

**Department of Geography**

**Faculty of Natural Sciences**

**JAMIA MILLIA ISLAMIA NEW DELHI – 110 025**

**(A Central University by an Act of Parliament)**



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**B.A. /B.Sc. (Subsidiary) Geography**

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**Syllabus (w.e.f. 2012-2013)**

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**COURSE STRUCTURE OF B.A./B.SC. (SUBSIDIARY) GEOGRAPHY**

**Semester-I**

**Theory Papers**

<b>Paper</b>	<b>Title</b>	<b>Credits</b>
<b>GEB-101</b>	<b>Geomorphology</b>	<b>4</b>

**Semester-II**

<b>GEB-201</b>	<b>Principles of Ecology</b>	<b>4</b>
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**Semester-III**

<b>GEB-301</b>	<b>Man and Environment</b>	<b>4</b>
<b>GEB-302</b>	<b>World Regional Geography</b>	<b>4</b>

**Semester-IV**

<b>GEB-402</b>	<b>Evolution of Geographical Thought</b>	<b>4</b>
<b>GEB-403</b>	<b>Fundamentals of RS/GIS/GPS</b>	<b>4</b>

## **SYLLABUS**

### **Paper (GEB-101) GEOMORPHOLOGY Credit: 4**

#### **Unit-I: Fundamentals/Basics of Geomorphology**

The nature and scope of Geomorphology; Constitution of earth's interior; Geological Time Scale; Continental Drift, Plate Tectonics.

#### **Unit-II: Geomorphic Structure and Processes**

Forces of earth crust and earth movements; Folds and Faults; Rocks: Formation and Types; Volcanoes and Earthquakes; Weathering: Normal cycle of Erosion by Davis & Penck.

#### **Unit-III :Evolution of Landscape**

Fluvial, Glacial, Aeolian, Karst and Coastal.

#### **Unit-IV :Applied Geomorphology**

Relevance of Geomorphological studies in Environment Management, Settlement and Industries.

#### **Books Recommended:**

1. Dayal, P.,1990. Text-Book of Geomorphology, Shukla Book Depot, Patna.
2. Goble R.E, Peterson. J.F. Trapasso,L.M.(2009) Physical Geography Brooks/ Cole Cengage Learning.
3. Hussain, M., 1976. Arziyat ke Bunyadi Tasawwurat, (Urdu), Translation of Fundamentals of Geology, V. Obrochey, Taraqqi Urdu Board, New Delhi
4. Hussain, M., 2009. Fundamentals of Physical Geography, Rawat Publications, Jaipur.
5. Kale, V. and Gupta, A., 2004. Elements of Geomorphology, Oxford University press, Calcutta.
6. Singh, S. 1976, Bhu-Akriti Vigyan, Tara Publishers, Varanasi
7. Skinner. B.J. and Porter Stephen.C. 2000; John Wiley and Sons, Inc.
8. Strahaler, A.H., 2008:. Modern Physical Geography (4th Edition); Wiley-India
9. Thornbury, W.D., 1991. Principles of Geomorphology, Wiley Eastern Ltd., New Delhi
10. Worcester, P.C., 1969, Text Book of Geomorphology, East West Press, New Delhi.

**Paper-(GEB-201)**

**PRINCIPLES OF ECOLOGY**

**Credit: 4**

**Unit-I: Introduction**

Definition, Scope, Evolution and development; Difference between Ecology and Human Ecology; Environmentalism; Conservation Ethics.

**Unit-II: Human and Environment Interaction**

Human Adaptation and Modification: Environmental Adaptation Types, Aquatic, Desert and Soil adaptations; Resources and Technologies.

**Unit-III: Bio-Geochemical and Nutrient cycles**

Nitrogen Cycle, Carbon Cycle, Phosphorous Cycle, Sulphur Cycle, Aresenic Cycle, Water Cycle, Human Population Size and Growth; carrying Capacity of Earth: Biophysical, Human.

**Unit-IV: Ecosystem**

Ecosystem: Kinds of Ecosystem, Types, physical, Chemical structure and functions; Genetic Energy flow within the Ecosystem, Y- Shaped Model of Energy Flow, Food- Chain and Tropic Levels and Ecological.

**Books Recommended:**

1. Odum, E.P. (1971), Fundamental of Ecology, 3rd ed., Saunders, Philadelphia.
2. Dieter Steiner and Marcus (eds.) (1993) Human Ecology; New York: Routledge,.
3. George A. Theodorson (ed.) (1961) Studies in Human Ecology, New York: Harper & Row
4. Quinn, J.A. (1971) Human Ecology (2nd edition), New York: Hamden Conn..
5. Mills, D.H. (1972), An Introduction to Fresh Water Ecology, Liver and Boyd, Edinburgh
6. Patten, B.C. (1974), The zero state and ecosystem stability, Proc. 1st. Internat. Cong. Ecol., The Hague, Netherlands.
7. Svensson, B.H. and Soderlund, R. (Eds.) (1976), Nitrogen, Phosphorus And Sulphur Global Cycles, Ecol. Bull. (Stockholm).
8. Krebs, C.J. (1972), Ecology, Harper and Row, New York.
9. Odum, E.P. (1968), The strategy of ecosystem development, Science,
10. Boremann, F.H. and Likens, G.E. (1967), Nutrient cycling, Science

**Paper-(GEB-301)**

**MAN AND ENVIRONMENT**

**Credit: 4**

**Unit-I: Man and Environment**

Man-environment relationship and its social relevance; Elements of physical and cultural environment; Approaches: Environmental determinism, possibilism and Modern environmentalism.

**Unit-II: Population and Human Settlements**

World population growth; population distribution and its determinants; Type and patterns of human settlements: Urban and Rural; Trends and Patterns of World urbanization and Migration.

**Unit-III: Human Adaptation to Environment**

Man in eco-system; Ecological adaptation; Biom-Climatic regions of the World; Human adaptation in equatorial, monsoon, hot desert and tundra regions.

**Unit-IV: Environmental Crisis and Management**

Environment as a resource system; Technology and resources; environmental crisis-nature and management of deforestation, flood and droughts, Land degradation/deforestation and their management.

**Books Recommended:**

1. Ahmad, Q.S. (1963) Major Natural Regions, S.Chand Publisher, Delhi.
2. Amit Harichandran .M.A. Chaudhry-2010, Global vision Pub.House, New Delhi 11002.
3. Kaushik, S.D. (1970) Manav Bhoogol, Rastogi & Co., Meerut.
4. Hoyt, J.B. (1973) Man and the earth, Prentice Hall, New Jersey.
5. Husain, Majid (2010) Human Geography, Rawat Publication, Jaipur.
6. Husain, Majid (2010) Manav Bhoogol, Rawat Publication, Jaipur.

**Paper-(GEB-302)**

**WORLD REGIONAL GEOGRAPHY**

**Credit: 4**

**Unit-I: Physical Landscape**

Landforms and Drainage, Climate, Vegetation, Soil, World Natural Regions.

**Unit-II: Economic Resources**

Main Economic Resources, Mineral resources, Iron, Energy; Major Economic Regions- Agriculture and Industrial.

**Unit-III: Human Resources**

Population Distribution, Density, Migration and Growth; Population Composition: Rural- Urban, Economic; Major Demographic Regions.

**Unit-IV: Regional Study**

Detailed Study of any one region with emphasis of on Physical, Economic and Population characteristics; Sub regionalization of the continent.

1. Asia
2. Europe
3. America

**Books Recommended:**

1. Blij, Harm J. De Peter, O. Miller: Geography: Regions and concepts John Wiley New York, 1993.
2. English, Paul Ward and James, A. Miller: World Regional Geography: A Question of Place, John Wiley, New York, 1989.
3. Jackson, Richard H. and Lloyd, E. Hudman: World Regional Geography: Issues for Today, John Wiley, New York, 1991.
4. Don, R. Hoy (ed.): Essentials of Geography and Development, MacMillan, New York, 1980.
5. Kromm, D.E.: World Regional geography, Saunders publishing, New York, 1981.
6. Mankoo, Darshan Singh: A Regional Geography of the world, Kalyani Publishers, Ludhiana.
7. Hussain, M. 2008, World Geography, Rawat Publications, Jaipur.

**Paper-(GEB-402)**

**EVOLUTION OF GEOGRAPHICAL THOUGHT**

**Credit: 4**

**Unit-I**

Geography in classical age: Contributions of Greek and Roman scholars with special references to the works of Herodotus, Eratosthenes, Hecateus, Strabo and Ptolemy.

**Unit-II**

Dark Age in Europe and its impact on the development of Geography. Contributions of Arab Scholars with special reference to the works of Al-Masudi, Al-Biruni, Ibn-e-Batuta and Ibn-e-Khaldun.

**Unit-III**

The revival of scientific geography with special reference to the work of Varenus and Kant. contributions of Humbolt and Ritter. Darwin's impact on geography.

**Unit-IV**

Contributions of Ratzel, Vidal de la blache, Richthofen and HartShrone; The Quantitative Revolution in Geography; Post Quantitative Revolution trends: Welfare, Radical, Post Modernization.etc.)

**Books Recommend**

1. Deckinsonre (1969) The Maker's of Modern Geography Routledge and Kegen Paul, London.
2. Hartshorne (1939) The Nature of Geography. Association of American Geographers Lancaster Pennsylvania.
3. Hartshorne (1959) Perspective on the Nature of Geography Rand McNally and company Chicago.
4. Harvey, D. (1989) The condition of Post Modernity: An Enquiry into the Origins of Cultural Change, Blackwell, Oxford.
5. Hussain, M. (2002) Evolution of Geographic Thought (also in hindi) Rawat Publication's Jaipur.
6. Sing, J. (1988) Bhaugolik Chenta ka karam vikas Gyanodaya Gorakhpur.
7. Peet, R. (1998) Modern Geographical Thought Blackwell, Oxford.

**Paper-(GEB-403)**

**FUNDAMENTALS OF REMOTE SENSING/GIS/GPS**

**Credit: 4**

**Unit –I: Basics of Remote Sensing**

Energy Sources and Radiation Principles; Energy Interaction In Atmosphere and with Earth Surface Features; Remote Sensing Platforms and Sensors.

**Unit-II: Basics of Photogrammetry and Image Interpretation**

Basic Geometric Characteristics of Aerial Photographs; Classification of Aerial Photographs, Ground Coverage of Aerial Photographs; Elements of Image Interpretation.

**Unit-III: Concepts of Geographic Information System**

Scope and Components of GIS; Data Models-Raster and Vector; Spatial Analysis-Overlay, Proximity and Buffer; 3-D GIS, GIS Application in Geographical Studies.

**Unit-IV: Global Positioning System**

Basic Concepts And Segments of GPS Positioning; Sources of Errors In GPS Observation; GPS Applications.

**Books Recommended:**

1. Lillisand, T.M. and M.K. Ralph (2011) Remote Sensing and Image Interpretation, New York, John Wiley & Sons,Inc.
2. Campbell,J.B.(1996) Introduction to Remote Sensing, London, Tylor and Francis, Second Edition.
3. Curran P. (1985) principles of Remote Sensing, London, Longman.
4. Sabins, J.F.F.9 (1997) Remote Sensing: Principles and Interpretation, New York, SanFrancisco, W.H. Freeman and Co.
5. Jenson, JR (2011) Remote Sensing of Environment, New Delhi,McGraw Hill.