BACHELOR OF SCIENCE (B.Sc.)

(THREE YEAR DEGREE COURSE)

SUBJECT

GEOGRAPHY
# B.Sc. (GEOGRAPHY)

## COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Year</th>
<th>Paper Code</th>
<th>Course</th>
<th>Max. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST YEAR</strong></td>
<td>PAPER – 101</td>
<td>Physical Geography</td>
<td>75 Marks</td>
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<tr>
<td></td>
<td>PAPER – 102</td>
<td>Human Geography</td>
<td>75 Marks</td>
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<tr>
<td></td>
<td>PAPER – 103</td>
<td>Practical</td>
<td>50 Marks</td>
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<tr>
<td><strong>SECOND YEAR</strong></td>
<td>PAPER – 201</td>
<td>Economic Geography</td>
<td>75 Marks</td>
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<td></td>
<td>PAPER – 202</td>
<td>Geography of India</td>
<td>75 Marks</td>
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<td></td>
<td>PAPER – 203</td>
<td>Practical</td>
<td>50 Marks</td>
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<tr>
<td><strong>THIRD YEAR</strong></td>
<td>PAPER – 301</td>
<td>Geographical thought</td>
<td>50 Marks</td>
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<td></td>
<td>PAPER – 302</td>
<td>Environmental Studies</td>
<td>50 Marks</td>
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<tr>
<td><strong>OPTIONAL PAPER – 303</strong></td>
<td></td>
<td>Regional studies of any one of the following regions:</td>
<td>50 Marks</td>
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</table>
PAPER 303 (A): South West Asia

PAPER 303 (B): South East Asia

PAPER 303 (C): Far East Asia

PAPER – 304 : Practical 50 Marks
B.Sc. (GEOGRAPHY)
FIRST YEAR DETAILED SYALLBUS
PAPER – 101
Physical Geography

Course Contents :


Part-III  Atmosphere ; Composition and Structure of atmosphere : Insolation, Horizontal and Vertical distribution of temperature, Atmospheric pressure and winds, Airmasses and Fronts, cyclones and anti-cyclones, Humidity, precipitation and rainfall types, Major climate types- Equatorial, Monsoon, Mediterranean, West European and Hot Desert.


Part-V  Biosphere Components of Biosphere, Plants and animals evolution, dispersal and distribution : Biotic succession, Biome types and Zoogeographical regions of the world , Biosphere as a global Eco-System.
Books Recommended:

3. Trewartha, G.T. Elements of Physical Geography.
6. Singh, Savindra : Physical Geography (Eng./Hindi)
7. Lal, D.S. : Climatology (Eng./Hindi)
8. Singh, J. and Singh, K.N. Bhautik Bhoogol (Hindi)
B.Sc. (GEOGRAPHY)
FIRST YEAR DETAILED SYLLABUS

PAPER – 102
Human Geography

Unit-I  Concept and Nature ; Meaning, Scope and Development of Human Geography, Man and Environment relationship-Determinism, Possibilism, Neo-determinism, Probabilism, Basic principles-Principle of Activity or Change, Principle of Terrestrial Unity or whole.

Unit-II  Habitation (Population and Settlement)
Distribution of population and world pattern, global migration - causes and consequences, concept of over population and under population. Human Settlements - Origin, types (Rural-Urban) characteristics, size and distribution. House types and their distribution with special reference to India.

Unit-III  Economy  Evolution of Human Economy ; Sequence of human occupance, Primitive Economics-Food gathering, Hunting, Pastoral herding, Fishing, Lumbering and Primitive agriculture. Later major innovations and their impact.


Unit-V  Population Tribes : Some typical modes of life of world Tribes- Eskimos, Kirghiz, Bushman, Masai, Semang and Pygmies. Habitat, Economy and Society of Indian Tribes-Bhotias, Gaddis, Tharus, Habitat, Economy and Society of Indian Tribes-Bhotias, Gaddis, Tharus, Bhil, Gond, Santhal, Nagas (with reference to their present-day transformation)
Books Recommended

2. Thomas, W.L. (ed.) Man's Role in Changing the Face of the Earth.
3. Peripillou, Human Geography
5. Forde, C.D., Habitat, Economy and Society
7. Kaushik, S.D., Manav Bhoogol (Hindi)
9. Prasad, Gayatri, Sanskritik Bhoogol (Hindi)
10. Singh, J, Manav Bhoogol (Hindi)
11. Bansal, S.C. Manav Bhoogol (Hindi)
12. Jain and Borha, Sankritic Bhoogol.
14. Thakur, B.S., Manav Bhoogol.
15. Jordon, T.G. and Lawntre, The Human Mosaic
16. Hira Lal, Jansankhya Bhoogol
B.Sc. (GEOGRAPHY)
FIRST YEAR DETAILED SYLLABUS

PAPER – 103
Practical

(A) Lab Work

Unit-I The nature and scope of cartography, Scales- Construction of Comparative, Diagonal and Vernier Scales, Enlargement and Reduction of maps. Calculation of area of maps of different shapes by graphical and arithmetical methods.

Unit-II Map Projections: General Principles: Classification, properties and choice of map projections - merits and demerits. Construction of Cylindrical Equal area, Mereator's, Conical with two Standard Parallels, Bonne's, Polyconic, Gnomonic Polar Zenithal and Stereographic Polar Zenithal projections.

Unit-III Methods of showing relief: Hachure's, shading, contours & layertints; representation of different landforms by contours. Drawing of profiles - cross & long profiles, super imposed, composite & projected profiles. Slopes & gradients.

Unit-IV Topographical Maps
Introduction: Expansion and Indexing: Coverage, Scale and Topo Symbols.
Study and Interpretation of One Inch/1:50,000 Survey of India Toposheets - representing Plain, Plateau and Mountain areas under the following heads- Relief, Drainage Characteristics, Land-use, Settlement types and patterns, and means of Transport and communication with special reference to recognition of Land forms based on contours and profiles drawn on them.
DIVISION OF MARKS:

Lab Work-One question from each unit with internal.
Choice (Duration - Three Hours)        40
Viva-Voce & sessional records        10

Books Recommended

5. Singh, L.R. & Singh, R.N. Map work and Practical Geography (Eng./Hindi)
6. Sharma, J.P. Practical Geography (Hindi)
7. Lal Hira : Prayogatmak Bhoogol Ke Adhar (Hindi)
B.Sc. (GEOGRAPHY)  
SECOND YEAR DETAILED SYLLABUS  
PAPER – 201  
Economic Geography  

Unit-I  

Unit-II  
Soil and major soil types, Forest types and their products; Agricultural Land use and Locational theory by Von Thunen; Distribution production and international trade of principal crops-rice, wheat, sugarcane, cotton tea, coffee and rubber, Agricultural regions of the world by Whittlesey.  

Unit-III  
Marine resources and Aquaculture-Major Fishing Areas, their production and trade. Nature of Occurrence, distribution, production and trade of minerals- Iron ore, Manganese, Bauxite, Copper, Mica and Gold (in major producing countries) Power Resources Production and utilization of coal, Petroleum, Hydroelectricity and atomic energy  

Unit-IV  
Unit-V Means and modes of transport-major transcontinental railways, International Air and Sea routes; inland waterways (Panama and Suez Canals); Changing pattern of international Trades, Major Trade organizations and trade blocks-COMECON, EFTA, ASEAN, NAFTA, OPEC-their objectives and trade relations.

Books Recommended

1. Allexander, J.W., Economic Geography
5. Zimmerman, E.W. Introduction to World Resources.
7. Singh, K.N. & Singh, J., Arthik Bhoogol ke Mool tatva (Hindi)
8. Jain, P, Arthik Bhoogol ki Samiksha (Hindi)
B.Sc. (GEOGRAPHY)
SECOND YEAR DETAILED SYLLABUS
PAPER – 202

Geography of India

Unit-I  India in the context of Asia and the world: Structure, Relief and Drainage System; Major Physiographic regions of India; The Indian Monsoon-origin and characteristics, effect of El Nino La Nina, climatic division, Soil types and conservation.

Unit-II  Forest resources-their utilization and conservation; Power resources (water, Coal, Mineral oil and Atomic) and Mineral resources (Iron ore, Bauxite, Mica, Manganese) their reserve, distribution, production, trade and conservation. River Valley Projects; Tehri dam & Narmada Valley.

Unit-III  Indian Economy: Agriculture - main characteristic and problems of Indian agriculture; Irrigation, mechanization and Green Revolution; post revolution scenario-recent trends; Major Agricultural regions. Industries - Locational factors; development and spatial pattern of major industries (Iron and Steel, Textiles, Cement, Sugar, Paper, Oil Refinery and Fertilizers) Major Industrial regions/complexes.

Unit-V  Regional development & disparities after independence ; Major issues and planning of some problem areas-Flood prone areas, Drought prone areas and Tribal areas.
Detailed geographical study of Uttar Pradesh.

Book Recommended

1. Spate, O.H.K. & Learmonth A.T.A. India and Pakistan
4. Mitra Ashok, Levels of Economic Development of India.
7. Verma, R.V. Geography of India (Hindi)
8. Bansal, S.C., Geography of India (Hindi)
9. Gopal Singh, Geography of India
10. Ramamurti, Geography of India Systematic.
11. Tiwari, R.C., Geography of India
B.Sc. (GEOGRAPHY)
SECOND YEAR DETAILED SYALLBUS

PAPER – 203

PRACTICALS

(A) Lab Work


(ii) Graphical Representation of Statistical Data-Histogram, Polygon, Frequency Curve, Scatter Diagram.

Unit-II  Cartographic Representation of Statistical Data

(i) Graphs :Band graph, Hythergraph, Climograph.

(ii) Diagrams : Compound Bar, Wheel, Rectangle, Circle.


Unit-III  Weather Maps  Use of weather instruments and weather symbols  
(Indian) Study and Interpretation of Indian daily Weather maps/ reports especially of January, March, July and October, Weather forecasting.

Unit-IV  Geological Maps  Identification of rock-outcrops, bedding planes, Drawing of cross-section and determination of dip and bed thickness- simple and folded.

(B) Viva-Voce & Sessional Records
Division of Marks

(A) Lab Work:
   One question from each unit with internal choice, Duration three hours - 40

(B) Viva-Voce & Sessional Records - 10

Books Recommended

2. Robinson, A.H., Elements of Cartography.
6. Sing, L.R. & Singh, R.N. Map work and practical Geography (Eng./Hindi)
7. Sharma, J.P. Prayogatmak Bhoogol Ki Rooprekha (Hindi)
8. Hira Lal, Prayogatmak Bhoogol Ke Adhar (Hindi)
9. Singh, J. et. al Bhaumikiya manchitro ki Rooprekha (Hindi)
10. Lal, Hira, Matratmak Bhoogol (Hindi)
B.Sc. (GEOGRAPHY)
THIRD YEAR DETAILED SYLLabus
PAPER – 301
GEOGRAPHICAL THOUGHT

Unit-I The field of geography; its place in the classification of sciences; geography as a selected concepts of geography-distributions; relationships, interactions, area differentiation and spatial organization.

Unit-II Dualisms in geography; systematic & Regional geography; physical & human geography. Systematic geography & its relation with systematic sciences and with regional geography. The myth and reality about dualisms.

Unit-III Geography in ancient period - Contribution of Indian, Greek & Roman geographers Geography in middleage- Arab geographers, Renaissance period in Europe. Renowned travellers and their geographical discoveries.

Unit-IV German school of thought - Kant, Humboldt, Ritter, Richthofen, Ratzel, Hettner. French school of thought - Contribution of Blache & Brunhes.

Unit-V Soviet geographers, American school - Contribution of Davis, Sample, Huntington & carl sauer. British school - Contribution of Mackinder, Herbertson & L.D. Stamp.

Books Recommended


B.Sc. (GEOGRAPHY)
THIRD YEAR DETAILED SYLLABUS

PAPER – 302

ENVIRONMENTAL STUDIES

Unit-I  Geography as a study of Environment, concepts & components of environment, Development of environmental studies, Approaches to environmental studies, concept of ecology and ecosystem. Man-Environment relationship, Agricultural and Industrial practices, science, technology and environment.

Unit-II  The problems and causes of environmental degradation, Deforestation, soil erosion, soil exhaustion, Desertification, Air pollution, water pollution Disposal of solid waste Population pressure.

Unit-III  Environmental management : Environmental education, preservation of ecological balance at local, regional and National level, Major environmental policies and programmes.

Unit-IV  Sample studies - Ganga Action Plan, Tiger project, Tehri dam & Narmada Valley project.

Unit-V  Emerging environmental issues ; population explosion, food security, global warming, bio-diversity and its conservation, sustainable development.

Books Recommended

2. P.S. Negi. Eco-Development and Environmental Geography (Hindi)
4. V.K. Srivastava, Environmental and Ecology (Hindi)
5. Griffith Taylor, Environmental race and migration.
B.Sc. (GEOGRAPHY)
THIRD YEAR DETAILED SYLLABUS

OPTIONAL PAPER – 303 (A)

South West Asia

Unit-I Region as a geographical entity and as a component of global system. Basis of regionlisation/grouping of countries - Geographical, political, historical, cultural, etc.

Unit-II Structure Relief, climate and climatic regions, vegetation. Irrigation, Power and Mineral resources.


Unit-IV Strategic importance of the region, Suez Canal, Geographical background of the modern problems.

Unit-V Detailed regional study of Turkey. Iraq. Israel and Saudi Arabia.

Book Recommended

1. W.B. Fisher : The Middle East
2. Cressey : Cross-Road
3. East and Spate : Changing Map of Asia
4. N.S. Ginnsburg : Pattern of Asia
6. J.Jones : Turkey
8. Vishwanath Tiwari - Asia, Ka Bhugolik Swaroop
9. Mahesh Narain Nigam And B.L. Garg-Pashchimi Asia
B.Sc. (GEOGRAPHY)
THIRD YEAR DETAILED SYALLBUS

OPTIONAL PAPER – 303 (B)

South East Asia

Unit-I Region as a geographical entity and as a component of global system. Basis of regionalisation/ grouping of countries. Geographical, political, historical, cultural etc.

Unit-II Structure, Relief, Climate and climatic regions, vegetation. Irrigation power and Mineral resources.

Unit-III Population - distribution, growth, distribution pattern, migration - Agriculture, industries, Trade and Transport.

Unit-IV Strategic importance of the region, Geographical background of the modern problems.

Univ-V Detailed regional study of Myanmar, Thailand, Malaysia and Indonesia.

Book Recommended

1. Dudely Stamp : Asia
2. Fisher, Charles, A : South East Asia
3. Dobby : South East Asia
4. Dr. Jagdish Singh - Monsoon Asia
5. Dr. V.K. Srivastava - Asia
6. Vishwanath Tiwari Asia Ka Bhugolik Swaroop
7. Dr. M.N. Nigam & B.L. Garg - Mansoon Asia
B.Sc. (GEOGRAPHY)
THIRD YEAR DETAILED SYALLBUS
OPTIONAL PAPER – 303 (C)

Far East Asia

Unit-I Region as a geographical entity and as a component of global system. Basis of regionalisation/grouping of countries geographical, political, historical, cultural, etc.

Unit-II Structure, Relief, climate and climatic regions, vegetation, Irrigation, Power and Mineral resources.


Unit-IV Strategic importance of the region, Geographical background of the modern problems.

Unit-V Detailed regional study of China and Japan.

Book Recommended

1. Dr. M.N. Nigam- Mansoon Ka Asia
2. Vishwanath Tiwari - Asia Ka Bhaugolik Swaroop
3. Trewartha ; G.T. Japan.
B.Sc. (GEOGRAPHY)
THIRD YEAR DETAILED SYLLabus
PAPER – 304

Practical

(A) Field Work

Unit-I Plane table Surveying; Radiation, Inter section & Resection method, two point problem and three Point problem.
Unit-III Use of Sextant; measurement of height-accessible and inaccessible method.

OR
Indian clinometer; Measurement of height-accessible and inaccessible method.

(B) Field Study Report:
Select a village or a town or a ward of a city and prepare a report based on primary and secondary data with the help of maps and diagrams.

(C) Viva-Voce & Sessional Records

Division of Marks:

(A) Field work (One exercise from each unit. Duration four hours) 10+10+5 (25)
(B) Field Study report 15
(C) Viva-Voce & Sessional Records 10
Books Recommended