

**DEPARTMENT OF GEOGRAPHY
FACULTY OF NATURAL SCIENCES
JAMIA MILLIA ISLAMIA
NEW DELHI - 110 025**

(A Central University by an Act of Parliament)



B.A. Programme Geography

Syllabus (w.e.f. 2015-2017)

COURSE STRUCTURE OF B.A. PROGRAMME

Semester - I

Paper No	Code	Title	Credit
Paper - I	GGB-01	Geomorphology	4

Semester - II

Paper No	Code	Title	Credit
Paper - II	GGB-02	Climatology and Oceanography	4

Semester - III

Paper No	Code	Title	Credit
Paper - III	GGB-03	Man and Environment	4

Semester - IV

Paper No	Code	Title	Credit
Paper - IV	GGB-04	Geography of Resources	4
Practical - I	GGB-07	Cartographic Methods	2
Practical - II	GGB-08	Basic Statistics	2

Semester - V

Paper No	Code	Title	Credit
Paper - V	GGB-05	Fundamentals of Remote Sensing and GIS	4
Practical - III	GGB-09	Surveying	2
Practical - IV	GGB-10	Image Interpretation	2

Semester - VI

Paper No	Code	Title	Credit
Paper - VI	GGB-06	Geography of India	4

GRAND TOTAL

Semester	Core Course			Total Papers	Credits
	Theory	Practical	Total		
I	01	-	01	01	04
II	01	-	01	01	04
III	01	-	01	01	04
IV	01	02	03	03	08
V	01	02	03	03	08
VI	01	-	01	01	04
Total Papers	06	04	10	10	32
Total Credits	6 * 4 = 24	4 * 2 = 08	32		32

B.A. PROGRAMME (Geography)

Semester - I

Credits: 4

Paper: I (GGB - 01)

Geomorphology

UNIT - I

Definition, Nature and Scope of Geomorphology; Origin of Solar System; Interior of the Earth; Wegner's theory of Continental Drift; Rocks: Types, Origin and Composition.

UNIT - II

Geomorphic processes: Weathering, Erosion, Transportation and Deposition, Fold and Faults, Earthquakes and Volcanoes.

UNIT - III

Evolution of Landforms: River, Glacier, Wind; Geomorphic Hazards and their management:

Books Recommended:

1. Dasagupta and A.N. Kapoor. 2001. Principles of Physical Geography. S. Chand and Co., New Delhi.
2. Dayal, P.,2015. Text Book of Geomorphology. Shukla Book Depot, Patna.
3. Monkhouse,F.J. 1960. Principles of Physical Geography. Hodder and Stoughton, London.
4. Enayat Ahmed. 1982. Physical Geography. Kalayani Publishers, Ludhiana.
5. Savindra Singh. 2006. Fundamental Concepts in Geomorphology. Prayag Pustak Bhavan, Allahabad.
6. Strahaler, A.H., 2013(6th edition). Introducing Physical Geography. Wiley Pub.
7. Gautam, A. 2015. Geomorphology. Sharda Pustak Bhawan.
8. Hugget, R.J. 2011. Fundamentals of Geomorphology. Routledge Pub.
9. Harvey, 2012. A. Introducing Geomorphology: A Guide to Landforms and Proecesses. Dunedin Academic Press.

B.A. PROGRAMME (Geography)

Semester - II

Credits: 4

Paper - II (GGB - 02)

Climatology and Oceanography

Unit - I

Composition and structure of the atmosphere; weather and Climate: Temperature, Precipitation and pressure; Insolation and heat Budget; Processes: Evaporation and Condensation.

Unit - II

Pressure Belts; Permanent, Seasonal and Local Winds; Air Masses and Fronts; Cyclones and anti cyclones

Unit - III

Configuration of Ocean floor; Sub-marine relief of Indian Ocean; Temperature and Salinity; Tides and Currents; Ocean Deposits

Books Recommended:

1. Sharma, R.C. and Vatal, M., 2005(5th edition) . Oceanography for Geographers, Chaitanya Pub., Allahabad.
2. Treewartha, G.T. and Horn, L.A., 1980(5th edition). Introduction to Climate, International Studies.
3. Lal, D.S. 2012. Climatology. Sharda Pustak Bhawan, Allahabad.
4. Andrews, David G. Lauthor. 2010. An Introduction to Atmospheric Physics. Cambridge University Press.
5. Singh. S. 2009. Oceanography. Prayag Pustak Bhawan, Allahabad.
6. Hussain, T and Tahir, M. 2012. Climatology. Jawahar Pub., New Delhi.
7. Hussain, T and Tahir, M. 2012. Oceanography. Jawahar Pub., New Delhi.
8. Siddhartha, K. 2013. Oceanography:A Brief Introduction. Kisalaya Pub., New Delhi.
9. Singh, S. 2013. Physical Geography. Prayag Pub., Allahabad.
10. Hussain, Majid. 2009. Fundamentals of Physical Geography. Rawat Pub.
11. Barry, R.G. and Chorley R.J. 2009(9th edition). Atmosphere Weather and Climate, Routledge.
12. Critchfield, J.H. 1983(4th edition). General Climatology. Phi Learning Pub.

B.A. PROGRAMME (Geography)

Semester - III

Credits: 4

Paper - III (GGB - 03)

Man and Environment

UNIT - I:

Definition, nature and scope of human geography; Branches of human geography; Dichotomy in physical and human geography; Geography as an integrated discipline; Concepts of man and environment relationship; Environmentalism/Determinism, Possibilism, Stop and go determinism; Economic activities.

UNIT - II:

Growth and distribution of population in the world; Migration - causes and consequences; Population Theories - Malthus, Demographic transition; Human Development Index.

UNIT - III:

Human Settlement: Rural and urban settlement; Social space in rural setting; Internal structure of city; Central place theory; Human adaptation to environment -Eskimo, Bushman, Gonds, and Bhill.

Books Recommended:

1. Chandna, R.C. 2000: Geography of Population, Kalyani Publishers, New Delhi.
2. Clark, J. 1972: Population Geography, Pergamon Press, Oxford
3. Husain, M. 1994: Human Geography, Rawat Publication house, Jaipur
4. Norton, W. 2004: Human Geography, Oxford University Press, Canada
5. Singh J. 2002: Manva Evam Arthik Bhoogol, Gyanandya Parkashan, Gorakhpur.

B.A. PROGRAMME (Geography)

Semester - IV

Credits: 4

Paper - IV (GGB - 04)

Geography of Resources

UNIT - I

Concept and classification of resources; Agriculture: Classification; Land Classification, Agricultural productivity, concentric zone model; Industrial regions of the world; Theory of industrial location; Communication and transport.

UNIT - II

Natural hazards: floods, drought, land degradation and desertification; conservation of resources.

UNIT - III

Sustainable development; quality of life; Social well being; Gender development; Food security; Global warming; Climate change.

Books Recommended:

1. Alaxender J.W. 1988: Economic Geography, Prentice Hall.
2. Cutter, L. 1997: Renwick,H.L.1985: Exploitation, Conservation and Preservation; A Geographic Perspective and Natural Resources use, Rowman and Allanheld, New Jersey.
3. Ehrlich, P.R. and A.H. Ehrlich 1970: Population, Resource and Environment, W.H. Freeman & Company, San Francisco.
4. Gautam, Alka 2010: Advanced Economic Geography, Sharda Pustak Bhavan, Allahabad.
5. Norton, W. 2004: Human Geography, Oxford University Press, Canada.

B.A. PROGRAMME (Geography)

Semester - IV

Credits: 2

Practical - I (GGB-07)

Cartographic Methods

UNIT - I

Line graphs- single, and poly graphs; Bar graphs- single and multiple bars (Both vertical and horizontal); Compound bar, pyramid graphs.

UNIT - II

Climograph, Hythergraph, Ergo graph; Proportionate circles; Thematic mapping, Choropleth method, Dot method.

UNIT - III

Significance and use of Cartograms in geography; Drawing of Value area Cartogram, Wind diagram; Traffic flow diagram.

Books Recommended:

1. Kraak, M.J and F. Ormeling 2005: Pearson Education, New Delhi.
2. Mishra R.P :1969: Fundamentals of Cartography; Prasaranga, University of Mysore, Mysore.
3. Monkhouse F.J and Wilkinson H.R.1952: Maps and Diagrams, Mathuen and Co, Ltd., London.
4. Raisz E1948: General Cartography, Tata-MC-Graw Hill, New York.
5. Robinson .H1963: Elements of Cartography, John Wiley, London.
6. Singh. R.L. 1979: Elements of Practical Geography; Kalyani Publishers, New Delhi.
7. Singh.L. R 2008: Practical Geography, Sharada Pustak Bhavan, Allahabad.

B.A. PROGRAMME (Geography)

Semester - IV

Credits: 2

Practical - II (GGB-08)

Basic Statistics

UNIT - I

Statistics- meanings, importance and limitations- sources of data- primary and secondary, development of questionnaire ; Sampling- meaning and types of sampling ; Measures of central tendency – mean, median, mode, direct and short cut methods for individual, discrete and grouped data.

UNIT - II

Measures of dispersion -Mean deviation, Quartile deviation and standard deviation.

UNIT - III

Coefficient of correlation, Regression analysis.

Books Recommended:

1. Singh.R.L. 1979: Elements of Practical Geography, Kalyani Publishers, New Delhi.
2. Mahmood, A. 2002: Statistical methods in Geographical Studies, Rajesh Publications, New Delhi.
3. Zamiruddin Alvi 1995: Statistical Geography, Methods and Applications, Rawat Publications, Jaipur.

B.A. PROGRAMME (Geography)
Semester - V
Credits: 4
Paper - V (GGB-05)
Fundamentals of Remote Sensing and GIS

Unit - I: Basics of Remote Sensing

Energy Sources and Radiation Principles; Energy Interaction with Atmosphere and 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.

Books Recommended:

1. Lillesand, T. and Keifer, 1979. Remote Sensing and Image Interpretation, John Wiley, New York.
2. Lillesand, T.M. and M.K. Ralph (2011) Remote Sensing and Image Interpretation, New York, John Wiley & Sons, Inc.
3. Campbell, J.B. (1996) Introduction to Remote Sensing, London, Taylor and Francis, Second Edition.
4. Dickinson, G.C; 1979. Maps and Air Photographs, Arnold Heinemann, New Delhi.
5. Curran P. (1985) principles of Remote Sensing, London, Longman.
6. Sabins, J.F.F.9 (1997) Remote Sensing: Principles and Interpretation, New York, San Francisco, W.H. Freeman and Co.
7. Jenson, JR (2011) Remote Sensing of Environment, New Delhi, McGraw Hill.
8. NRSA, 1998. IRS- IA, Data User Handbook, National Remote Sensing Agency, Hyderabad.
9. NRSA, 1995. IRS- IC, Data User handbook, National Remote Sensing Agency, Hyderabad.
10. Patel, A.N. and Singh, S. 1992. Remote Sensing: Principles and Applications, Scientific Publishers, Jodhpur.

B.A. PROGRAMME (Geography)

Semester - V

Credits: 2

Practical - III (GGB-09)

Surveying

Unit - I:

Surveying: Definition, significance and objects of surveying and levelling; Types of surveying: Geodetic and Plane surveying; Methods of surveying: Plane Table Surveying (I) Radiation Method, (ii) Intersection Method.

Unit - II:

Dumpy Level (Definition of terms used in surveying) (i) Collimation Method (ii) Rise and Fall Method (levelling).

Unit - III:

Sextant: Measurement of Vertical and horizontal angles; Prismatic Compass: Close traverse and open traverse.

Books Recommended:

1. Alvi, Z. 1995: Text Book of Surveying, Vikas Publishers, New Delhi.
2. Kanetkar, T.P. and Kulkarni, S.V. 1985: Surveying and Levelling, Poona. Vidyarthi Griha Prakashan, Pune.
3. Singh, R.L. and P.K. Dutta, 1970: Elements of Practical Geography, Students Friends, Allahabad
4. Sharma, J.P. 1984: Prayogik Bhugol, Rastogi and Company, Meerut

B.A. PROGRAMME (Geography)

Semester - V

Credits: 2

Practical - IV (GGB-10)

Image Interpretation

Unit - I: Photogrammetry

Determination of photoscale; Determination of height of objects using single vertical aerial photograph; Zeiss test; Construction of instrument base, photo base and stereo-model.

Unit - II: Interpretation of Aerial Photographs

Detection of defined objects; Preparation of image interpretations keys; Interpretation of stereo-grams; Interpretation of stereo-pairs.

Unit - III: Interpretation of Satellite Imageries

Satellite Imageries: referencing, types, border information; Feature identification from multi-band imageries; Interpretation of FCC for land cover/ land use mapping.

Books Recommended:

1. Dickinson, G.C; 1979. Maps and Air Photographs, Arnold Heinemann, New Delhi.
2. Lillesand, T. and Feifer, 1979. Remote Sensing and Image Interpretation, John Wiley, New York.
3. NRSA, 1998. IRS- IA, Data User Handbook, National Remote Sensing Agency, Hyderabad.
4. NRSA, 1995. IRS-IC, Data User handbook, National Remote Sensing Agency, Hyderabad.
5. Patel, A.N. and Singh, S. 1992. Remote Sensing: Principles and Applications, Scientific Publishers, Jodhpur.

B.A. PROGRAMME (Geography)

Semester - VI

Credits: 4

Paper - VI (GGB-06)

Geography of India

Unit - I

Physical Divisions of India; Drainage; Climate; Soil; Natural Vegetation.

Unit - II

Population: Distribution and its factors; Population Growth; Population Composition: Sex ratio, Rural and Urban, Literacy, Work force, Language, Religion.

Unit - III

Agricultural Crops: Food crops, Cash crops, Green Revolution; Minerals: Production and Distribution of Iron ore, Coal and Petroleum; Industries: Iron and Steel, Sugar and Cotton Textile; Transport and Communication.

Books Recommended:

1. Deshpande C.D: Indian-A Regional Interpretation, Northern Book centre, New Delhi.1992.
2. Chauhan. T., 1997: Geography of Rajasthan, Vigyan Prakashan Jodhpur.
3. Farmer. B.H. An Introduction to South Asia, Methuen, London, 1983.
4. Govt. of India-Reference Annual, 2001 Pub.div; New Delhi.
5. Govt. Of India: National Atlas of India Natmo Publication, Calcutta.
6. Hussain. M. 2009,Geography of India, Tata Mc Graw-Hill companies Book.
7. Kalpana Raja Ram, 2007, Geography of India, Spectrum Books, New Delhi 110058.
8. Govt. of India: The Gazetteer of India. Vol. I & III Publication division.
9. Learmonth A.T.A et.al (ed) Man and land of South Asia, Concept
10. Mitra, A: levels of Regional development of India, Census of India, Vol.I, Part I-A (i) and (ii) New Delhi, 1967.
11. Routray, J.K.: Geography of Regional Disparity, Asian Institute of Technology, Bangkok, 1993.
12. Sdhekhar.S.(edt.)2004, Regional Planning in India, Anmol Publications, New Delhi-2
13. Shafi, M: Geography of South Asia, McMillan & Co; Calcutta, 2000.
14. Singh, R.L. (Ed). India: A Regional Geography, National Geographical Society, India.