

## **COURSE, PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES OF GEOGRAPHY**

### **Programme Outcome:**

**PO1:** This program will provide students the basic concepts of Physical & Human Geography.

**PO2:** It will help in developing analytical and critical thinking based on the themes and issues of geography.

**PO3:** Students will be able to analyse the problems of present physical as well as cultural world and they will try to find out the possible measures to solve those problems.

**PO4:** Students will be able to understand applied and interdisciplinary aspects of geography.

**PO5:** Students will be able to design and conduct research projects in geography.

**PO6:** Students will learn how to use various surveying instruments in the field.

**PO7:** Students will be equipped with various statistical techniques and their uses.

**PO8:** Students will learn how to prepare maps based on toposheets as well as GIS.

**PO9:** Students will be able find out an original research question appropriate for geographic analysis.

**PO10:** As a student of geography, they will be capable to develop their observation power through field experience and to identify the socio-environmental problems of the areas and regions.

**PO11:** Students will prepare themselves for professional careers in geography.

**PO12:** As a spatial science subject, it will train students to get employment in the sectors of geospatial analysis, regional planning and development, tourism, mapping and surveying etc.

**PO13:** Through this course, students will be able to prepare themselves for Post Graduate and Ph.D. programmes in geography.

**PO14:** Students will be able to relate and use geographical knowledge and its applied aspects in their practical life.

### **Programme Specific Outcomes:**

**UG I Year / Certificate course Arts/Science**

**PSO1:** Students will gain knowledge of physical geography. Students will have a general understanding of the geomorphological and geotechnical process and formation. They will be able to correlate the knowledge of physical geography with that of human geography.

**PSO2:** They will be able to Imbibe knowledge, skills and holistic understanding of the earth, atmosphere, oceans and the planet through analysis of landform development, crustal mobility and tectonics, climate change and dynamics; soil formation and classification; hydrological and oceanographic studies etc.

**PSO3:** They will be able to associate landforms with structure and process, establish man-environment relationships, and explore the place and role of geography vis-a-vis other social and earth sciences.

**PSO4:** They will be able to acquire knowledge of human geography and will correlate it with their practical life.

**PSO5:** They will be able to analyse the problems of physical as well as cultural environments of both rural and urban areas. Moreover, they will try to find out the possible measures to solve those problems.

**PSO6:** They will be able to learn various Field Survey Techniques with diverse survey instruments.

**PSO7:** They will be able to learn the application of various modern instruments (GPS) and with these, they will be able to collect primary data.

**PSO8:** They will be able to apply for the post of geomorphologist working independently or serving on multidisciplinary advisory panels, and be in a position to influence public policy to the benefit of society and the earth sciences.

## **Course Title: Physical Geography B .A. / B.Sc. I SEMESTER**

### **Course Outcomes:**

1. The students will be able to understand the origin of universe, earth and solar system.
2. The students will be able to learn about the continents and oceans.
3. The students will be able to learn about plate tectonics and related movements.
4. The students will be able to lean about the origin and development of different landforms on the earth.
5. The students will be able to learn about the earth's climate and factors influencing it.
6. The students will be able to understand formation of Soil, types, profiles and biogeography.
7. The students will be able to learn about ocean systems of the world.

Unit I	<b>Students will learn about:</b> <ul style="list-style-type: none"><li>• Meaning, scope and branches of physical geography,</li></ul>
--------	--

	<ul style="list-style-type: none"> <li>• Origin of universe, solar system and earth.</li> <li>• Geological Time Scale, theories of Laplace, Chamberlin, James Jeans, Jeffreys, and Hoyle &amp; Lyttleton origin of earth.</li> <li>• Interior of the earth, rocks: origin and classification.</li> </ul>
Unit II	<p><b>Students will be able to understand:</b></p> <ul style="list-style-type: none"> <li>• Origin of continents and ocean basins: continental drift and convectional current theories, plate tectonics,</li> <li>• Isostasy, earth movements, endogenetic forces, landforms: mountains, plateaus and plains, gradational processes.</li> <li>• Weathering and erosion, normal cycle of erosion, arid, glacial, and marine and karst topographies.</li> <li>• Vulcanicity and earthquakes.</li> </ul>
Unit III	<p><b>Students will be able to understand about:</b></p> <ul style="list-style-type: none"> <li>• Soil as a basic component of environment, soil profile (soil horizon): characteristics and significance, processes and factors of soil formation.</li> <li>• Biodiversity and biosphere, biotic succession, biomes and their types, zoogeographical regions of the world, and biodiversity conservation.</li> </ul>
Unit IV	<p><b>Students will gain knowledge about:</b></p> <ul style="list-style-type: none"> <li>• Composition and structure of atmosphere, insolation, vertical and horizontal distribution of temperature, pressure and pressure belts, winds: planetary, periodic and local.</li> <li>• Humidity, clouds and precipitation, cyclones and anticyclones.</li> </ul>
Unit V	<p><b>Students will be able to understand:</b></p> <ul style="list-style-type: none"> <li>• Ocean bottom topography,</li> <li>• Ocean deposits,&amp; ocean Salinity,</li> <li>• Ocean temperature,&amp; ocean currents,</li> <li>• Tides and coral reefs.</li> </ul>

**Course Title: Basic Cartographic Techniques and Map Readings B .A. / B.Sc.I SEMESTER**

**Course Outcomes:**

Students will be able to:

1. Learn basics of cartography and map making.
2. Understand and interpret toposheets and weather maps.
3. Draw maps with the help of toposheets.
4. Learn function and use of meteorological instruments.

**CERTIFICATE COURSE IN ARTS/ SCIENCE B .A. / B.Sc. II SEMESTER**

Course Outcomes:

Students will be able to:

1. Understand broad meaning and scope of human geography.

2. Understand man and environment relationship.
3. Learn characteristics of races and their broad distribution.
4. Understand rural settlements and urban settlements.
5. Understand about cultural regions of the world.

<b>Unit – I</b>	They will be able to Understand: <ul style="list-style-type: none"> <li>• Definition and scope of Human Geography;</li> <li>• Human versus physical geography; branches of human geography; development of human geography;</li> <li>• Contributions of German and French geographers.</li> </ul>
<b>Unit - II</b>	They will be able to Understand about: <ul style="list-style-type: none"> <li>• Approaches: determinism, possibilism,</li> <li>• Human ecology and positivism;</li> <li>• Schools: ecology, landscape,</li> <li>• Locational, welfare and humanistic.</li> </ul>
<b>Unit – III</b>	Students will learn about: <ul style="list-style-type: none"> <li>• Elements of environment, physical and human environment;</li> <li>• Constraints and opportunities of the environment, impact of environment on man;</li> <li>• Impact of man on environment; environmental problems.</li> </ul>
<b>Unit – IV</b>	Students will gain knowledge about: <ul style="list-style-type: none"> <li>• Evolution of man: classification of races, characteristics of races and their broad distribution,</li> <li>• Human adaptation to the environment: Eskimo, Bushman, and Masai.</li> <li>• Major tribes of India; their habitat, economy and culture with special reference to Nagas, Bhils, Santhal, Gaddi, Bhotia, and Tharu.</li> </ul>
<b>Unit – V</b>	Students will be able to understand about: <ul style="list-style-type: none"> <li>• Rural settlements: types and pattern, urban settlement: evolution and classification,</li> <li>• Rural houses in India,</li> <li>• Cultural regions of the world.</li> </ul>

Course Title: Surveying Techniques

**Course Outcomes:**

Students will be able to:

1. Understand importance of surveying e.g. Plane Table Survey and Prismatic Compass survey
2. Learn to use different surveying instruments including GPS.

<b>Unit I</b>	Students will gain knowledge about: <ul style="list-style-type: none"> <li>• Fundamentals of Surveying.</li> </ul>
---------------	--

	<ul style="list-style-type: none"> <li>• Objects.</li> <li>• Primary divisions of survey, Classification.</li> </ul>
<b>Unit II</b>	<p>Students will learn about:</p> <ul style="list-style-type: none"> <li>• Plane Table Surveying: Radiation, Intersection, Close Traverse, Open Traverse method.</li> <li>• Resection by two point and three-point problems of Plane Table Surveying.</li> </ul>
<b>Unit III</b>	<p>Students will learn about:</p> <ul style="list-style-type: none"> <li>• Surveying by prismatic compass: close traverse, open traverse.</li> <li>• Correction of bearing of prismatic compass survey.</li> </ul>
<b>Unit IV</b>	<p>Students will learn about:</p> <ul style="list-style-type: none"> <li>• Measurement of height and depth by Indian Pattern Clinometer.</li> </ul>
<b>Unit V</b>	<p>Students will learn about:</p> <p>Use and applications of GPS in surveying.</p>

**B.A /B.Sc. Second Year HUMAN GEOGRAPHY Paper code: (GUGP-201) First Paper**  
**Course Outcomes:**

Students will be able to:

1. Understand broad meaning and scope of human geography.
2. Understand man and environment relationship.
3. Learn Characteristics of races and their broad distribution.,
4. Understand rural settlements and urban settlements.
5. Understand about cultural regions of the world.

<b>Unit – I</b>	<p>They will be able to understand:</p> <ul style="list-style-type: none"> <li>• Definition and scope of human geography;</li> <li>• Human versus physical geography, branches of human geography; development of human geography;</li> <li>• Contributions of German and French Geographers.</li> </ul>
<b>Unit – II</b>	<p>They will be able to Understand about:</p> <ul style="list-style-type: none"> <li>• Approaches: determinism and possibilism.</li> <li>• Human ecology and positivism.</li> <li>• Schools: ecology, and landscape.</li> <li>• Locational, welfare and humanistic approach.</li> </ul>
<b>Unit – III</b>	<p>Students will learn about:</p> <ul style="list-style-type: none"> <li>• Elements of environment, physical and human environment.</li> <li>• Constraints and opportunities of the environment, impact of environment on man,</li> <li>• Impact of man on environment, environmental problems.</li> </ul>

<b>Unit – IV</b>	Students will gain knowledge about: <ul style="list-style-type: none"> <li>• Evolution of man: classification of races, characteristics of races and their broad distribution,</li> <li>• Human adaptation to the environment: Eskimo, Bushman, and Masai.</li> <li>• Major tribes of India; their habitat, economy and culture with special reference to Nagas, Bhils, Santhal, Gaddi, Bhotia, and Tharu.</li> </ul>
<b>Unit – V</b>	Students will be able to understand about: <ul style="list-style-type: none"> <li>• Rural settlements: types and pattern, urban settlement: evolution and classification.</li> <li>• Rural houses in India.</li> <li>• Cultural regions of the world.</li> </ul>

**B.A/B.Sc. Year GEOGRAPHY OF INDIA Paper code: (GUGP-202) Second Paper**

**Course Outcomes:**

Students will be able to:

1. Know the uniqueness of India in the world.
2. Learn about the physical and cultural diversities and interrelationships of India.
3. Understand the agricultural, industrial and trade aspects of India.

<b>Unit – I</b>	Students will learn about:, India- A subcontinent, physical features, geologic structure, drainage system, climate, natural vegetation, soils.
<b>Unit – II</b>	Students will learn about: Population (density, distribution and growth), transport, multipurpose projects, foreign trade, regional development and planning.
<b>Unit – III</b>	Students will learn about: Agriculture, crops (food, plantation and commercial), agriculture production, agriculture regions, irrigation, livestock raising and fishery.
<b>Unit – IV</b>	Students will learn about: Transport: roads and railways, air transport and pipe transport.
<b>Unit-V</b>	Students will learn about: Industries (metallurgical, textile, engineering, chemical, food, leather, forest based), industrial regions, power and minerals resources.

**B.A /B.Sc. Second Year PRACTICAL (Surveying and Cartographic Representation of Geographical Data) Paper code: (GUGP-P-203)**

**Course Outcomes:**

Students will be able to:

1. Understand importance of surveying e.g. Plane Table Survey and Prismatic Compass survey.
2. Learn to use different surveying instruments including GPS.

<b>Unit I</b>	Students will gain knowledge about: <ul style="list-style-type: none"><li>• Fundamentals of Surveying.</li><li>• Objects, primary divisions of survey, classification.</li></ul>
<b>Unit II</b>	Students will learn about: <ul style="list-style-type: none"><li>• Plane Table Surveying: radiation, intersection, close traverse, open traverse method.</li></ul>
<b>Unit III</b>	Students will learn about: <ul style="list-style-type: none"><li>• Surveying by prismatic compass: close traverse, open traverse.</li><li>• Correction of bearing of prismatic compass survey.</li></ul>
<b>Unit IV</b>	Students will learn about: <ul style="list-style-type: none"><li>• Measurement of height and depth by Indian pattern clinometers.</li><li>• Basics of GPS, application of GPS.</li><li>•</li></ul>
<b>Unit V</b>	Students will learn about: <ul style="list-style-type: none"><li>• Cartographic representation of geographical data by (a) dot method, (b) proportional sphere method, and (c) circle method.</li><li>• Representation of economic data: agriculture land use, production and industrial data.</li><li>• Representation of population data: growth, and distribution.</li></ul>

**B.A/B.Sc. Third Year EVOLUTION OF GEOGRAPHICAL THOUGHTS Paper code: (GUGP-301) First Paper****Course Outcomes:**

Students will be able to:

1. Understand the development of geography as a scientific discipline.
2. Learn the basic concepts of geography.
3. Know the impact of expedition, discoveries and exploration on geographical knowledge.
4. Contributions of Indian, Arab, Greek, Roman, and modern geographers.

<b>Unit – I</b>	Students will learn about: Definition and purpose of geography, geography as science, basic concepts
-----------------	---

	of geography, techniques and tools in geography, and different branches of geography.
<b>Unit – II</b>	Students will learn about: Geography in classical times: Greek and Roman geographers, and contribution by Arab geographers.
<b>Unit – III</b>	Students will learn about: Renaissance, eighteenth century geography, development of geographical thought in India: ancient and modern.
<b>Unit – IV</b>	Students will learn about: Formulation of scientific geography, schools of thoughts: German, French, British, American and former Soviet Union. Environmental determinism, possibilism, Neo-determinism and probablism.
<b>Unit – V</b>	Students will learn about: Dualism in geography, dichotomism of scientific and regional geography; unity in geography, concept of regions and regionalization, quantitative geography, recent trends in geography.

**B.A/B.Sc. Third Year ECONOMIC GEOGRAPHY Paper code: (GUGP-302) Second Paper**

**Course Outcomes:**

**Students will be able to:**

1. Understand broad meaning and scope of economic geography.
2. Understand economic landscape.
3. Learn world production of crops, industries, resources, and petroleum etc.
4. Learn theories of industrial location and factors responsible.
5. Understand trade and transportation scenario of the world.

<b>Unit – I</b>	<b>Students will learn about:</b> Meaning, aim and scope of economic geography, resources: meaning, classification, conservation and concepts, economic landscapes.
<b>Unit - II</b>	<b>Students will learn about:</b> Primary production, vegetation & forest economy, soil resources, mineral resources (Iron ore and bauxite), power resources (coal, petroleum and hydro-electricity, resource conservation.
<b>Unit – III</b>	<b>Students will learn about:</b> Agricultural regions (Derwent Whittlesey), principle crops: wheat, paddy, sugarcane and tea,theory of agriculture location (Von Thunen),
<b>Unit – IV</b>	<b>Students will learn about:</b> Major industries: iron & steel, textiles, petro-chemical and sugar; theory of industrial location (Weber) and industrial regions.
<b>Unit – V</b>	<b>Students will learn about:</b> World transportation, major trans-continental railways, sea and air routes, international trade, patterns and trends, major trade blocks: NAFTA, EEC, ASEAN, globalization and developing countries.

**B.A/B.Sc. Third Year PRACTICAL (Statistical, RS & GIS Techniques and Map Projections) Paper**



**code: (GUGP-P-303)**

**Course Outcomes:**

**Students will be able to:**

1. Understand the importance of statistical methods in geographical studies.
2. Learn data collection, tabulation, analysis and prediction.
3. Understand the need of projection and construction methods.
4. Understand the Remote sensing and GIS techniques.
5. Understand the field survey techniques and preparation of tour report.

<b>Unit – I</b>	<b>Students will learn about:</b> Types of data, collection of data, methods of sampling, measures of central tendency; mean, mode, median, measures of dispersion; mean, quartile and standard deviation, correlation.
<b>Unit – II</b>	<b>Students will learn about</b> Definition, Necessity and Classification of map projection, Construction of map projections: Simple conical projection with one and two standard parallels, Bonne's projection.
<b>Unit – III</b>	<b>Students will learn about:</b> Cylindrical projections: equidistant and equal area cylindrical projections, Mercator's Zenithal Projections: Polar zenithal equidistant, Equatorial zenithal equidistant, Polar zenithal equal-area, Equatorial zenithal equal area.
<b>Unit – IV</b>	<b>Students will learn about:</b> Remote sensing: components of remote sensing, remote sensing systems, platform and sensors; elements of image interpretation; Image processing techniques: visual and digital, geometric & supervised and unsupervised.
<b>Unit – V</b>	<b>Students will learn about:</b> Datum and Geo referencing, geographic data types; spatial and non spatial data; principal functions of GIS, applications of GIS.

\*\* Survey Camp denotes 'field survey' which will be carried out by the students of B.A./ B.Sc. 3rd Year. The area of field survey must be selected by the Department and conducted in any geographical region.