STATE LEVEL UNDERGRADUATE SYLLABI
(with Minor Changes approved by Board of Studies, Geography, (meeting held on 12.07.2011)
M.J.P. Rohilkhand University, Bareilly)
B.A./B.Sc.

GEOGRAPHY

The three year B.A./B.Sc. course in geography shall be spread over three Academic Sessions viz. Part – I, Part – II, Part – III. There will be two theory papers carrying 75 marks each and a Practical of 50 marks in the first two years. In Part – III, there will be three theory papers carrying 50 marks each and a Practical of 50 marks.

The candidates must pass in theory and Practicals separately at least 36 percent marks in each. No private candidate is allowed. Failed candidates shall not be required to under go practical training. They might submit the old Record Book or a new one.

Class-wise Schedule of papers is as follows –

B.A./B.Sc. Part – I

Paper – I Physical Geography	M.M. 75
Paper – II Human Geography	M.M. 75
Practicals	M.M. 50

B.A./B.Sc. Part – II

Paper – I Economic Geography	M.M. 75
Paper – II Geography of India	M.M. 75
Practicals	M.M. 50

B.A./B.Sc. Part – III

Paper – I Geographical thought	M.M. 50
Paper – II Environmental Studies	M.M. 50
Paper – III Regional studies of any one of the following	
(A) South West Asia	
(B) South East Asia	
(C) Far East Asia	
Practicals	M.M. 50

B.A./B.Sc. Part – I
Paper – I: 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, Isostacy, 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 : Isolation, Horizontal and Vertical distribution of temperature, Atmospheric pressure and winds, Air masses 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.

Paper – II: 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**: Sequences 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, 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, Sanskritic 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.

PRACTICALS

(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:** Hachures, 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.A./B.Sc. Part – II
Paper – I: 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 Locational 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, Textile, 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 of 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.

Paper – II: 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, 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 characteristics 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 Gangetic Plain with special reference to Rohilkhand Region.

Books 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

PRACTICALS

(A) Lab Work

Unit - I Statistical Analysis (i) Measures of Central Tendency – Mean, Median, Mode, Measure 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 (India) Study and Interpretation of Indian daily Weather maps/reports especially of January, March, July and October, Weather forecasting.
Geological Maps: Identification of rock-outcomes, bedding planes, Drawing of cross-section and determination of dip and bed thickness- simple and folded.

Unit - IV Aerial Photogrammetry and Remote Sensing
Terminology, meaning and scope of Remote Sensing. Types and characteristics of aerial photographs, Determination of scales, Image characteristics –Tone, Shadow size, Pattern and their idenfication.

(B). Viva-Voce & Sessional Records

DIVISION OF MARKS:

(A). 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 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 Practicals Geography.
6. Singh, 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, Sadha, Abhinav Prayogic Bhoogol.

B.A./B.Sc. Part – III
Paper – I: 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 dualism.

Unit - III Geography in ancient period – Contribution of Indian, Greek & Roman geographers, Geography in middle age – 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 Views 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.: Evaluation 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.
10. Thakur, B.S.: Bhogolik Gyan Ka Vikas.

Paper – II: Environmental Studies

Unit - I Geography as a study of Environment - concepts & components of environment, Development of environment 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 Development-concepts and issues, concept, New Delhi – 2000.
7. Reid, D., Sustainable Development, Earthscan, Pub. London, 1995.
8. Singh, Savinder, Paryavaran Bhoogol/Environmental Geography.

Paper – III:
Regional Studies of any one of the following Regions
(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.

Books 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.
5. W. Willcocks: The Irrigation of Messopotamia.
6. J. Johnes: 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) South East Asia

Unit - I Region as a geographical entity and as a component of global system. Basis of regionalization, 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.

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

Books 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.

(C) Far East Asia

Unit - I Region as a geographical entity and as a component of global system. Basis of regionalization, 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.
Unit - V Detailed regional study of China and Japan.

Books Recommended:
1. Dr. M.N. Nigam – Mansoon Ka Asia.
2. Vishwanath Tiwari: Asia Ka Bhaugolik Swaroop.
3. Trewartha; G.T. Japan.

PRACTICALS

(A) Lab Work

Unit - I Plane table Surveying; Radiation, Inter section & Resection method with three Points problem.
Unit - II Surveying by Prismatic Compass, open traverse, Close traverse, Elimination of error. Bowditch Method.
Unit - III Use of Sextant; measurement of height-accessible and inaccessible method.

OR

Indian clinometers: Measurement of height-accessible and inaccessible method.

(B). Field Study Tour and Report:

Field study tour shall be arranged for about one week duration in an area normally different geographically from the native region. Students will prepare field study report based on primary data and first hand observations of physical, environmental and socio-economic characteristics of the landscape of geographical area/region visited, surveyed and studied. The findings should be well supported by suitable maps and diagrams.

Note: -
1. T.A./D.A. and related expenses of Teachers and Supporting Staff on Tour Duty shall be met by the respective Institutions.
2. Normally for a batch of 20 students, one teacher and an attendant would accompany the tour to guide students.

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, Tour and Report.	15
(C). Viva-Voce & sessional records	10

Books Recommended:

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

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