil forming process and factors; Soil profile development; Soil erosion; Soil conservation and management	12
Unit 3	Weather and Climate: Climatic Elements - Solar Radiation; Heat balance; Temperature distribution (horizontal and vertical); Controlling factors of temperature distribution; Inversion of temperature Atmosphere Circulation - Controlling factors of atmospheric motion; Tri-cellular model; Planetary winds; Zonal winds (Surface – Walker circulation; Upper Air – Jet stream)	10
Unit 4	Hydrosphere: Modes and Occurrence of water on Earth; Global hydrological cycle ; Concept of run-off; Drainage basin as a hydrological unit	04

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 12

HOURS: 16

SUB-TOPIC: FUNDAMENTALS OF HUMAN GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Secondary Activities – Industry: Classification of Industries; Factors responsible for industrial location; Production-wise distribution pattern of industries (leading two countries worldwide except India) - a) Agro-based: food processing industries b) Sea-based: commercial marine fishing c) Forest-based: paper industries d) Mineral-based: Metallic (Iron and steel); Non-metallic (Petrochemical) e) Manufacturing-based: Automobile	12
Unit 2	Tertiary Activities: Definition, Classification, Case study (Trade; Transport; Service; Communication; Tourism)	02
Unit 3	Quaternary Activities: Nature and characteristics of Information and Communication Technology (ICT) based industries; Research and Development (R&D) based industries	01
Unit 4	Quinary Activities: Roles of specialists; decision-makers; consultants, policy formulators	01

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 8

HOURS: 14

SUB-TOPIC: GEOGRAPHY OF INDIA

Unit No.	Unit Content	Hours
Unit 1	Indian Climate: Controlling factors of Indian climate; Nature of Indian monsoon; Seasonal variability of weather; Monsoon and Indian Economy; Impact of ENSO Phenomena and global warming on Indian climate	06
Unit 2	Forests of India: Types of forests; Ecological and economic significance; Programmes and policies of forest management in India	03
Unit 3	Natural Hazards and Disasters of India: Concept and classification of hazards; Types of disasters; Hazard management approaches (pre-hazard, during occurrence, and post-hazard); Natural disaster management policy; Hazard prone zones of West Bengal	05

CLASS-XI
Course Code: GEGR
Course Type: (Practical)

FULL MARKS: 30

HOURS: 40

Unit No.	Unit Content**	Hours	Marks
Unit 1	Introduction to Maps: Definition; components; types, importance and uses	02	02
Unit 2	Map scale: Concept and types of map scales; Graphical scale (Concept of Linear; Comparative; Diagonal; and Vernier scales; Construction of Linear scale)	09	04
Unit 3	Map Projection: Concept of map projection; Classification; Mathematical construction and properties of following projections – a. Polar Zenithal Stereographic b. Simple Conical with One Standard Parallel c. Mercator's Projection	10	05
Unit 4	Interpretation of Topographical Maps: Study of Open series topographical maps (1:50000 scale) Preferably of a plateau region; Identification of topographical features using cross section drawings. Identification of break of slopes from cross section drawing and preparation of Broad Physiographic Divisions Map. Typical features identification (Drainage; Natural Vegetation; Transport and Communication; Settlement); Establishment of relationship between different Physical and cultural elements using Transect Chart (Schematic method)	12	06
Unit 5	Interpretation of Indian Daily Weather Maps: Daily Weather Maps of January and July months under following Heads - Pressure condition; Wind condition; Sky condition (cloudiness and precipitation)	05	04
Unit 6	Preparation and Presentation of Poster[†]: Poster related to any one prominent hazard/ disaster (Causes, consequences, Preparedness and Management) with respect to West Bengal	02	04(2+2)
Unit 7	Laboratory Notebook* and Viva voce	-	05(3+2)

* The laboratory notebook should contain A3 sized (42 cm × 29.7 cm) white pages in landscape mode.

[†]Poster related to selected topic should be of A1 (59.4 cm × 84.1 cm, approximately). Technique of preparing the hardcopy poster can be manual/ digital/ blended. The poster should carry signatures of teachers responsible for supervising the poster preparation.

**Each topic of laboratory notebook should contain the following sub-heads: statement of the problem, objectives, materials and methods (with data source), calculations, drawings/ representation (if any), analysis and interpretation.

Tutorial + Remedial + Assignments: 6+10+4 = 20 Hours (Semester: I+II)

Syllabus
for
Higher Secondary Course in Geography
under
West Bengal Council of Higher Secondary Education
(as per NCERT Guidelines for NEP 2020)

Class XII

Effective from
Academic Session 2025-2026

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Detailed Semester-wise Syllabus

Class XII: Semester - III

Course Code: GEGR

Course Type: (Theory)

FULL MARKS: 15

HOURS: 34

SUB-TOPIC: FUNDAMENTALS OF PHYSICAL GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Geotectonic: Continental Drift Theory according to Alfred Wegner	06
Unit 2	Geomorphic Process: Exogenic processes - Mass wasting, Glacial landforms, and Karst landforms	09
Unit 3	Climate: Water in the atmosphere (Condensation – formation and types, Precipitation – formation and types)	05
Unit 4	Hydrosphere: Characteristics of ocean floor; Temperature and salinity; Ocean minerals, food, and power; Ocean deposits	09
Unit 5	Biosphere: Nature, concept and types of ecosystem; Concept of trophic levels; Food chain and food web	05

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 10

HOURS: 18

SUB-TOPIC: FUNDAMENTALS OF HUMAN GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Population: Concept of Demography; Distribution and density of population (worldwide); Determinants and measures of population growth - birth rate, death rate, migration	10
Unit 2	Settlement: Classification, types and patterns of settlement; Factors determining the types of rural settlement; Functional classification of urban settlement; Problems of rural and urban settlements	08

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 10

HOURS: 28

SUB-TOPIC: GEOGRAPHY OF INDIA

Unit No.	Unit Content	Hours
Unit 1	Population of India: Distribution, density, growth, and composition of population	03
Unit 2	Water Resources: Water conservation and management; Watershed management and rainwater harvesting; Nature and types of irrigation systems; Sustainable use of water resources	03
Unit 3	Mineral and Energy Resources: Types, distribution and uses – Mineral resource (Iron Ore, Manganese, Bauxite, Copper, Mica); Conventional energy resource (Coal, Petroleum, Natural Gas, Nuclear Energy); Non-conventional energy resource (Solar, Wind, Tidal, Geothermal, Biogas energy, OTEC)	10
Unit 4	Agriculture: Importance of agriculture in Indian economy; Concept of crop calendar; Crop rotation; Crop combination; Cropping intensity; Green, White, and Blue Revolution in India; Production-wise distribution of important cash crops (Jute, Cotton, Sugarcane and Tea)	08
Unit 5	Transport and Communication: Importance of different modes of Transport; Types and importance of personal and mass communication systems	02
Unit 6	Trade and Economy: Concept; Classification; Bases; Importance	02

Class XII: Semester -IV

Course Code: GEGR

Course Type: (Theory)

FULL MARKS: 15

HOURS: 34

SUB-TOPIC: FUNDAMENTALS OF PHYSICAL GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Geotectonic: Sea floor spreading; Plate tectonic and associated landforms	06
Unit 2	Geomorphic Processes: Exogenic processes - Fluvial landforms; Coastal landforms; Aeolian landforms; Combined works of exogenic processes and associated landforms	10
Unit 3	Cycle of erosion: The role of WM Davis; Davis's concept of landform evolution; Concept of rejuvenation	03
Unit 4	Atmosphere: Weather systems and atmospheric disturbances; Climatic classification after Koppen; Concept of climate change	05
Unit 5	Hydrosphere: Movement of ocean currents and associated environmental effects	06
Unit 6	Biosphere: Biodiversity -Definition, types, significance; Factors responsible for biodiversity depletion; Strategies and programs of biodiversity conservation	04

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 10

HOURS: 12

SUB-TOPIC: FUNDAMENTALS OF HUMAN GEOGRAPHY

Unit No.	Unit Content	Hours
Unit 1	Population Geography: Impact of migration on global demographic changes; Malthusian theory of population growth; Concept of optimum, under, and over population; Demographic Transition Model; Need of population control measures and population policy	09
Unit 2	Human Development: Concept; definition; measurement (Human Development Index, Concept of human poverty index); and approaches (Welfare approach; AmartyaSen's Capability approach)	03

Course Code: GEGR
Course Type: (Theory)

FULL MARKS: 10

HOURS: 14

SUB-TOPIC: GEOGRAPHY OF INDIA

Unit No.	Unit Content	Hours
Unit 1	Indian Industries: a. Agro-based – Food processing b. Sea-based – Commercial marine fishing c. Forest-based –Paper industry d. Mineral-based –Metallic (Iron and steel); Non-metallic (Petrochemical) e. Manufacturing-based –Automobile f. Information and communication technology	07
Unit 2	Human Settlement and Development in Indian context: Human settlement types in India; Land resources and agricultural planning; Sustainable development in Indian context	02
Unit 3	Geographical Perspectives on Selected Issues and Problems: a. Water pollution in Ganga Basin – Causes, consequences, and management b. Air pollution in Kolkata and National Capital Region – Causes, consequences, and management c. Arsenic pollution in southern West Bengal – Causes, consequences, and management d. Human-wildlife conflict in Dooars and Sundarbans regions – Causes, consequences, and management e. Land degradation in Jangalmahal– Causes, consequences, and management	05

CLASS-XII
Course Code: GEGR
Course Type: (Practical)

FULL MARKS: 30

HOURS: 40

Unit No.	Unit Content	Hours	Marks
Unit 1	Data Processing Using Statistical Techniques: a. Type and source of data b. Tabulation and processing of data; Construction of data array; Frequency distribution table; Histogram, Frequency polygon; and Ogives c. Measures of central tendency - Mean; Median; Mode d. Measures of dispersion – Absolute measures (range, mean deviation, standard deviation); Relative measure (co-efficient of variation)	10	05
Unit 2	Cartograms and Thematic Mapping: a. Bar graphs – Simple; Multiple; Compound b. Divided proportional circles c. Flow chart d. Ombrothermic diagram e. Thematic maps – Dot and sphere; Isopleths; Choropleth	10	05
Unit 3	Application of Geographical Instruments: a. Angular measurement using Prismatic Compass (forward and backward bearings) b. Pebble diameter measurement using Slide Caliper (major, minor, and intermediate axes) c. Measurement of strike direction and dip amount using Clinometer Compass d. Six's maximum & minimum thermometer	12	05
Unit 4	Remote Sensing and Geographic Information System (GIS): a. Remote sensing - Concept of remote sensing; Definition; Source of energy; Types of sensors; Types of image acquisition platforms; Modern application b. GIS – Introduction to GIS; Hardware and software requirements; Data formats – vector and raster; Concept of data input, editing, analysis, manipulation, and representation	04	05
Unit 5	Preparation and Presentation of Field Report: Report based of structured survey schedule on (any one) – a. Household survey b. Market survey c. Traffic survey Note: Student of school in rural area will visit any type of urban centre or unit/Student of school in urban area will visit a rural area (household survey only)	04	05 (3+2)
Unit 6	Laboratory Notebook* and Viva Voce	-	05 (3+2)

* The laboratory notebook should contain A3 sized white pages (42 cm × 29.7 cm) in landscape mode

Tutorial+ Remedial+ Assignments: 6+10+4= 20 Hours (Semester: I+II)

Guidelines for Preparation of Field Report

Every student needs to participate in fieldwork and prepare a filed report according to the following guidelines:

A. Household Survey:

1. Each student will prepare a report based on primary data collected from household survey with the help of properly formulated and structured survey schedule having open ended, double choice, and multiple choice questions.
2. Student will select either a rural area/ mouza (for school students from urban area) or an urban (at least a Class-VI Town as categorized by Census of India) area/ municipal ward (for school students from rural area) for the study, with primary objective of demographic and socio-economic information.
3. Each student should survey at least five households selected through simple random sampling without replacement method.
4. The report should be hand written in A4 sized white pages in candidate's own words. The word limit should be of 500 words excluding tables, figures, maps, photographs, and appendices.
5. A copy of the field report duly signed by the concerned teacher will be submitted on the date of examination.
6. The field report should contain the following sections – Introduction, Selection of Study Area, Objectives of the Study, Methodology, Results and Discussion/ Major Inferences, Conclusions.

B. Market Survey:

1. Each student will prepare a report based on primary data collected from market survey with the help of properly formulated and structured survey schedule having open ended, double choice, and multiple choice questions.
2. Each student should survey at least five shops selected through simple random sampling without replacement method.
3. The report should be hand written in A4 sized white pages in candidate's own words. The word limit should be of 500 words excluding tables, figures, maps, photographs, and appendices.
4. A copy of the field report duly signed by the concerned teacher will be submitted on the date of examination.
5. The field report should contain the following sections – Introduction, Selection of Study Area, Objectives of the Study, Methodology, Results and Discussion/ Major Inferences, Conclusions.

C. Traffic Survey:

1. Each student will prepare a report based on primary data collected from road traffic survey with the help of properly formulated and structured inventory, specifically having frequency distribution tables.
2. Each student should survey at an important three-point or four-point junction, nearest to the school.
3. The survey should be conducted in two sessions (forenoon and afternoon) of one hour duration.
4. The report should be hand written in A4 sized white pages in candidate's own words. The word limit should be of 500 words excluding tables, figures, maps, photographs, and appendices.
5. A copy of the field report duly signed by the concerned teacher will be submitted on the date of examination.
6. The field report should contain the following sections – Introduction, Selection of Study Area, Objectives of the Study, Methodology, Results and Discussion/ Major Inferences, Conclusions.