

GEOGRAPHY

SENIOR SECONDARY COURSE

CURRICULUM

Introduction

Geography is the study of description of the earth's surface. It studies the relationship between human and their environment and their spatial variations in this relationship. One side it's related to natural phenomenon and other side it's related to human activity and their implications on the environment. It also studies the spatial changes. These changes may be seen at the same place over a period of time. It is known as temporal variation. Certain scientific reasons are the driving force for these phenomena. The whole of the earth may be studied with respect to certain component. The distribution of that component may be explained by general principles. The nature and scope of the study of geography is very diverse and evolving. These components may be varied like earth, water, air, climate, soil, vegetation, environment or life for global study.

Rationale

Geography is introduced as an independent subject at Senior Secondary level. Prior to this, a component of geography is a part of environmental studies till primary level and part of social sciences at secondary level. Being the entry point for higher and professional education, learners choose geography for various purposes. These purposes may broadly be divided as academic interest (i.e. higher studies, research, teaching etc.) and vocational interest (i.e. Cartographer, Regional Planners, GIS & Remote Sensing Specialist, Demographers, Environmentalist, Disaster Management specialist, Sustainable Development planner etc.). Therefore, there is a need for providing a broad understanding about the subject. Apart from this, geography is also very useful for day-to-day life. Its contributions lie in the contents, cognitive processes, skills and values that geography promotes and thus helps the learners explore, understand and evaluate the environmental and social dimensions of the world.

Geography is also known as an integrated science. This is the only discipline which acts as a link between social sciences and physical sciences. The former includes contents from economics, history, political science, sociology, anthropology, commerce etc. whereas the latter includes geology, botany, geo-physics, oceanography, climatology etc.

Keeping in view the fact that NIOS, draws its learners from a widely diversified group-age wise, socio-economically as well as educationally, the course has to be so designed that it is meaningful and relevant to a majority of learners.

Objectives

After completing this course, the learner will be able to:

- explain the terms, key concepts and basic principles of geography;
- explore the processes and patterns of the spatial arrangements of the natural as well as human phenomena;
- explain the complex relationship that exists between physical and human environment;
- apply geographical knowledge and methods of enquiry to emerging issues and problems at different levels - local, regional, national and global;
- develop an understanding of diverse physical resource base, economic activities and regional inequalities in India;
- summarize the concept of unity in diversity in India and its demographic structure;
- recognize the spirit and purpose of geography as a discipline in the modern world;
- analyse contemporary issues and challenges and their impact on society;
- demonstrates various concepts through Poster, Role play, story, debate, etc; and
- interpret the data in spatial perspective with appropriate maps and diagrams

Eligibility conditions

Age: 15 Years

Qualification: 10th pass

Medium of instruction: Hindi, English, Urdu, Bengali, Gujarati and Odia mediums.

Duration of the course: 1 Year

Weightage

Theory: 80 Marks

Practical: 20 Marks

Tutor Marked Assignments (TMA): 20% Marks of theory

COURSE CONTENT

| No. and Title of the Module/Lesson | | Weightage | Study Hrs | Content description | Learning Outcomes |
|------------------------------------|--|-----------|-----------|--|---|
| I. | The study of Geography as a discipline | 2 | 4 | | |
| | 1. Nature and as a subject matter of Geography | | | Definition, nature, scope, relationship with other subjects, approaches in geography, evolution of geography in the world and India, recent trends and job opportunities in geography. | <ul style="list-style-type: none"> ● explain geography integrating discipline, ● identify the development in geography discipline through time and space, ● elaborate the prevailing geographical themes, and ● explain the development of world geography in general and Indian geography in particular. |
| II. | Dynamic and Geomorphic Processes of the Earth | 10 | 22 | | |
| | 2. Endogenic Forces | | | Earth's interior, Endogenic and exogenic forces, continental drift theory, plate tectonic, fold and fault, Volcano and earthquake. | <ul style="list-style-type: none"> ● identify endogenic forces shaping the earth, ● distinguish between slow and sudden movements, ● differentiate |

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| | | | | <p>between vertical and horizontal movements and their resultant features, and</p> <ul style="list-style-type: none"> ● explain the causes of occurrence and spatial distribution of volcanoes and earthquakes. |
| 3. Exogenic Forces and their resultant landforms | | | Mountains, plateaus and plains- types and economic significance, Geomorphic processes- aggradational and degradational. | <ul style="list-style-type: none"> ● identify exogenic forces shaping the earth surface, ● describe weathering and gradation and their effects on landforms, ● differentiate between aggradational and degradational agents, ● classify mountains, plateaus and plains, and ● elaborate the economic significance of major landforms. |
| 4. Running water, moving ice, wind and sea waves | | | Weathering, denudation, erosional and depositional landforms formed by Running water, moving ice, wind and sea waves and their significance. | <ul style="list-style-type: none"> ● describe various erosional and depositional relief features evolved by running waters and moving ice, |

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| | | | | <ul style="list-style-type: none"> ● describe various erosional and depositional relief features evolved by wind and sea waves and ● explain significance of running water, moving ice, wind and sea waves for humans. |
| III. The domain of the water on the earth | 6 | 12 | | |
| 5. Hydrological Cycle and Ocean | | | Hydrological cycle, water budget, ocean relief, temperature and salinity, waves, tides and currents | <ul style="list-style-type: none"> ● explain the importance of oceans, the hydrological cycle and water budget on the earth ● differentiate various relief features ● analyse the vertical and horizontal distribution of temperature and salinity and its determining factors ● describe the three types of ocean movements - waves, tides and ocean currents |
| IV. Dynamics of Atmosphere | 10 | 24 | | |
| 6. Structure and | | | Structure and composition, | <ul style="list-style-type: none"> ● identify the layers |

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| composition; Insolation | | | insolation, distribution of temperature and heat budget | <p>of atmosphere</p> <ul style="list-style-type: none"> ● describe the composition of atmosphere ● explain the factors influencing insolation and its horizontal distribution ● describe the heat budget with the help of diagram |
| 7. Atmospheric pressure and winds | | | Atmospheric pressure, factors affecting atmospheric pressure, pressure belts, planetary and local winds | <ul style="list-style-type: none"> ● define atmospheric pressure ● explain factors affecting atmospheric pressure ● describe atmospheric pressure belts ● distinguish between planetary and local winds |
| 8. Humidity and precipitation | | | Humidity- types and measure; precipitation- types and measure; rainfall- types and global distribution | <ul style="list-style-type: none"> ● distinguish between absolute and relative humidity ● explain evaporation, condensation and precipitation ● describe various forms of precipitation ● explain types of rainfall |

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| 9. Climate and Climate Change | | | Climate, climatic regions, climate change- causes and consequences, Global initiatives- IPCC and Paris Climate Agreement | <ul style="list-style-type: none"> ● describe climatic regions of the world ● describe factors causing climate change ● explain the impact of climate change ● describe global initiatives of Paris Climate Agreement |
| V. Biogeography and Biodiversity | 4 | 8 | | |
| 10. Biosphere, Biomes and Biodiversity | | | Biosphere and biomes, major biomes of the world and their characteristics, biodiversity and its conservation | <ul style="list-style-type: none"> ● classify Biomes of the world. ● locate Biomes on the world map and compare their characteristics. ● identifies causes and loss of biodiversity ● explain various conservation measures and global initiatives. |
| VI. Physical Geography of India | 10 | 20 | | |
| 11. Physical Settings | | | Location and extent, major physiographic divisions and their characteristics, drainage system, unity in diversity | <ul style="list-style-type: none"> ● locate India in terms of neighbouring countries; ● describe major physiographic divisions and their salient features; |

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| | | | <ul style="list-style-type: none"> ● describe the drainage system and ● explain unity in diversity in India. |
| 12.. Climate | | <p>Climates of India, monsoon: mechanism and its significance, El-Nino and La-Nina, Major seasons, distributional patterns of temperature and rainfall, major climatic regions</p> | <ul style="list-style-type: none"> ● describe the factors that influence the climate; ● explain the mechanism of monsoon and its significance in Indian economy; ● becomes familiar with the seasons; and ● describe the distributional patterns of temperature and rainfall. |
| 13. Natural Hazards and Disasters | | <p>Hazards and disaster, types of disaster, major disaster prone areas, impact of disaster, mitigation measures, Sendai framework for disaster risk reduction</p> | <ul style="list-style-type: none"> ● differentiate between hazards and disasters; ● describe types of disasters and disaster prone areas; ● explain the impact of disasters and ● suggest mitigation measures and disaster risk reduction techniques. |

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| VII. Natural resources, Utilisation and Management | 10 | 20 | | |
| 14. Land and Soil Resources | | | Land and soil: significance and distribution, land use pattern, land degradation and its consequences, land resource management, soil conservation, soil health card | <ul style="list-style-type: none"> ● explain the significance and distribution of land and soil resources ● describe the land use and soil utilisation ● identify responsible factors for land degradation and its consequences ● elucidate soil health card for land resource management |
| 15. Forests and Biodiversity | | | Forest resources: significance, types, distribution and uses, major flora and fauna, biodiversity hotspots, conservation methods, community initiatives | <ul style="list-style-type: none"> ● describe the importance and uses of forest resources and their distribution; ● explain the flora and fauna and biodiversity hotspots; ● analyse the methods of forest conservation and ● appreciate community development initiatives with special reference |

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| | | | | to joint forest management strategies. |
| 16. Water Resources | | | Water resources: significance, sources, utilization and distribution; water induced problems; conservation: traditional and modern methods, national water policy | <ul style="list-style-type: none"> ● state different sources of water and its utility; ● explain uneven distribution and water induced problems ● identify the traditional methods of conservation and management of water resource ● elaborate National Water Policy in India |
| VIII. Economic Geography of India | 10 | 20 | | |
| 17. Agriculture and Food Security | | | Agriculture: Significance, major practices, growth, types of crops, production and distribution, agricultural development through green, blue, yellow and white revolution; environmental and socio-economic implications, food security and safety | <ul style="list-style-type: none"> ● analyse spatial and temporal variations in agricultural production since independence; ● describe production of cereal and non-cereal crops; ● identify environmental and socio-economic implications of agriculture |

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| | | | <ul style="list-style-type: none"> development and ● explain the concepts of food security and safety. |
| 18. Mineral and Energy Resources | | Minerals and energy resources: significance and role in national economy, major minerals: occurrence and distribution, conventional and non conventional energy resources and their distribution, energy conservation, National energy policy | <ul style="list-style-type: none"> ● state the significance of mineral and energy resources in the national economy; ● differentiate between conventional and non-conventional energy resources ● describe the spatial distribution of different types of minerals and energy resources ● assess the development of non-conventional energy resources |
| 19. Major Industries and Industrial Complexes | | Industries: Significance and role in national development; types of industries, agro based industries- Sugar and Cotton, Mineral based Industries- Iron and Steel, Footloose industries, Industrial regions and complexes, Government initiatives- Startup India and Skill India | <ul style="list-style-type: none"> ● highlight the role of industries in national development; ● differentiate between agro based and mineral based industries; ● describe spatial distribution of major industries and their production and ● identify the major |

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| | | | | industrial complexes and regions. |
| 20. Foreign Direct Investment (FDI), Transport, Communication and Trade, | | | FDI: Significance, regional pattern and sectors; Transport: road, rail, airways and water ways; Communication, role of ICT, Trade: Import and export, trade imbalance | <ul style="list-style-type: none"> ● explain the role of FDI in the development over the years; ● identify the different modes of transport and their development ● trace out the role of ICT in development of India ● describe the changing patterns of import and export |
| IX. Human resource development in India | 8 | 20 | | |
| 21. Population Growth and Distribution | | | Population: Size, growth and trends, distribution pattern, challenges of growing population, International Conference on Population and Development (ICPD) | <ul style="list-style-type: none"> ● explain the size of Indian population in the world perspective; ● explain the trends in population growth since 1901; ● analyse factors responsible for uneven distribution of population and ● state the issues and challenges of growing population. |

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| 22. Population Composition | | Population composition: Rural-Urban, sex ratio, age, demographic dividend, literacy, religious and linguistic population, SC and ST, Gender equality: adolescents and reproductive health | <ul style="list-style-type: none"> ● explain the rural-urban, Sex ratio, age composition and demographic dividend of Indian population; ● describe the spatial and temporal change in levels of literacy; ● analyse the concentration of scheduled castes, scheduled tribes, religious and linguistic composition of population. ● describe recent population issues related to gender equality and reproductive health |
| 23. Human Development | | Human development: Concept and human development index, regional pattern of Human development, need for improvement in Human development, UNDP initiatives | <ul style="list-style-type: none"> ● define the term human development and human development index; ● elaborate the gender equality and its role in human development; ● describe the regional patterns of human development and ● highlight the need |

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| | | | | for improvement in inclusive human development. |
| X. Contemporary Issues and Challenges | 10 | 20 | | |
| 24. Sustainable Development Goals (SDGs) | | | MDGs and SDGs: concept, significance, SDG Targets, status of SDGs in India | <ul style="list-style-type: none"> ● differentiate between MDGs and SDGs; ● describe the key concepts and significance of SDGs; ● explain sustainable development goals and their specific targets and ● explain impact of SDGs on spatial development in Indian context. |
| 25. Environment, Health and Sanitation | | | Environment, health and sanitation: linkages, issues and challenges, health risk, traditional medicines and health practices; Government initiatives: Namami Gange, Ujjwala Scheme and Swachh Bharat Abhiyan | <ul style="list-style-type: none"> ● identify the linkages between the environment, health and sanitation; ● describe environmental management to minimize the health risk; ● explain the overview of Namami Gange, Ujjwala Scheme and Swachh Bharat |

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| | | | | Abhiyan, and <ul style="list-style-type: none"> elaborate the traditional medicines and health practices. |
| Practical Geography | 20 | 70 | | |
| 1. Maps: Types and Elements; Toposheets | 5 | 20 | Maps: definition, types, elements; construction of scales, Toposheets: marginal information, symbols and interpretation | <ul style="list-style-type: none"> differentiate between general and thematic maps construct linear scales construct linear recognise map symbols used in topographical sheets and interpret the physical and cultural features on toposheets. |
| 2. Geospatial Technologies | 4 | 20 | Geospatial techniques: Concepts of remote sensing, GIS and GPS; image interpretation keys, raster and vector GIS, application of remote sensing, GIS and GPS | <ul style="list-style-type: none"> describe the concept of remote sensing, geographical information system and Global positioning system comprehend elements of image interpretation in areal photo and remotely sensed images |

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| | | | | <ul style="list-style-type: none"> ● describe the raster and vector GIS ● explain the utility of Remote sensing, GIS and GPS |
| 3. Data and Statistical Diagrams | 6 | 30 | Data types, central tendency: mean, median and mode; diagrams: line, bar and pie; Cartographic technique: dot and choropleth; | <ul style="list-style-type: none"> ● explain the types of data and calculate mean, median, mode and percentile ● construct simple line, bar, pie diagrams with suitable data ● represent the statistical data with cartographic techniques- dot and choropleth ● explain the suitability, merits and demerits of diagrams and cartographic techniques. |
| 4. Practical Record and Viva voice | 5 | - | | |
| Total | 100 | 240 | | |

Scheme of studies

This course is essentially for self-study. The course material has been prepared keeping in mind the social, psychological & intellectual conditions of the intended learners. As the course is designed for self-study therefore at the end of each lesson, questions related to the lesson are given, so that learners are able to develop concepts as well as learn to express them well through writing. Other media of learning i.e. Muktvaidya Vani, Swayam (MOOCs platform), Swayamprabha (Free DTH Channels) will provide more

learning assistance to learners.

Learners also have the option of attending contact classes at their AIs, where learners will be able to clarify any subject related doubts in these classes as well as discuss them with their peer group. Learners can also clarify their subject related problems at literacy centre and adult education centre.

Scheme of Evaluation

1. Self-Assessment

Learner can keep doing their evaluation throughout the course. For this purpose a scrutiny/ question paper is provided after every four lessons, which contains questions related to those four lessons. Learners can answer these questions and then evaluate their answers by looking at the correct answers provided at the end. This is the self- evaluation method adopted for this course.

2. External Assessment

After completing the course the learner will appear in the external evaluation. The method for this evaluation is written examination, which will consist of 100 marks. The duration of this exam will be three hours and question paper will comprise questions based on lessons and concepts in them.

Feed back on Lesson 1-25

| Lesson No. | Lesson Name | Was the content | | | | Was the language | | Were the Illustrations | | What you have learnt is | | |
|------------|-------------|-----------------|-----------|-------------|-----------|------------------|---------|------------------------|------------|-------------------------|------------------|-------------|
| | | Easy | Difficult | Interesting | Confusing | Simple | Complex | Useful | Not Useful | Very helpful | Somewhat helpful | Not helpful |
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