



BACHELOR OF SCIENCE (B.Sc.)

(THREE YEAR DEGREE COURSE)

SUBJECT

GEOGRAPHY

B.Sc. (GEOGRAPHY)

COURSE STRUCTURE

FIRST YEAR

Max. Marks

PAPER – 101: Physical Geography

75 Marks

PAPER – 102: Human Geography

75 Marks

PAPER – 103 : Practical

50 Marks

SECOND YEAR

PAPER – 201: Economic Geography

75 Marks

PAPER – 202: Geography of India

75 Marks

PAPER – 203 : Practical

50 Marks

THIRD YEAR

PAPER – 301: Geographical thought

50 Marks

PAPER – 302: Environmental Studies

50 Marks

OPTIONAL PAPER – 303 :

50 Marks

Regional studies of any one of the following regions:-

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-I Lithosphere** Nature and Scope of Physical Geography : Geological Time Scale, Origin of the Earth, Interior of the Earth Origin of Continents and Oceans, Isostasy, Earthquakes and Volcanoes, Geosynclines, Mountain Building with special reference to folded mountains, Concept of Plate Tectonics.
- Part-II** Rocks-their origin, classification and characteristics, Earth movements-Folding, Faulting and Wrapping, Weathering and Erosion, Cycle of Erosion by Davis and Penk, Drainage Pattern, Evolution of Land forms by River, Wind, Glacier and Underground water.
- 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-IV Hydrosphere** : Ocean Bottoms, composition of marine water-temperature and salinity, Circulation of Ocean water-Waves, Currents and Tides, Ocean deposits, Corals and atolls, oceans as storehouse of resources for the future.
- Part-V Biosphere** Components of Biosphere, Plants and animals evolution, dispersal and distribution : Biotic succession, Biome types and Zoo-geographical regions of the world , Biosphere as a global Eco-System.

Books Recommended :

1. Strahler, A N and Strahler, A.H. : Modern Physical Geography.
2. Barry, R.G. and Chorley, R.J. Atmosphere, Weather and Climate.
3. Trewartha, G.T. Elements of Physical Geography
4. Pears, N.: Basis Biography.
5. Sharma, R.C. and Hukku, M : Oceanography for Geographers.
6. Singh, Savindra : Physical Geography (Eng./Hindi)
7. Lal, D.S. : Climatology (Eng./Hindi)
8. Singh, J. and Singh, K.N. Bhautik Bhoogol (Hindi)
9. Agarwal, K.M.L.: Bhautik Bhoogol (Hindi)
10. Tiwari, A.K. Jalvau Vijyan Ke mool tatva - Rajasthan Hindi Grantha Academy Jaipur 2000.

B.Sc. (GEOGRAPHY)

FIRST YEAR DETAILED SYALLBUS

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-IV Society and Culture** Evolution of man (Australopithecus, Homo Erectus, Homosapiens. Man's spread over the earth during the Pleistocene) cultural Diffusion, Cultural realms. World Human Races-Classification, Characteristics and Distribution.
- 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

1. Spencer, J.E. and Thomas, W.L. Introducing Cultural Geography.
2. Thomas, W.L. (ed.) Man's Role in Changing the Face of the Earth.
3. Peripillou, Human Geography
4. Smith, D.M. Human Geography-A Welfare Approach
5. Forde, C.D., Habitat, Economy and Society
6. Dicken, S.N. and Pitts. F.R., Introduction to Human Geography.
7. Kaushik, S.D., Manav Bhoogol (Hindi)
8. De Blij, H.J., Human Geography, Culture, Society and Space, John Wiley, New York, 1996
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.
13. Srivastava, V.K. and Rao, B.P. Manav Bhoogol
14. Thakur, B.S., Manav Bhoogol.
15. Jordon, T.G. and Lawntre, The Human Mosaic
16. Hira Lal, Jansankhya Bhoogol
17. Fellman, J.L. Human Geography-Landscapes of Human Activities, Brown and Bench man, Pub. U.S.A. 1997.
18. Michael, Can, New Patterns : Process and change in Human Geography. Nelson, U.K. and Canada, 1996.

B.Sc. (GEOGRAPHY)

FIRST YEAR DETAILED SYLLBUS

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, Mercator'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

1. Monkhouse, F.J. : Maps & Diagrams.
2. Robinson, A.H : Elements of Practical Geography.
3. Singh, R.L. Elements of Practical Geography.
4. Mishra, R.P. and Ramesh, A : Fundamentals of Cartography.
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)
8. Tiwari, R.C.; Tripathi, Sudhakar : Abhinav Prayogic Bhoogol.

B.Sc. (GEOGRAPHY)

SECOND YEAR DETAILED SYALLBUS

PAPER – 201

Economic Geography

- Unit-I Nature, Scope and development of Economic Geography. Major concepts -Economic landscape, Stages of economic development, typology of economic activities (Primary, secondary, tertiary quaternary) Resource-concept and classification.
- 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 Aquarculture-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 Lactational factors of Industries and their relative significance, Webers theory of Industrial location. Types of industries, Location patterns and development trends of Manufacturing industries-Iron and steel, Textiles, Ship Building, Sugar, Paper and Chemicals, Major Industrial regions of U.S.A. U.K. and Japan.

Unit-V Means and modes of transport-major trans continental railways, International Air and Sea routes; inland water ways (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
2. Robinson, A.H. Jones, C.F. and Darkenwarld G.G. Principles of Economic Geography.
3. Boesh, Hans, A Geography of World Economy.
4. Bengston and Reyen, Fundamentals of Economic Geography.
5. Zimmerman, E.W. Introduction to World Resources.
6. Chisholm, M., Modern World Development-A Geographical Perspective.
7. Singh, K.N. & Singh, J., Arthik Bhoogol ke Mool tatva (Hindi)
8. Jain, P, Arthik Bhoogol ki Samiksha (Hindi)
9. Srivastava, V.K. & Rao, B.P. Arthik Bhoogol.
10. Wheeler, J.O. et al ; Economic Geography, John Wiley, New York 1995.
11. Robertson, D (ed.) Globalization and Environment, E.Elgas Co. U.K.,2001.

B.Sc. (GEOGRAPHY)

SECOND YEAR DETAILED SYALLBUS

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-IV Population-growth, distribution and density, demographic and occupational structure, Literacy, Urbanization with special reference to post-Independence period, Population problems. Transport and Trade-Development of Transport Net-work, railway zones, road development and air routes; Foreign trade-salient features, recent trends and trade direction, Major ports.

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
2. Singh R.L. (ed), India-A Regional Geography.
3. Sen Gupta, P., Economic Regions and Regionalization of India.
4. Mitra Ashok, Levels of Economic Development of India.
5. Singh, J., India-A Comprehensive Systematic Geography.
6. Sharma, T.C. & Countino, O., Economic Geography 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

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SECOND YEAR DETAILED SYALLBUS

PAPER – 203

PRACTICALS

(A) Lab Work

Unit-I Statistical Analysis (i) Measures of Central Tendency- Mean, Median, Mode. Measures of Dispersion-Quartile range, Standard Deviation, Variance and Co-efficient of variation. Correlation and Co-efficient of correlation.

(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.

(iii) Distribution Maps : Using Dots, Isopleth and Choropleth method.

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

1. Monkhouse, F.J. Maps & Diagrams.
2. Robinson, A.H., Elements of Cartography.
3. Gregory, S., Statistical Method and the Geographer.
4. Smith, H.T.V. Aerial Photographs and their Applications.
5. Singh, R.L., Elements of Practical Geography.
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)
11. Tiwari, R.C. and Tiwari, Sudha, Abhinav Prayogic Bhoogol.

B.Sc. (GEOGRAPHY)

THIRD YEAR DETAILED SYALLBUS

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, Hunthington & carl sauer. British school - Contribution of Mackinder, Herbertson & L.D. Stamp.

Books Recommended

1. Abler, Ronald ; Adams, John S. Gould Peter : Spatial Organization : The Geographers View of the World, Prentice Hall, N.J. 1971.

2. Ali S.M. : The Geography of Puranas, Peoples Publishing House, Delhi, 1966.
3. Amedeo, Douglas : An introduction to Scientific Reasoning in Geography, John Wiley, U.S.A. 1971.
4. Dikshit, R.D. (ed.) The Art & Science of Geography Integrated Readings, Prentice Hall of India, New Delhi-1994.
5. Hartshorne, R : Perspective on Nature of Geography, Rand McNally & Co. 1959.
6. Husain, M. : Evolution of Geographic Thought, Rawat Pub.: Jaipur. 1984.
7. Johnston, R.J. : Philosophy and Human Geography, Edward Arnold London, 1983.
8. Johnston, R.J. : The Future of Geography, Mehtuen, London, 1988.
9. Minshull R. : The Changing Nature of Geography, Hutchinson University Library, London, 1970.

B.Sc. (GEOGRAPHY)

THIRD YEAR DETAILED SYALLBUS

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

1. Jagadish Singh, Vatavaran Niyojan Aur Samvikas.

2. P.S. Negi. Eco-Development and Environmental Geography (Hindi)
3. G.P. Yadav & Ram Suresh, Paryavaran Adhyayan.
4. V.K. Srivastava, Environmental and Ecology (Hindi)
5. Griffith Taylor, Environmental race and migration.
6. Sharma, H.S. and Chattopadhyay, S.K. Sustainable Developments concepts and issues, concept, New Delhi-2000.
7. Reid, D., Sustainable Development, Earthscan, Pub. London, 1995.

B.Sc. (GEOGRAPHY)

THIRD YEAR DETAILED SYALLBUS

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-III Population distribution, growth, distribution pattern, migration. Agriculture, Industries Transport and Trade.
- 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. Ginsburg : Pattern of Asia
5. W. Willcocks : The Irrigation of Messopotamia.
6. J.Jones : Turkey

7. The Statesmans Year book : 2001-2002
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-III Population- distribution, growth, distribuion pattern, migration, Agriculture, Industries, Trade and Transport.
- 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 SYALLBUS

PAPER – 304

Practical

(A) Field Work

- Unit-I Plane table Surveying ; Radiation, Inter section & Resection method, two point problem and three Point problem.
- Unit-II Surveying by Prismatic Compass, open traverse. Close traverse, Elimination of error. Bowdich Method, Axis Method.
- 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

1. Singh, R.L., Elements of Practical Geography, Kalyani Pub. New Delhi.
2. Khan, Z.A., Text book of practical Geography, Concept, New Delhi-1998.
3. Sharma J.P.-Prayogik Bhugol.