Syllabus

B.A. (GEOGRAPHY)

Based on National Education Policy-2020

(To be Effective from Session 2023-24)

KAMLA NEHRU INSTITUTE
OF PHYSICAL & SOCIAL SCIENCES
Sultanpur (UP)

Accredited 'A' Grade by NAAC

(An Autonomous Institute)

B.A. in Geography

PROGRAMME SPECIFIC OUTCOMES (PSOs)-
Program Outcome (After 3 Years of Study)

a) This course provides the basic ideas and concepts of Physical & Human aspect of Geography.

b) This course intends to orient the learner with the Approaches to the broader discipline of Geography.

c) It will help in developing analytical and critical thinking based on the themes and issues of geography.

d) It eventually prepares the students to understand the development of the subject and delve around issues suited to the needs of the contemporary world.

e) It will help in exhaustive understanding of the basic concepts of Geography and an awareness of the emerging areas of the field.

f) Acquisition of in-depth understanding of the applied aspects of Geography as well as interdisciplinary subjects in everyday life.

g) Improvement of critical thinking and skills facilitating.

h) The application of knowledge gained in the field of Geography in the classroom to the practical solving of societal problems.

i) The programme orients students with tradition geographical knowledge along with advance contemporary skills like remote sensing and GIS.

List of all papers in all six semesters.

- Semester-wise Titles of the Papers in BA (Geography)

Year Sem	Sem	Course Code	Paper Title	Theory/ Practical	Credits
1	I	KA110101T	Physical Geography	Theory	4
1	I	KA110102P	Elements of Map and Surveying	Practical	2
1	II	KA110201T	Human Geography	Theory	4
1	II	KA110202P	Thematic Mapping and Surveying	Practical	2
2	III	KA110301T	Environment, Disaster Management and Climate Change	Theory	4
2	III	KA110302P	Statistical Techniques and Surveying	Practical	2
2	IV	KA110401T	Economic Geography	Theory	4
2	IV	KA110402P	Weather Maps, Geological Maps and Surveying	Practical	2
3	V	KA110501T	Regional Geography	Theory	4
3	V	KA110502T	Basics of Remote Sensing and GIS	Theory	4
3	V	KA110503R	Tour and Tour report	Practical	2
3	V	KA110504R	Project Report-1	Practical	3
3	VI	KA110601T	Geography of India	Theory	4
3	VI	KA110602T	Evolution of Geographical Thoughts	Theory	4
3	VI	KA110603P	Remote Sensing and GIS	Practical	2
3	VI	KA110604R	Project Report-2	Practical	3

BA 1st Year Sem. I
Course I
(Theory)

Programme/Class: Certificate/ BA	Year: First	Semester: First
Subject: Geography		
Course Code: KA110101T	Course Title: Physical Geography	

Course outcomes: Students will be able to understand

- The Earth geomorphic transition from beginning to present day.
- Plate tectonics and related movements
- Landforms carved by various agents of erosion
- Earth's climate and that factors that influence it
- Oceans system and biogeography of the world.

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Nature and Scope of Physical Geography, Solar system and Origin of Earth, Geological Time Scale (with special reference to evidences from India) and Interior of the Earth.	8
II	Origin of Continents and Oceans:Lothian's theory, Continental Drift theory and Plate Tectonics theory, Geosynclines and Mountain building theories,Isostacy, Earthquakes and Volcanoes.	8
III	Rocks, Folding, Faulting, Weathering and Erosion, Cycle of Erosion by Davis and Penck, Drainage Pattern.	8
IV	Fluvial, Karst, Aeolian, Glacial, and Coastal Landforms.	8
V	Atmosphere: Composition and Structure of atmosphere, Insolation and Heat Budget, Temperature, Atmospheric pressure, and winds	8
VI	Air masses and Fronts, cyclones and anti-cyclones, Humidity and precipitation, Climatic classification by Koppen.	7
VII	Relief of the Ocean Bottoms, Temperature and salinity of marine water, Circulation of Ocean water: Waves, Currents and Tides, Ocean deposits, Coral, and Coral reefs.	7
VIII	Biosphere and their components, Ecosystem and Biotic succession, Biome.	6

Suggested Readings:

1. Singh, Savindra (2018), Physical Geography (Eng./Hindi) Allahabad, India: Prayag Pustak
2. Huggett, R.J. (2007): Fundamentals of Geomorphology. New York, U.S.A.: Routledge.
3. Khullar, D.R. (2012). Physical Geography. New Delhi. India: Kalyani Publishers.
4. Strahler, A. H. and Strahler, A N. (2001): Modern Physical Geography (4/E). New York, U.S.A.: John Wiley and Sons.
5. Thornbury, W. D. (2004): Principal of Geomorphology. New York, U.S.A.: Wiley.
6. Bloom, A. L. (2003). Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, New Delhi, India: Prentice-Hall of India

- This course can be opted as an elective by the students of following subjects: Open for all
- Suggested Continuous Evaluation Methods: Assignment / Test / Quiz (MCQ) / Seminar/ Presentations
- Suggested equivalent online courses:

https://onlinecourses.swayam2.ac.in/cec21_hs03/preview
https://onlinecourses.swayam2.ac.in/nos20_sc25/preview

BA 1st Year, Sem. I
Course II
(Practical)

Programme/Class: Certificate/ BA	Year: First	Semester: First
Subject: Geography		
Course Code: KA110102P	Course Title: Elements of Map and Surveying	

Course outcomes:

On completion of this course, learners will be able to:

- Understand the basic idea of Map, Scale and Topographic sheets

Credits: 2	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w

Unit	Topics	No. Of Lectures
I	Cartography: Definition and Scope, Scales: Methods and Graphical Construction of Plain, Comparative, Diagonal Scales.	7
II	Map Projections: Definition and Classification, Graphical Construction of Bonne's, Mercator's, Polar Zenithal and Sinusoidal projections with properties and use.	7
III	Topographical Map: Survey of India maps and their types, numbering of topographical sheets, Topo Symbols, Interpretation of Survey of India Toposheet; Representation of Conical hill, Saddle, Waterfall, and U-shaped valley by Contours.	8
IV	Surveying: meaning and classification, Plane Table Surveying: Required instruments and methods of Plain tabling.	8

Suggested Readings:

1. Monkhouse, F. J., and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London
2. Raisz, E. (1962): General Cartography. John Wiley and Sons, New York. 5th edition.
3. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
4. Sharma, J. P. (2001): Prayogic Bhoogol., Rastogi Publication, Meerut 3rd. edition.
5. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi.
6. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.

- This course can be opted as an elective by the students of following subjects: Open for all
- **Note:** In Final Examination Student shall be examined by external and internal examiners. Marks Distribution: Written Exam, Viva, Practical File, Map Preparation, Topo sheet interpretation.

BA 1st Year Sem. II
Course I
(Theory)

Programme/Class: Certificate/ BA	Year: First	Semester:Second
Subject: Geography		
Course Code: KA110201T	Course Title: Human Geography	

Course outcomes:

On completion of this course, learners will be able to:

- To understand the Concept, Nature, Meaning and Scope of Human Geography
- To understand the natural and Cultural Changes in and around the Human Environs and their interrelationship.

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Human Geography: Definition and scope, Branches of Human Geography, Development of Geographical understanding in India with special reference to Puranas.	7
II	Major Concept of Human Geography: Determinism, Possibilism, and Neo-determinism.	7
III	World population distribution, global migration - causes and consequences, concept of Optimum population, over population and under population.	7
IV	Human Settlements: Origin, types (Rural-Urban) characteristics, House types and their distribution with special reference to India.	7
V	Primitive Economics-Food gathering, Hunting, Pastoral herding, Fishing, Lumbering and Primitive agriculture.	8
VI	Cultural Realms, Cultural Regions, Cultural Diffusion, Races, Taylor's Zone Strata Theory.	8
VII	World Tribes: Eskimos, Kirghiz, Bushman, Masai, Semang, and Pygmies.	8
VIII	Indian Tribes: Bhotias, Gaddis, Tharus, Bhil,Gond,Santhals,andNagas.	8

Suggested Readings:

- 1. Chisholm, M. (1985): Human Geography, 2nd edition, Penguin Books, London.
- 2. B N Singh (2019) Manav Bhoogol ka Swaroop, Pravalika Publication, Allahabad
- 3. de Blij, H.J. (1996): Human Geography: Culture, Society and Space, 2nd edition. John Wiley and Sons, New York.
- 4. Haggett, P. (2004): Geography: A Modern Synthesis. 8th edition, Harper and Row, New York.
- 5. Hussain, M. (1994): Human Geography, Rawat Publications, Jaipur.
- 6. B N Singh (2021) Manav Evam Arthik Bhoogol, Pravalika Publication, Allahabad
- 7. Kaushik, S.D., and Sharma, A.K. (1996): Principles of Human Geography (in Hindi), Rastogi Publication, Meerut.
- 8. Norton, W. (2008): Human Geography, Oxford University Press, New York. 5th ed.
- 9. Singh, K. N. and Singh, J. (2001): Manav Bhoogol. GyanodayaPrakashan, Gorakhpur. 2nd edition.
- 10. Singh, L.R. (2005): Fundamentals of Human Geography, Sharda Pustak Bhawan, Allahabad
- 11. Smith, D. M. (1977): Human Geography- A Welfare Approach, Edward Arnold (Publishers) Ltd., London
- 12. Stoddard, R.H., Wishart, D.J. and Blouet, B.W. (1986): Human Geography. Prentice-Hall, Englewood Cliffs, New Jersey.
- 13. B N Singh (2020) Samajik aur Sanskritic Bhoogol, Pravalika Publication, Allahabad
- 14. Johnston, R. J., Gregory, D., Pratt, G. and Watts, M. (2009): The Dictionary of Human Geography. 5th edition, Basil Blackwell Publishers, Oxford.
- 15. Ali, S. Muzafer (1966). Geography of the Puranas. New Delhi, People's Pub. House.This course can be opted as an elective by the students of following subjects: Open for all.

- Suggested Continuous Evaluation Methods:
  Assignment / Test / Quiz (MCQ) / Seminar/ Presentations

- Course prerequisites: 12th Standard Pass/Open to all

- Suggested equivalent online courses:
- Courses on Swayam / MOOCs
  https://onlinecourses.swayam2.ac.in/nou20_hs18/preview

BA 1st Year, Sem. II
Course II
(Practical)

Programme/Class: Certificate/ BA	Year: First	Semester: Second
Subject: Geography		
Course Code KA110202P	Course Title: Thematic Mapping and Surveying	

Course outcomes:

On completion of this course, learners will be able to:

- Understand the basic idea of Map, Scale and Topographic sheets

Credits: 2	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w

Unit No. of Topics	Topics	No. Of Lectures
I	Maps – Definition, concepts and Classification, Diagrammatic Data Presentation – Line, Bar and Circle.	7
II	Thematic Mapping Techniques –Methods and properties; Representation of areal data by Choropleth, Isopleth, Dot,and sphere methods.	7
III	Thematic Maps – Preparation and Interpretation of any two maps.	8
IV	Instrumental Survey: Prismatic Compass	8

Suggested Readings:

1. Monkhouse, F. J., and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London
2. Raisz; E. (1962): General Cartography. John Wiley and Sons, New York. 5th edition.
3. Sharma, J. P. (2001): Prayogic Bhoogol., Rastogi Publication, Meerut 3rd. edition.
4. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi
5. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
6. Sharma, JP. (2008): Prayogatamak Bhoogol Ki Rooprekha, Rastogi PublicationsMeerut.

- **Note:** In Final Examination Student shall be examined by external and internal examiners. Marks Distribution: Written Exam, Viva, Practical File, Map Preparation, Topo sheet interpretation.

BA 2nd Year Sem. III
Course I
(Theory)

Programme/Class: Certificate/ BA	Year: Second	Semester: Third
Subject: Geography		
Course Code: KA110301T	Course Title: Environment, Disaster Management and Climate Change	

Course outcomes:

Students will be able to understand

- The course aim is to give basic understanding of concept Environment, Climate Change and Disaster Management.
- Understanding of the concept of appraisal and conservation of Environment and Natural Resources.
- It will help in developing understanding about various Impacts of Climate Change.
- This course shall introduce the basic concepts related to disaster Management. • This paper shall help in understanding Global effort in field of disaster management.

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Concepts & components of Environment, Ecology, and ecosystem. Indian traditional Knowledge in Environment and disaster Management.	8
II	Bio-diversity and its conservation, sustainable development.	8
III	Deforestation, soil erosion, Desertification, Air pollution, water pollution and solid waste pollution.	8
IV	Ganga Action Plan, Tehri dam & Narmada Valley project.	8
V	Climate Change: Understanding Climate Change; Green House Gases (GHGs), and Global Warming.	8
VI	Global Climatic Assessment – IPCC, Impacts of Climate Change, National Action Plan on Climate Change.	7
VII	Disaster: Meaning and Type of Disasters, Risk and Vulnerability, Disaster Management Agencies, Disaster Management Cycle.	7
VIII	Flood, Drought, Cyclone, Earthquake, Tsunami, Landslide, Chemical and Nuclear Disasters. Do's and Don'ts During Disasters.	6

Suggested Readings:

1. Casper J.K. (2010). Changing Ecosystems: Effects of Global Warming. New York, USA: Infobase Pub.
2. Hudson, T. (2011). Living with Earth: An Introduction to Environmental Geology. Delhi, India: PHI Learning Private Limited.
3. Miller, G.T. (2007). Living in the Environment: Principal, Connections, and Solutions. Belmont, Australia: Brooks/ Cole Cengage Learning.
4. Singh, R.B. (1993) Environmental Geography. Delhi, India: Heritage Publishers.
5. UNEP. (2007). Global Environment Outlook: GEO4: Environment for Development, United Nations Environment Programme. UK: University Press, Cambridge.
6. Government of India. (2011). Disaster Management in India. Delhi, India: Ministry of Home Affairs.

7. Singh, Savindra (2019) Paryavaran Bhoogol, Pravalika Publication, Allahabad
8. Kapur, A. (2010). Vulnerable India: A Geographical Study of Disasters. Delhi, India: Sage Publication.
9. Singh, Savindra (2019) ApadaPrabandhan, Pravalika Publication, Allahabad.
10. Ramkumar, M. (2009). Geological Hazards: Causes, Consequences and Methods of Containment. New Delhi, India: New India Publishing Agency.
11. Climate Change: Understanding Climate Change; Green House Gases and Global Warming; Global Climatic Assessment- IPCC
12. Climate Change and Vulnerability: Physical Vulnerability; Economic Vulnerability; Social Vulnerability.
13. Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health
14. Adaptation and Mitigation: Global Initiatives with Particular Reference to South Asia.
15. The Climate Change Policy Framework: Global Initiatives UNFCCC and COPs; National and Local Action Plan on Climate Change.
16. Government of India. (2008). Vulnerability Atlas of India. New Delhi, India: Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India
17. Modh, S. (2010). Managing Natural Disaster: Hydrological, Marine and Geological Disasters. Delhi, India: Macmillan.
18. Bansal SC, (2020) Jal Vayu vigyan Evam Samudra Vigyan, Meenakshi Publication, Meerut.
19. Bansal SC, (2019) Paryavaran ek Adhyayan, Meenakshi Publication, Meerut.

- This course can be opted as an elective by the students of following subjects: Open for all
- Suggested Continuous Evaluation Methods: Assignment / test / Quiz (MCQ) / Seminar/ Presentations
- Suggested equivalent online courses:
  https://onlinecourses.swayam2.ac.in/aic19_ge05/preview
  https://onlinecourses.swayam2.ac.in/nou21_bt03/preview

BA 2nd Year, Sem. III
Course II
(Practical)

Programme/Class: Certificate/ BA	Year: Second	Semester: Third
Subject: Geography		
Course Code: KA110302P	Course Title: Statistical Techniques and Surveying	

Course outcomes:

Students will be able to understand

- To differentiate between qualitative and quantitative information.
- To understand the nature of various data.
- To understand sampling methods for data collection.
- To present data through graphical and diagrammatic formats.
- To use the concept of probability mainly the normal distribution.

Credits: 2	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w

Unit	Topics	No. Of Lectures
I	Use of Data in Geography: Significance of Statistical Methods in Geography, Sources of data, types of data and data collection method.	8
II	Tabulation of data, Graphical Presentation of Data (Bar diagram, Histograms, Frequency Curves), Measurement of Central Tendencies: Mean, Median and Mode, Dispersion (Standard Deviation, Variance and Coefficient of Variation).	8
III	Sampling concepts: Meaning, Importance and types, Defining the Target Population, Sampling Methods (Cluster, Stratified, Simple, and Random).	7
IV	Instrumental Survey: Sextantor SoilTesting Machine: Importance and Brief study of instruments: PH Meter, Conductivity meter, spectrometer.	7

Suggested Readings:

1. Berry B. J. L. and Marble D. F. (eds.): Spatial Analysis – A Reader in Geography.
2. Abdon D., 1977: Statistics in Geography: A Practical Approach.
3. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication, New York
4. Sharma, JP (2001) PrayogikBhugol, Rastogi Publication, Meerut
5. Hammond P. and McCullagh P. S., 1978: Quantitative Techniques in Geography: An Introduction, Oxford University Press.
6. Sharma, PM, (2009) Bhugol Me sankhkia Vidhyan, Rajasthan Granth Academy, Jaipur
7. Bansal SC, (2020) ShodhVidhitantrava sankhkia Vishya, RK Books Publication, New Delhi.
8. King L. S., 1969: Statistical Analysis in Geography, Prentice-Hall.
9. Mahmood A., 1977: Statistical Methods in Geographical Studies, Concept.
10. Pal S. K., 1998: Statistics for Geoscientists, Tata McGraw Hill, New Delhi.
11. Sarkar, A. (2013) Quantitative geography: techniques and presentations. Orient Black Swan Private Ltd., New Delhi
12. Silk J., 1979: Statistical Concepts in Geography, Allen and Unwin, London.
13. Spiegel M. R.: Statistics, Schaum's Outline Series.
14. Yeats M., 1974: An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York.

- This course can be opted as an elective by the students of following subjects: Open for all
- **Note:** In Final Examination Student shall be examined by external and internal examiners. Marks Distribution: Written Exam, Viva, Practical File, Map Preparation, Topo sheet interpretation.

BA 2nd Year Sem. IV
Course I
(Theory)

Programme/Class: Certificate/ BA	Year: Second	Semester: Fourth
Subject: Geography		
Course Code: KA110401T	Course Title: Economic Geography	

Course outcomes:

On completion of this course, learners will be able to:

- Define Meaning, concepts, and approaches of Economic Geography
- Understand the nature of Economic activities, Resource Distribution
- Understand the Effect of globalization on developing countries.

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Meaning, concepts, and approaches of Economic Geography; agricultural region of the world (Derwent Whittlesey).	8
II	Resource: meaning, concept and classification. Economic activities and their classification.	8
III	Forestry, fishing, mining (Iron ore)and energy resources (Coal)	7
IV	Meaning and factors of agricultural localization, agricultural land use model (J.H. Von Thunen).	7
V	Types of industries; Factors of location of industries; Case studies of selected Industries: Iron and steel industry, Oil Refining and Petrochemical and cotton textiles; Theory of industrial location (Alfred Weber).	8
VI	World transportation: Sea routes and major transcontinental railways.	8
VII	WTO and International trade: Patterns and trends	7
VIII	Effect of globalization on developing countries.	7

Suggested Readings:

1. B N Singh (2021) Manav evam Arthik Bhugol, Pravalika Publication, Allahabad
2. Bryson, J., Henry, N., Keeble, D. and Martin, R. (eds.) (1999): The Economic Geography Reader: Producing and Consuming Global Capitalism. John Wiley and Sons, Inc, New York.
3. Clark,G. L., Gertler, M. S. and Feldman, M. P. (eds.) (2000): The Oxford Handbook of Economic Geography. Oxford University Press, USA.
4. Coe, N. (2007): Economic Geography: A Contemporary Introduction. Blackwell Publishers, Inc., Massachusetts.
5. Gautam, A. (2006): Aarthik Bhugol Ke Mool Tattava, Sharda Pustak Bhawan, Allahabad.
6. Guha, J. S. and Chattoraj, P.R. (2002): A New Approach to Economic Geography: A Study of Resources. The World Press Private Limited, Kolkata.
7. Hanink, D. M. (1997): Principles and Applications of Economic Geography: Economy, Policy, Environment. John Wiley and Sons, Inc, New York.
8. Hartshorne, T. A. and Alexander, J. W. (1988): Economic Geography (3rd revised edition) Englewood Cliff, New Jersey, Prentice Hall
9. Hudson, R. (2005): Economic Geographies: Circuits, Flows and Spaces. Sage Publications, London.

10. Knowles, R, Wareing, J. (2000): Economic and Social Geography Made Simple, Rupa and Company, New Delhi.
11. Sokal, Martin 2011. Economic Geographics of Globalisation: A short Introduction. Cheltenham, UK: Edward Elgar.
12. Alexander, J. W. (1988): Economic Geography. Prentice-Hall, New Delhi.

- Suggested Continuous Evaluation Methods:
  Assignment / test / Quiz (MCQ) / Seminar/ Presentations

- Suggested equivalent online courses:
  Courses on Swayam / MOOCs
  https://onlinecourses.nptel.ac.in/noc21_hs50/preview

BA 2nd Year, Sem. IV
Course II
(Practical)

Programme/Class: Certificate/ BA	Year: Second	Semester: Fourth
Subject: Geography		
Course Code KA110402P	Course Title: Weather Maps, Geological Maps and Surveying	

Course outcomes:

On completion of this course, learners will be able to:

- Identify the various Survey Operations and Survey Instruments
- To understand the idea of Basic and applied Instrumental surveying.

Credits: 2	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w

Unit Topics No. of	Topics	No. Of Lectures
I	Weather Maps: Indian observatories and weather symbols,Interpretation of Weather Map and Forecasting.	7
II	Geological Maps: Types and Signs, Bed and Bedding plane, Rock Outcrop, Dip and direction of dip and Strike line, Construction of Geological Sections.	7
III	Instrumental Survey: Indian Clinometer	8
IV	Instrumental Survey: Theodolite	8

Suggested Readings:

1. Sharma, JP (2001) PrayogikBhugol, Rastogi Publication, Meerut
2. Jones, P.A. (1968): Fieldwork in Geography, Longmans, Green and Company Ltd., First Publication, London
3. Kanetker, T.P. and Kulkarni, S.V. (1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
4. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai.
5. Pugh, J.C. (1975): Surveying for Field Scientists, Methuen and Company Ltd., London, First Publication.
6. Punmia, B.C. (1994): Surveying, Vol I, Laxmi Publications Private Ltd, New Delhi.
7. Shephard, F.A. (1968): Surveying Problems and Solutions, Edward Arnold (Publishers) Ltd, London
8. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions), Kalyani Publishers, Ludhiana, and New Delhi.
9. Venkatramaiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.
10. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication, New York.

- **Note**: In Final Examination Student shall be examined by external and internal examiners. Marks Distribution: Written Exam, Viva, Practical File, Map Preparation, Topo sheet interpretation.

BA 3rd Year Sem. V
Course I
(Theory)

Programme/Class: Certificate/ BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code: KA110501T	Course Title: Regional Geography	

Course outcomes:

Students will be able to understand:

- To understand the concept of Region and Regional Planning.
- To familiarize the students with Theories and Models for Regional Planning.
- To develop understanding about concept of Development, Sustainable Development and Multi level planning.

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Definition and types of regions, meaning and objectives of regional planning. Planning practices in Ancient India.	8
II	Types of Regional planning, Formal, Functional, and Planning Regions.	8
III	Delimitations of Region and Regional Planning.	8
IV	Theories and Models for Regional Planning: Growth Pole Model of Perroux; Myrdal, Hirschman, Rostow and Friedmann.	8
V	Sustainable Development, Concept of Development and Underdevelopment.	8
VI	Efficiency-Equity Debate: Definition, Components and Sustainability for Development.	7
VII	Indicators of development (Economic, Social and Environmental).	7
VIII	Need for regional planning in India, Five Year Plans and Regional Planning, multi- level planning in India.	6

Suggested Readings:

1. Agyeman, Julian, Robert, D. Bullard and Bob, Evans. (Eds.) (2003). Just Sustainability's: Development in an Unequal World. London: Earthscan. (Introduction and conclusion.).
2. Anand, Subhash., (2011). Ecodevelopment:Global Perspectives. New Delhi, India: Research India Press.
3. Misra, R. P., Sundaram, K.V., and Rao, V.L.S. (1974). Regional Development planning in India. Delhi, India: Vikas Publishing House.
4. Singh, M B, () Pradeshik Vikas Niyojan, Tara Book Agency, Varanasi.
5. Peet, R. (1999). Theories of Development. New York, USA: The Guilford Press.
6. Berry, BJ.L. and Horton, F.F. (1970): Geographic Perspectives on Urban Systems. Prentice Hall, New Jersey.
7. Bhat L.S. (1972): Regional Planning in India, Statistical Publishing Society
8. Blij H. J. De, 1971: Geography: Regions and Concepts, John Wiley, and Sons.

9. Kulshreshtha, S.K. (2012): Urban and Regional Planning in India: A Hand Book for Professional Practitioners, Sage Publications, New Delhi
10. Kundu, A. (1992): Urban Development Urban Research in India, Khanna Publ. New Delhi
11. Misra, R.P. Sundaram, K.V. Prakash Rao, V.L.S (1974): Regional Development Planning in India, Vikas Publications, New Delhi
12. Misra, R.P. (1992): Regional Planning: Concepts, Techniques, Policies and Case Studies, Concept, New Delhi
13. Friedmann, J. and Alonso, W. (1975): Regional Policy - Readings in Theory and Applications, Massachusetts, USA, MIT Press

- This course can be opted as an elective by the students of following subjects: Open for all
- Suggested Continuous Evaluation Methods:
  Assignments / Test / Quiz (MCQ) / Seminar/ Presentation
- Suggested equivalent online courses:
  https://onlinecourses.swayam2.ac.in/arc19_arch1/preview

BA 3rd Year Sem. V
Course II
(Theory)

Programme/Class: Certificate/ BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code: KA110502T	Course Title: Basics of Remote Sensing and GIS	

Course outcomes:

Students will be able to understand:

On completion of this course, learners will be able to:

- Understand the Basic idea and application of Remote sensing Techniques and Geographical Information System

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Remote Sensing: Definition, Type, Scope and major components of remote sensing, Historical Development (Special reference to India).	7
II	Electro-magnetic radiation: Characteristics and spectral regions and bands, Stages or Process of Remote Sensing.	7
III	Remote sensing satellites: Types of Satellites, Platforms, sensors,Resolution, and their types.	8
IV	Remote Sensing data processing: Visual and digital image processing techniques.	8
V	Remote Sensing applications in Urban Planning, Agriculture, Forestry, Land use/Land cover Mapping, Oceanic Studies, and Disaster Management.	6
VI	Introduction to GIS: Definition, concept, and history of GIS.	8
VII	Components of GIS and software (ARC GIS, ERDAS&etc.).	8
VIII	Types of data and model (Raster and vector data), Coordination of raster data, application of GIS.	8

Suggested Readings:

1. Chauniyal, D D, (2016) Sudur Samvedan Evam Bhaugolik Suchna Pranali ke Siddhant, Sharda Pustak Bhavan, Allahabad.
2. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. 4 th edition. John Wiley and Sons, New York
3. Campbell, J.B. (2002): Introduction to Remote Sensing. 5th edition, Taylor and Francis, London
4. Bhatta, B. (2010): Remote Sensing and GIS, Oxford University Press, New Delhi.
5. Nag Prithvish and Kudrat M. (1998): Digital Remote Sensing, Concept Publishing Company, New Delhi
6. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London.

- Suggested Continuous Evaluation Methods:
  Assignment / test / Quiz (MCQ) / Seminar/ Presentations
- Suggested equivalent online courses:
- Courses on Swayam / MOOCs
  https://onlinecourses.swayam2.ac.in/aic20_ge05/preview

BA 3rd Year, Sem.V
Course III
(Practical)

Programme/Class: Certificate/ BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code: KA110503R	Course Title: Tour and Tour report	

Course outcomes:

Students will be able to understand

- The variation among geographical locations.
- Interaction with people with different natural and cultural settings.
- Study physical and human geography of area being visited.
- Learn to prepare tour report.

Credits: 2	Core Compulsory
Max. Marks: 100	Min. Passing Marks: 40
Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w	

Unit No. of Topics	Topics	No. Of Lectures
I	How to prepare Field Bookand methods for preparing Tour report, Methodology for Research in Field Trip, Various aspects of study in Field Trip, Preparation of Surveying in Field Trip. (30 lectures shall be taken before and during field trip).	30

Suggested Readings:

- This course can be opted as an elective by the students of following subjects: Open for all.....
- **Suggested Continuous Evaluation Methods:Field training and Tour Report analysis.**
- **The following shall be the guidelines and structure of Educationaltour:**

Geographical Excursion Committee:

1. All faculty members shall organize geographical excursion as 'tour in-charge' in rotation according to departmental seniority list.
2. There shall be **Geographical Excursion Committee headed by the principal.** Tour in-charge shall act as convener of committee and shall convene a meeting at the beginning of session or semester. All other teachers of department shall be member of committee. Four/Five meritorious students based on last available examination result shall be invited by the tour in-charge to participate in meeting as members of committee.
3. **Committee shall:**

a) Review the tour plan.
b) Confirm that all arrangements shall be made in advance before tour departure
c) Listen to the opinion of students and give recommendations to tour in-charge accordingly.
d) Review academic nature of tour and evaluate day wise tour plan and academic activity as submitted by Tour in-charge.

Structure of the tour party:

1. For 20 or less than 20 students one faculty member with one non-teaching staff shall accompany the Tour party. For 21 to 50 students two faculty members with one non-teaching staff shall accompany the Tour party. If two faculty members are required for tour, second faculty member shall be selected on the recommendation of tour in-charge. If students are more than 50 then a separate tour batch

shall be constituted in same manner.

2. **If female students are also participating in tour and tour in-charge, accompany other faculty member or non-teaching staff none are female then one female attended (Female faculty member from Geography or any other departments/female non-teaching staff) shall accompany with tour party.**

Responsibility of tour in-charge:

1. Tour shall **at least of6 days stay at location** with inter region variation (Himalayan Mountain, Southern pleateu, Eastern and Western coast, North Eastern states).
2. Tour in-charge shall submit **tentative day wise activity report in advance to the principal.**
3. Tour in-charge shall coordinate with Institutes/Colleges/ Universities/Research institutes etc in location where tour is being planned for following activities like:

a) Interaction of students.
b) Lectures on various local physical and cultural attributes of the area by the experts.
c) Local visit with faculty members having academic understanding of the area.

4. Lectures by tour in-charge on physical and human characteristics of area being visited for educational tour.
5. Survey with students with **at least one instrument like Dumpy Level, Sextant, Theodolite, GPS etc.**
6. **Questionnaire survey on various socio-cultural or any other aspects.** Questionnaire must be prepared in advance and shall be shared during Geographical Excursion Committee meeting.
7. Tour in-charge shall collect **undertaking from all students which shall be counter signed by their guardian.**
8. Tour in-charge will prepare list of students accompanying the tour with their information like mobile number, address, guardian contact information **and one recent colour photo.** One copy will also be submitted to the head in universities and Principal in colleges.
9. **Teacher shallalways try to minimize tour expenditure of students** by:

a) Using concession train reservation and avoiding buses if possible.
b) Making stay arrangements of students in advance in youth hostels/lodges/guesthouse etc.
c) Try to visit few important locations only with objective of spot study and avoiding unnecessary travel for sightseeing.

10.After the completion of tour there shall be **presentation by students regarding learning outcomes and experiences** under the supervision of tour in-charge. Presentation shall be **attended by Geographical Excursion Committee members along with other faculty members, staff, students etc.**11. All students shall submit tour report under supervision of Tour in-charge for evaluation. Tour report shall portray all activities conducted and places visited for the purposes of study.
12.In case of any incident/injury where one or more than one student cannot join tour party in return journey. One teaching/non-teaching staff member shall stay with student until student's guardian arrives or alternative arrangement is not made by the college. In case tour in-charge stays the other teacher/staff member shall act as tour in-charge for remaining tour period according to seniority.

Exemption of Students from Tour:

- **Tour can be exempted in very special circumstances on recommendation of tour in charge by theprincipal.** Exempted students will prepare local tour report based on his/her own local tour visits. Report shall be prepared under supervision of tour in-charge.

TA, DA, and other expenses:

- **The TA, DA and other expenses of teachers and attendants shall be met out by college as admissible to their cadre as per government rules.**

- Suggested equivalent online courses.....

BA 3rd Year, Sem.V
Course III
(Practical)

Programme/Class: Certificate/ BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code KA110504R	Course Title: Project Report-1	

Course outcomes:

On completion of this course, learners will be able to:

- Identify the various Survey Operations and Survey Instruments
- To understand the idea of Basic and applied Instrumental surveying.

Credits: 2	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40
Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w	

Unit Topics No. of	Topics	No. Of Lectures
I	Meaning and significance of Research, Literature review and formulation of research design, research problem, objectives, hypothesis, Research materials and methods, Sampling etc. Techniques of writing scientific reports: Preparing notes, references, bibliography, abstract and keywords etc. **Note:** 1. Each faculty member shall teach these topics of research to his/her Group of students independently. 2. Student shall choose supervisor according to his/her research interest and specialisation of Faculty member.	30

Suggested Readings.....

- This course can be opted as an elective by the students of following subjects: Open for all
  .....
- **Suggested Continuous Evaluation Methods:**
  Seminar, Presentations, VIVA
- Suggested equivalent online courses.....

BA 3rd Year Sem. VI
Course I
(Theory)

Programme/Class: Certificate/ BA	Year: Third	Semester:Sixth
Subject: Geography		
Course Code KA110601T	Course Title: Geography of India	

Course outcomes:

On completion of this course, learners will be able to:

- Understand the importance of "Ek Bharat Shrestha Bharat"
- Understand the wider aspects of Geography of India
- Understand the importance of "Aatmnirbhar Bharat" & "Vocal for Local"
- Understand the "Biodiversity of India"

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w	

Unit	Topics	No. of No. Of Lectures
I	India and neighbouring countries, Structure, and relief; Physiographic regions; Drainage system, and watersheds, Ek Bharat Shresth Bharat: A Geographical Prospective.	8
II	Indian monsoons and rainfall patterns, Tropical cyclones,and western disturbances; Floods and droughts; Climatic regions, Natural vegetation,and Soil regions of India	8
III	Resources: Land, surface and groundwater, energy, minerals, biotic and marine resources; Forest and wildlife resources and their conservation; Energy crisis.	7
IV	Industry: Locational factors of industries, complexes /Industrial region, public sector undertakings; New industrial policies; Special Economic Zones and eco-tourism.	7
V	Cultural Setting: Historical Perspective of Indian Society, Racial, linguistic, and ethnic diversities, majortribes,and tribal Area: problems; cultural regions.	8
VI	Population: Growth and distribution, Demographic structure: literacy and work-force, migration (inter-regional, intraregional, and international) and associated problems; Population problems and policies. Health indicators.	8
VII	Agriculture: Irrigation, Seeds, fertilizers, Power; Institutional factors: landholdings, land tenure, and land reforms; Cropping pattern: Wheat and Rice, agricultural productivity, Agro and social-forestry; greenrevolution, and its socio-economic and ecological implications.	6
VIII	Settlements: Types, patterns, and morphology of rural settlements; Functional classification of Indian cities,metropolitan regions, Slums and associated problems, Problems of urbanization and remedies.	6

Suggested Readings:

1. Chauhan, P.R. and Prasad, M. (2003): Bharat Ka VrihadBhugol, Vasundhara Prakashan, Gorakhpur.
2. Farmer, B.H. (1983): An Introduction to South Asia. Methuen, London
3. Gautam, A. (2006): Advanced Geography of India, Sharda Pustak Bhawan, Allahabad
4. Johnson, B.L.C. (1963): Development in South Asia. Penguin Books, Harmondsworth
5. Krishnan, M.S. (1982): Geology of India and Burma, CAS Publishers and Distributors, Delhi.
6. Bansal SC, (2018) Bharat Ka Bhugol, Meenakshi Publication, New Delhi, Meerut.
7. Nag, P. and Gupta, S. S. (1992): Geography of India, Concept Publishing Company, New Delhi.
8. Rao, B.P. (2007): Bharat Kee Bhaugolik Sameeksha, Vasundhara Prakashan, Gorakhpur.
9. Sharma, T.C. and Coutinho, O. (2003): Economic and Commercial Geography of India, Vikas Publishing House Private Ltd. New Delhi.
10. Singh, J. (2003): India: A Comprehensive Systematic Geography. GyanodayaPrakashan, Gorakhpur
11. Singh, J. (2001): Bharat: Bhaugolik Aadhar evam Ayam, GyanodayaPrakashan, Gorakhpur. (Hindi)
12. Singh, R.L. (ed.) (1971): India: A Regional Geography. National Geographical Society of India, Varanasi.
13. Spate, O.H. K., Learmonth A. T. A. and Farmer, B. H. (1996): India, Pakistan, and Sri Lanka. Methuen, London, 7th edition.
14. Sukhwal, B.L. (1987): India: Economic Resource Base and Contemporary Political Patterns. Sterling Publication, New Delhi
15. Tiwari, R.C. (2007): Geography of India, Prayag Pustak Bhawan, Allahabad.
16. Wadia, D. N. (1959): Geology of India. Mac-Millan and Company, London, and student edition, Madras.
17. Khullar, D.R. (2007): India: A Comprehensive Geography, Kalyani Publishers, New Delhi.

- Suggested Continuous Evaluation Methods:
  Assignment / test / Quiz (MCQ) / Seminar/ Presentations

- Suggested equivalent online courses:
- Courses on Swayam / MOOCs
  https://onlinecourses.swayam2.ac.in/nou20_ag10/preview

BA 3rd Year Sem. VI
Course II
(Theory)

Programme/Class: Certificate/ BA	Year: Third	Semester: Sixth
Subject: Geography		
Course Code KA110602T	Course Title: Evolution of Geographical Thought	

Course outcomes:

On completion of this course, learners will be able to:

- Understand the contribution of Indian and other renowned Geographers
- Understand the concept of evolution of Geographical Thought.

Credits: 4	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4/w

Unit	Topics	No. of No. Of Lectures
I	Nature and scope of Geography: Geography as a spatial science, as interdisciplinary and integrated discipline.	7
II	Concepts of distributions; relationships, areal differentiation, and spatial organization in Geography	7
III	Dualisms in geography; systematic & Regional geography, physical & human geography, The myth, and reality about dualisms.	8
IV	Contribution of Greek, Roman and Indian geographers in ancient period.	7
V	Contribution of Arab geographers in Middle Ages, Renaissance period in Europe. Renowned travellers and their geographical discoveries.	8
VI	German school of thought - Kant, Humboldt, Ritter, Richthofen, Ratzel, Hettner, French school of thought - Contribution of Blache & Brunches.	8
VII	Soviet geographers, American school - Contribution of Sample, Huntington& Carl Sauer. British school - Contribution of Mackinder, Herbertson & L.D. Stamp.	7
VIII	Paradigms in Geography. Changing Paradigms in Geography; Thomas Kuhn theory, and application of Kuhn model in geography.	8

Suggested Readings:

1. Ali, S.M. (1960): Arab Geography, Institute of Islamic Studies, Aligarh Muslim University, Aligarh, First Edition.
2. Daniel, P., Bradshaw, M., Shaw, D. and Sidaway, J. (2000): Human Geography. Issues for the 21stCentury. Prentice Hall, London.
3. Diddie, J. (ed.) (1990): Indian Geography, Institute of Indian Geographers, Pune, first edition.
4. Dikshit, R. D. (2003): Geographical Thought. A Critical History of Ideas. Prentice-Hall of India, New Delhi. (In English and Hindi).
5. Dube, B. (1967): Geographical Concepts in Ancient India, National Geographical Society of India, Varanasi
6. Getis, A., Getis, J. and Fellman, J. D. (2007): Introduction to Geography. 10th edition. McGraw Hill, New York.

7. Hartshorne, R. (1959): Perspectives on the Nature of Geography. John Murray, London.
8. Harvey, D. (1969): Explanation in Geography. Arnold, London.
9. Holt-Jensen, A. (1988): Geography: Its History and Concepts. Harper and Row Publishers, London.
10. Husain, Majid (2005): Evolution of Geographical Thought. Rawat Publications, Jaipur.
11. Johnston, R., Gregory, D., Pratt, G., Watts, M. and Whatmore, S. (2009): The Dictionary of Human Geography. Blackwell Publishers, Oxford, 5th edition.
12. Johnston, R. and Sidaway, J. D. (2004): Geography and Geographers: Anglo-American Human Geography Since 1945. Arnold Publishers, London.
13. Rowling, L. and Daugherty, R. (eds.) (2005): Geography into the Twenty-first Century. 2nd edition. John Wiley and Sons, Chichester.
14. Taylor, G. (ed.) (1953): Geography in the Twentieth Century. Methuen and Company, London.

- Suggested Continuous Evaluation Methods:
  Assignment / Test / Quiz (MCQ) / Seminar / Presentations

- Suggested equivalent online courses:
- Courses on Swayam / MOOCs
  https://onlinecourses.swayam2.ac.in/cec21_hg06/preview

BA 3rd Year, Sem. VI
Course III
(Practical)

Programme/Class: Certificate/ BA	Year: Third	Semester: Sixth
Subject: Geography		
Course Code: KA110603P	Course Title: Remote Sensing and GIS	

Course outcomes:

On completion of this course, learners will be able to:

- Understand and Conceptualize Remote Sensing and GIS Technique
- Understand the use of various image processing Software
- Basic idea of Geographical Information System

Credits: 2	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w

Unit Topics No. of	Topics	No. Of Lectures
I	Remote Sensing and GIS: Definition, Principles of Remote Sensing, EMR Interaction with Atmosphere and Earth Surface; Overview of image processing & GIS Packages (Including open-source Software's) – ARC GIS, ERDAS, MAP INFO, ILWIS, QGIS etc.	5
II	Creation of Shape File in GIS Software's, GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.	5
III	Geo-Referencing of Maps and Preparation of Maps with Legend, Scale, North Arrow etc; Interpretation and Application of Remote Sensing and GIS: Land use/ Land Cover, Urban Sprawl Analysis; Forests Monitoring.	10
IV	Downloading of Remote sensing Images from various online platforms (like Bhuvan, USGS, ASF, Copernicus etc). Land use Classification (Supervised and Unsupervised) using downloaded images and GIS Packages.	10

Suggested Readings:

1. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London
2. Chauniyal, D. D. (2004): Remote Sensing and Geographical Information System (in Hindi), Sharda Pustak Bhawan, Allahabad
3. Cracknell, A. and Ladson, H. (1990): Remote Sensing Year Book. Taylor and Francis, London.
4. Curran, P.J. (1985): Principles of Remote Sensing. Longman, London.
5. Deeksha Tulu, B.L. and Rajan, Y.S. (ed.) (1984): Remote Sensing. Indian Academy of Science, Bangalore.
6. Floyd, F. and Sabins, Jr. (1986): Remote Sensing: Principles and Interpretation. W.H. Freeman, New York.
7. Gautam, N.C., and Raghav swamy, V. (2004). Land Use/ Land Cover and Management Practices in India. B.S. Publication., Hyderabad.
8. Jensen, J.R. (2004): Remote Sensing of the Environment: An Earth Resource Perspective. Prentice Hall, Englewood Cliffs, New Jersey. Indian reprint available.
9. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. John Wiley and Sons, New York.
10. Nag, P. (ed.) (1992): Thematic Cartography and Remote Sensing. Concept Publishing Company, New Delhi.
11. Rampal, K.K. (1999): Handbook of Aerial Photography and Interpretation. Concept Publishing. Company, New Delhi.
12. Campell, J. B. (2003): Introduction to Remote Sensing. 4th edition. Taylor and Francis, London.

- **Note:** In Final Examination Student shall be examined by external and internal examiners. Marks Distribution: Written Exam, Viva, Practical File, Map Preparation using open-source GIS, Image processing Software Use.

BA 3rd Year, Sem. VI
Course III
(Practical)

Programme/Class: Certificate/ BA	Year: Third	Semester: Sixth
Subject: Geography		
Course Code: K<A110604R	Course Title: Project Report-2	

Course outcomes:

Students will be able to understand:

- In-depth knowledge and application of RS and GIS technology in research.
- Learn to prepare Project Report.

Credits: 3	Core Compulsory
Max. Marks: 25+75	Min. Passing Marks: 40

Total No. of Lectures-Tutorials-Practical (in hours per week): P- 2/w

Unit No.	Topics	No. Of Lectures
I	Project report shall be on any topic of interest of students. It must include Remote sensing and GIS technology directly or indirectly. Like project can be based on investigation of any issue using above technology or this technology must be used in data analysis or representation. **Note:** 1. Each faculty member shall teach and guide to his/her Group of students independently. 2. Student shall choose supervisor according his/her research interest and specialisation of Faculty member.	30

Suggested Readings:

- This course can be opted as an elective by the students of following subjects: Open for all

Suggested Continuous Evaluation Methods:

- Seminar, Presentations, VIVA

Suggested equivalent online courses...

Syllabus

M.A. (GEOGRAPHY)

Based on National Education Policy-2020

(To be Effective from Session 2023-24)

KAMLA NEHRU INSTITUTE
OF PHYSICAL & SOCIAL SCIENCES
Sultanpur (UP)

Accredited 'A' Grade by NAAC

(An Autonomous Institute)

Kamla Nehru Institute of Physical & Social Sciences, Sultanpur (UP)-228118

(An Autonomous Institute)

'NAAC – 'A' Grade'

Structure of syllabus for the program

B.A. and M.A. : Subject- Geography

Syllabus developed/proposed by

S.No.	Name	Designation	Department	College/University/Address
1.	Sri Sudhanshu Pratap Singh	Convenor	Geography	K.N.I.P.S.S., Sultanpur
2.	Dr. Ravi Prakash Mishra	Member	Geography	K.N.I.P.S.S., Sultanpur
3.	Dr. Namrata Verma	Member	Geography	K.N.I.P.S.S., Sultanpur
4.	Dr. Shambhu Nath	Member (Nominee Academic Council)	Geography	Principal, Raja Srikrinsha Dutt Mahavidyalaya, Jaunpur
5.	Prof. R.K. Singh	Member (Nominee Academic Council)	Geography	T.D. P.G. College, Jaunpur
6.	Dr. Sant Lal	Member (Nominee V.C., Dr. RMLAU)	Geography	K.S. Saket P.G. College, Ayodhya
7.	Sri Baldev Singh (Industrialist)	Member (Nominated Principal)	NA	Punjabi Colony, Kurwara Naka, Sultanpur
8.	Sri Jagjeet Singh (Ex-student)	Member (Nominated Principal)	NA	Near Vijay Delux, Laldiggi, Sultanpur

As per syllabus development guidelines of Higher Education for UG & PG Course-

(Dr. Ravi Prakash Mishra)
Member
K.N.I.P.S.S., Sultanpur

(Sri Sudhanshu Pratap Singh)
Convenor
K.N.I.P.S.S., Sultanpur

(Dr. Shambhu Nath)
Member (Nominee Academic Council)
Principal, Raja Srikrinsha Dutt
Mahavidyalaya, Jaunpur

(Dr. Namrata Verma)
Member
K.N.I.P.S.S., Sultanpur

(Dr. Sant Lal)
Member (Nominee V.C., Dr. RMLAU)
K.S. Saket P.G. College, Ayodhya

(Prof. R.K. Singh)
Member (Nominee Academic Council)
T.D. P.G. College, Jaunpur

(Sri Jagjeet Singh)
Ex-student
Member (Nominated Principal)
Near Vijay Delux, Laldiggi, Sultanpur

(Sri Baldev Singh)
Industrialist
Member (Nominated Principal)
Punjabi Colony, Kurwar Naka, Sultanpur

Course Code		Course Title	Credits	T/P	Evaluation	
					CIE	ETE
A	B	C	D	E	F	G
SEMESTER I (YEAR I)						
KA1107001T	CORE	Advance Geomorphology	5	T	25	75
KA1107002T	CORE	AdvanceClimatology	5	T	25	75
KA1107003T	CORE	Economic Geography	5	T	25	75
KA1107004T	First Elective (Subject Elective) (Select any one)	Urban Geography	5	T	25	75
KA1107005T		Rural Geography				
KA1107006P	Second Elective (Subject Elective) (Select any one)	Field Study Report	5	P	50	50
KA1107007P		Cartography	5	P	50	50
SEMESTER II (YEAR I)						
KA1108001T	CORE	Advance Oceanography	5	T	25	75
KA1108002T	CORE	India: Physical Geography	5	T	25	75
KA1108003T	CORE	Environmental Geography	5	T	25	75
KA1108004T	Third Elective (Generic Elective) (Select any one)	General Geography	5	T	25	75
KA1108005T		Disaster Management				
KA1108006P	Fourth Elective (Subject Elective) (Select any one)	Advance Quantitative Techniques	5	P	50	50
KA1108007P		Remote Sensing	5	P	50	50

SEMESTER III (YEAR II)						
KA110901T	CORE	History of Geographical Thought	5	T	25	75
KA110902T	CORE	Regional Development & Planning	5	T	25	75
KA110903T	CORE	Geography of Resources	5	T	25	75
KA110904T	Fifth Elective (Subject Elective) (Select any one)	Bio Geography	5	T	25	75
KA110905T		Agricultural Geography	5	T	25	75
KA110906P	Sixth Elective (Subject Elective) (Select any one)	Field Training (Tour Report)	5	P	50	50
KA110907P		Geographic Information System (GIS)	5	P	50	50
SEMESTER IV (YEAR II)						
KA111001T	CORE	Population and Development	5	T	25	75
KA111002T	CORE	Political Geography	5	T	25	75
KA111003P	Seventh Elective (Subject Elective) (Select any one)	Field Study (Socio-economic Survey)	5	P	50	50
KA111004P		Advance Surveying	5	P	50	50
KA111005P	Research Project/Dissertation	Major Research Project / Dissertation	10	P	50	50

10.09.23

DEPARTMENT OF GEOGRAPHY
M.A./M.Sc. GEOGRAPHY SYLLABUS (NEP 2020)

The programme outcomes relating to M.A. Programme in geography are as follows:

PROGRAMME OUTCOMES (POs):

Programme Outcomes after Four Semesters (2year) of study

After the completion of M.A. Programme in Geography, students should able to:

1. Establish the position of Geography as a subject and its importance and interrelationships that reiterate and validate the Man Environment relationship.

2. In the course of field surveys, students acquire a greater understanding of the socio-economic and cultural dimensions of the populations with greater focus on marginalized section of society.

3. Physical field surveys enable the students to understand the landforms, geomorphic process, and associated hazards.

4. Computer-based techniques (RS & GIS) are incorporated in the syllabus which prepares the students for further analytical studies.

5. The students are directed towards problem analysis so that they can design and conduct independent research.

6. The comprehensive syllabus promotes and develops a thorough knowledge of concepts, methods, and theory.

7. The Ability Enhancement Course strives to develop communication powers in the student, both written and oral.

8. The Dissertations written by the students prepare them to examine social and environmental issues along with the causes, consequences and remedial measures emerging at local and national levels.

9. The syllabus is oriented towards emerging job opportunities and future prospects for the students.

10. Assistance is given to students in preparing for various competitive exams like UGC NET, CSIR NET, SET, etc.

Structure of Syllabus for the Program: M.A./M.Sc, Subject: Geography
Course Title:ADVANCE GEOMORPHOLOGY

Course Code: 1107011

Semester -First

Paper- First (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Study of landforms and the related processes from the traditional concept to the contemporary development of Geography.
- Depth knowledge on the influence of various types of rocks on the development and evolution of the landforms; hydrologic characteristics of an open channel flow that produce erosional and depositional landforms; form process interaction in the landform development.
- Learn some modern methods of geomorphic analysis of the landforms through the concept of geomorphic threshold, geochronological methods and extreme events and equilibrium.

ADVANCE GEOMORPHOLOGY

Unit I:Fundamental Concepts in Geomorphology:
Concept of relief orders.
Principles of uniformitarianism
Cycle of Erosion - concepts of Davis and Penck

Unit II:Earth Movements:
Theory of Isostasy: Views of Airy and Pratt, Geosynclines, Continental Drift Theory-Wegener
Plate Tectonics-concept and related views
Mountain Building Theories-concepts of Kober, Daly and Holmes.

Unit III:Exogenic Processes:
Weathering and soil formation
Dynamics of fluvial process and resulting landforms
Dynamics of glacial process and resulting landforms.
Dynamics of Aeolian process and resulting landforms.

Unit IV:Applied Geomorphology:
Scope of Applied Geomorphology, Terrain classification and its application, Applied Geomorphology and Disaster Management,Urbanisation,Oil exploitation and Engineering projects.

Books Recommended

1. Alam Clowes & Comfort., Processes and Landforms.
2.Blooms, A.L., Geomorphology-A Systematic Analysis of late Cenozoic landforms. 3.Cotton, Geomorphology.
4. Dowie, Isostasy.
5. Jolly., Surface History of the Earth.
6. Ollier, C.D., Weathering.
7. Sparks, B.W., Geomorphology.
8. Steers, J.A., Unstable Earth.
9. Strahler, A.H. & Strahler, A. H., Elements of Physical Geography.
10. Thornbury, W.D., Principles of Geomorphology.
11. Von Engeln., Geomorphology.
12. Wooldridge, S.W., & Morgan, R.S., An Outline of Geomorphology.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: ADVANCE CLIMATOLOGY

Course Code: GA110702T

Semester -First

Paper- Second (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Acquire clear concepts of climatology
- Greater understanding of the nature and scope of climatology; ocean atmospheric interaction; climate change and its impacts
- Response to global warming at individual as well as, societal levels.
- Responding to issues of climate change and its impacts
- Weather interpretation and forecasting.

ADVANCE CLIMATOLOGY

Unit I. Nature and scope of Climatology. The Atmosphere: Structure and composition, Insolation, Heat-budget of the Earth. Distribution of temperature: Temporal, Vertical and Horizontal, Green House effect.

Unit II. Atmospheric Equilibrium:Stability and Instability, PotentialEvapotranspiration. Distribution of Atmospheric pressure and Winds, Jet streams - their origin, types and distribution, Monsoon winds(with special reference to INDIA).

Unit III. Climatic Phenomena: Air masses and fronts their origin and classification. Frontogenesis and their Types. Weather associated with fronts. Cyclones,Anticyclones, Tornadoes and Waterspouts, Global warming.

Unit IV. Climatic Classification: Koppen and Thornthwaites- A critical appraisal of each classification. Climates of the World: Tropical, Temperate and Desert. Applied Climatology: Climate and Natural vegetation, Climate and Urban planning (Urban Climatology).

Books Recommended:

1.Barry & Perry, Synoptic Climatology.
2.Blair, T.A., Climatology-General and Regional.
3.Chorley, R.J. & Barry, R.G., Atmospheric Weather, and climate.
4.Donn, W.L., Meteorology.
5.Jackson, I.J., Climate, Water and Agriculture in the Tropics, 1977.
6. Kendrew, W.G., Climates of the Continents.
7.Lal, D.S., Climatology.
8. Mather, J.R., Climatology: Fundamental and Application,1974.
9. Patterson., Introduction to Meteorology.
10. Rama Shastry, A.A., Weather & Weather fore casting.
11. Rummy, G., Climatology, and the world's climate.
12. Stringer., Foundation of Climatology.
13. Stringer., Techniques in Climatology.
14. Trewartha, G.T., An Introduction to Climate

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:ECONOMIC GEOGRAPHY

Course Code:GA110703T

Semester -First

Paper- Third (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Develop knowledge on geographical aspects of economy; types of economic activities.
- Conceptualize, demarcate, and analyse the geographical determinates of agriculture and manufacturing activities
- Inculcate the knowledge of changing dynamics in the industrial and agricultural sector that will help them in their research studies.
- Acquire knowledge of the fundamental and modern issues in Economic Geography
- To gain in-depth knowledge of the concepts and approaches; classification of economic activities and their changing trend; theories of economic development.

ECONOMIC GEOGRAPHY

Unit I. Meaning and scope of Economic Geography. Approach to the study of economic geography, recent trends, changing relationship between Economics and Economic Geography. Economic Development,Rostow's Model of Stages of growth and development.

Unit II. Economic Activities: Characteristics an importance of Primary, Secondary and Tertiary economic activities. Classification of Agricultural system- Whittlesey's classification and Von-Thunen model of Agricultural Location.

Unit III. Manufacturing Activities: Significance and types, Factors of Industrial Location, Iron and Steel Industry, Cotton Textile Industry. Theories of Industrial Location; Weber's and Izard models.

Unit IV. Energy resources: Convectional Energy resources-Coal, Petroleum, Non-conventional energy resources-Solar Energy; World Energy Crisis,World trade Organization (WTO), Central Place Theories of Christaller and Losch.

Books Recommended:

1. Alexander J.W. Economic Geography.
2. Boesch H., A Geography of world Economy.
3. Brian, J. L., Berry et al., The Geography of Economic Systems
4. Barlow M. H. &R. G. Newton Patterns and Processes in Man's Economic Environment
5. Chisholm, M., Geography and Economics
6. Jones C. F. Economic Geography.
7. Grigg, D. B., Agricultural Systems of the World: An Evolutionary
8. Lloyd P. &P. Dickens., Location in Space; A Theoretical Approach to Eco. Geo.
9. Strahler, A. N. &A. Strahler., Geography and Man's Environment
10. Thoman, R. S. &E. C. Conking., The Geography of Economic Activity.
11. Thoman, R., "Econ. Geog." in International Encyclopaedia of S. Science
12. Miller E. &E. Willard , A Geography of Manufacturing.
13. Mc. Carty H. &J. B. Lindberg., A preface of Economic Geography.
14. Von Royan, W., Fundamentals of Economic Geography
15. William Von Rooyen et al., Fundamentals of Economic Geography.
16. Zimmerman, E. W., World resources and Industries
17. Hartshorne T. A., Economic Geography.
18. Majid Hussian, Economic Geography.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: URBAN GEOGRAPHY

Course Code: A110704T

Semester -First

Paper- Fourth (First Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- It will help students gain a better understanding of the process of urbanization and origin, growth of urban settlements with various theoretical viewpoints in the literature explaining them.
- They would be able to understand the key aspects of cities and get an indication of the breadth of material that can be covered when examining cities.
- Students will also get sensitized to the evolving urban planning visions.

URBAN GEOGRAPHY

Unit I. Internal Structure of Cities- Meaning, scope and significance of Urban Geography; urban morphology and land use patterns, classical models of urban growth and evolution of functional zones - Burgess's Concentric Zone Theory; Hoyt's Sectoral Model; Harris and Ullman's multiple Nuclei Model: formulation, salient features, and critical evaluation of these models; CBD - meaning, internal structure, characteristic features, and method of its delineation.

Unit II.Surrounding Relations: - The urban economic base- terminology, concepts, geographic qualities of the basic, non - basic concepts; the city's spheres of influence (Umland)-methods of its determination; rural-urban fringe- conceptual explanation, internal structure, characteristic features.

Unit III.Settlement Theories and Concepts: - The study of Walter Christaller's Central Place Theory and August's Losch settlement theory in the following heads-Initial formulation of the model and later developments; Salient features of the model and its applicability; Rank-size Rule and Law of Primate City.

Unit IV. Urbanization: -Urbanization as a process of transformation-demographic process,Economic process, and socio-cultural process. Spatial pattern and trends of urbanization

in India, patterns of urban growth in India-decadal, regional, different size classes of towns (I-VI).

BOOKS RECOMMENDED:

1. Alam, S.M., Hyderabad-secunderabad Twin Cities, Asia Publishing House, Bombay.
2. Barry, B.J.L. and Horton, F.F., Geographic perspectives on Urban Systems, Prentice Hall, Englewood Cliff, New Jersy, 1970.
3. Beaujeu Garnier, J., Chabot, G., Urban Geography, London, 1969.
4. Carter, Harold, The Study of Urban Geography, Edward Arnold Publishers, London.
5. Dickinson, R.E., 1964., City and Region, Routledge, London.
6. Gibbs, J.P., Urban Research Methods, New Jersey, 1961.
7. Hall, T., Urban Geography,London, 1988.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: RURAL GEOGRAPHY

Course Code: KA110705T

Semester -First

Paper- Fourth (First Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Classify rural economies and productive activities.
- Identify the strengths and weaknesses of various rural development programs.
- Categorise rural economic, environmental, and demographic patterns

RURAL GEOGRAPHY

Unit I. Concept and scope of rural geography; different approaches to study rural Geography,concept, and significance of rural development: Indicators of rural development.

Unit II. Rural Settlement: Definition and characteristics; Types and patterns of rural settlements and their distribution with special reference to spacing, rural house type, based on building materials, size and shape.

Unit III. Rural infrastructure facilities and amenities; New Agricultural technology; Rural transportation, rural education, rural industries, and rural marketing.

Unit IV. Critical review of rural development strategies in India: Integrated Rural Development Programme (I.R.D.P.), Community Development Programmes, Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA), National Rural Health Mission (NRHM).

Books Recommended

1.Singh Kartar., Rural Development: Principal, Policies and Management.

2. Maheshwari, R.S., Rural Development in India.

3. Clout, S.D., Rural Geography.

4. Hussain, Majid., Agricultural Geography, New Delhi.

5. Bell, G. (Ed). Strategies for Human Settlements: Habitat and Environment.

6.Chisholm, M., Rural Settlement and Land Use.

7.Singh, R.L., et. al: Readings in Rural Settlement Geography.

8. Singh, K.N.(Ed.) Rural Development in India: Problems, Strategies and Approaches.

9. Wan Mali, Sudhir., Service Centres in Rural India.

10. Mishra, H.N. (Ed.) Rural Geography.

11. Prasad, R. & Sarkar S., Rural India-Socio-Political development, Vol. I & II, Global Vision Pub. House, New Delhi.
12. Khullar D.R. India- A Comprehensive Geography, Kalyani Pub. NewDelhi

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: FIELD STUDY REPORT

Course Code: A110706P

Semester -First

Paper- PRACTICAL (Second Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- This course will require regular field visits, and at the end of the course each student will submit a Field Report as a part of the evaluation.
- Understanding of various dimensions of geography through field visits.
- Application of Geographical Research strategies by visiting door to door to collect reliable and valuable data.
- Students were able to Evaluate their role in the society and they able to know the problems of society.
- The paper deals with representing socio-economic data in the form of maps which will be useful for the students in their project work.
- Handle logistics and other emergencies on field.

FIELD STUDY REPORT

Field study Report will be prepared by the students under guidance of the teachers. The teacher will guide proper procedure for the Field Study Report on the basis of the following points: -

1. Selection of the problem.
2. Aims and objectives.
3. Hypotheses.
4. Selection of the study area.
5. Methodology: -
   1. Preparation or Questionnaire
   2. Personal Interviews
   3. Preparation of survey chart
   4. Tabulation and calculation.
   5. Data Interpretation and preparation of Field Study Report.

Structure of Syllabus for the Program: M.A. Subject: Geography
Course Title: INDIA PHYSICAL GEOGRAPHY

Course Code: A110802T

Semester - Second

Paper- Second (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Knowledge of Physiography, Climate, Soil, and Natural vegetation, of India.
- Conceptualize the Physiological approaches and to examine Physical differentiation in the study of India.
- Recognize Physical identities and Environmental dimension of various regions of India to address the issues and concern needed for environmental planning

INDIA: PHYSICAL GEOGRAPHY

Unit I. Physiography: Bases of Physiographic Divisions of India; Origin of Himalaya in context of Geosyncline and Plate Tectonics;Indian Peninsula: Structure and Relief; Indo-Gangetic Plain: Evolution, Structure and Relief; Coasts: Western Coast and Eastern Coast.

Unit II. Drainage: Evolution of Himalayan Drainage- A Critical study of Indo-Brahma River Theory: The Ganga River System; System and Pattern of Peninsular Drainage. The Godavari River System; differences between the Himalayan and Peninsular Drainage.

Unit III. Climate: Origin and Mechanisms of Indian Monsoon- A Critical Review of Classical and Modern Views Regarding Monsoons Origin, Effects of El-Nino on Indian Monsoon. IndianClimatic classification byKoppen and Thornthwaite.

Unit IV.Soils and Forests: Soil Erosion and Soil Conservation;Saline and Alkaline Soils- their measures of reclamation; Problems of Indian Forestry; Forest Development Programs.

Books Recommended

1. Spate. O.H.K. &Learmonth A.T.A.India &Pakistan,London
2. Puri, G. S., Indian forest Ecology New Delhi
3. Ray Chaudhary S.P. Land and soil New Delhi
4. TheGazetteer of India Vol.1
5. Krishnan. M.S., Geology of India, and Burma

The students will select any village or a sector of urban centres such as slum, popular settlements etc. for Field Study Report. The Report should be prepared in about 50 pages.

Structure of Syllabus for the Program: M.A./M.Sc.Subject: Geography

Course Title: CARTOGRAPHY

Course Code: GA110707P

Semester -First

Paper- PRACTICAL (Second Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Understand and prepare different kinds of maps.
- Recognize basic themes of map making.
- Development of observation skills.

CARTOGRAPHY

- History, Development and Significance of Cartography.
- Representation of Relief and Climatic Data
- Depiction of Relief: Drawing of Profiles Serial, superimposed, composite and projected; Profiles and their usefulness in studying landforms.
- Gradient and Slope: Significance, calculation of gradient, scale of slopes
- Methods of slops analysis: Wentworth, Smith, Henry Raisz and Robinson
- Hypsographic, Climographic and Altimetric Frequency curves
- Representation of Climatic Data: Climograph, Hythergraph and Rainfall Dispersion Diagram
- Representation of Statistical Data
- Thematic Mapping- Choropleth and Isopleth; Lorenz Curve.

BOOKS RECOMMENDED:

1. Campbell, J., Introductory Cartography, Prentice Hall, Inc., Englewood Cliff, New Jersey, 1984.
2. Cuff, D.J., & Mattson, M.T., Thematic Maps, their Design and Production, Mathuen, New York., 1982.
3. Robinson, A.H., & others., Elements of Cartography, John Willey, and sons, NewYork (New edition).
4. Archer, J.E., & Dalton, T.H., Fieldwork in Geography, London.
5. National Atlas and Thematic Maps Organization (NATMO): National Atlas of India, Calcutta.
6. Monkhouse, F.J., Maps and Diagrams, Methuen & Co., London, 1967.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: ADVANCE OCEANOGRAPHY
Course Code: GA110801T

Semester - Second

Paper- First (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Student will be able to understand the dynamics of ocean physiography and water movement.
- It will help them to have an understanding of relevance of oceans as a resource in times to come.

ADVANCE OCEANOGRAPHY

Unit I. Oceanography-nature, scope and development, distribution of land and water, Ocean bottom topography, bottom relief of Pacific, Atlantic and Indian Ocean.

Unit II. Characteristics of Ocean water: temperature - distribution, salinity - composition, source and distribution, density of sea level.

Unit III. Movement of ocean water: currents causes and character, currents of Atlantic, Indian and Pacific Ocean, Waves, tides, and theories of origin.

Unit IV. Ocean deposits and coral reefs: sources, Types and distribution of ocean deposits, coral reefs-formation, condition of growth, type of theories of origin.

Book Recommended:

1.Davis, R.J.A. 1986, Oceanography - An Introduction of the Marine Environment,Win C. Brown, Iowa.

2.King, C.A., Oceanography for Geographers, Edward Arnold Pub.

3.Murray, S.J., 1913, Ocean, A General account of the Science of the sea, Thorton Butter Worth, London.

4. Siddartha, K. 1999, Oceanography, A Brief Introduction, Kisalaya Pub, Pvt. Ltd. New Delhi.

5.Singh, S. 2002, Physical Geography, Prayag Pub, Allahabad.

6. Stahler, A. N. Stahler A. M., 1997, Geography and Man's Environment, JohnWiley, and Sons,New York.

7. Thurman, H. V., 1978, Introduction to oceanography, Charles E. Merrill Pub Co. London.

6. Das. P.K.. The Monsoon. New Delhi Wadia, D.N.. Geology of India. London.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: ENVIRONMENTAL GEOGRAPHY

Course Code: A110803T

Semester - Second

Paper- Third (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Appreciate the structure and functions of ecosystems with examples.
- Understand the environmental problems and relevant management strategies.
- Acquire knowledge about the new environmental policies and the need to revise policies to tackle the environmental issues of India, in particular.
- This paper is a core paper that intends to introduce students to geography and environment interface.
- It seeks to develop new insights among students on the relevance of environmental studies from a spatial perspective.
- The paper will be useful for students in developing ideas on environmental issues that geographers usually address.

ENVIRONMENTAL GEOGRAPHY

Unit I. Meaning and scope of Environmental Geography, Relations of environmental geography with other science, Types and Components of Environment, approaches to the study of man-environment relationships.

Unit II. Ecosystem,types, components and FunctionsofEcosystem, Trophic levels, Food chain and Food webs, Ecological pyramid and flow of energy. Bio-Geo-Chemical Cycles-Nitrogen cycle, Carbon cycle and Hydrological cycle.

Unit III. Concept, causes and types of Environmental Degradation,sources and types of Pollution, Air Pollution, Ozone depletion and itseffects on human health, Greenhouse effect, water pollution, and its adverse effects on human health.

Unit IV. Environmental management-methods and approaches; Environmental management and Sustainable development, Ecological principles: Survey, evaluation, preservation, and conservation of resources. Environmental impact Assessment.

Books Recommended:

1. Chandna, R.C., 1998 Environmental Awareness, Kalyani Publishers, New Delhi.
2. Gaur, S., and Chandrashekhar, T., 2006, Global Environmental Crisis, Book Enclave, Jaipur.
3. Gupta, P.D., 2003, Environmental Issue for the 21st Century, Mittal Publication, New Delhi.
4. Morris, D., Freeland, J., Hinchliff, S., Smith, S. (ed.), 2003, Changing Environments, Pd. John Wiley and Sons Ltd., The Open University, U. K.
5. Park, C. C., 1980, Ecology and Environmental Management, Butterworths, London.
6. Md Noor., Perspectives in Agricultural Geography, New Delhi.
7. Ali Mohammad. Food Production and Food Problem in India. N. Delhi.
8. Krishna, D., The New Agricultural Strategy, Delhi, 1971.
9. Bansil, B. C., Agricultural Problems in India, Delhi, 1971.
10. India 2004, Ministry of Information and Broad Casting, Govt. of India, New Delhi.
11. Survey of Agriculture and Survey of Industry, 2003, Hindu Publication.
12. C. B. Memoria, Economic and Commercial Geography of India.
13. Mahesh Chand and V.V. Puri, Regional Planning in India.
14. Paul Clavell, An Introductions to Regional Geography.
15. Johnstone, R. J., Geography and Geographers Since 1945.
16. Sinha, B. N., Industrial geography of India.
17. Sant, M., Industrial Movement and Regional Development.
18. Bijli, S. M. Industrialization in the Third World.
19. India 2004, Government of India Publication.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: GENERAL GEOGRAPHY

Course Code: XA110804T

Semester - Second

Paper- Fourth (Third Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- This course will lay the foundation of the understanding of Lithosphere, hydrosphere, atmosphere, Biosphere with special reference to Latitude, Longitude and Solar system.
- It will enhance the understanding of relationship and linkages between land, ocean, and atmosphere.
- The students will understand the Solar system, earth system sciences and impacts of climate variability.

GENERAL GEOGRAPHY

Unit I. Basic Concepts: Definition of Geography; General Geography, Regional Geography, Systematic Geography; Solar System; Motions of Earth-Rotation and Revolution; Concept of Latitude and Longitude; International Date Line; Calculation of Time.

Unit II. Components of Earth System: Atmosphere, Lithosphere, Hydrosphere, Biosphere, Composition and Structure of Atmosphere; Interior of the Earth; Weather and Climate; Wind Circulation; Hydrological Cycle; Ecosystem, Food Chain and Food Web.

Unit III. Regional Geography: Concept of Region; Components of Natural Regions; Natural Regions of the world; Man, and Environment Relationship in Equatorial Region, Temperate Region, and Polar Region.

Unit IV. Environment: Concept of Environment- Physical and Cultural Environment; Hazards and Disasters, Social and Economic Disaster; Global Warming and Climate Change.

Books Recommended:

1. Hussian Majid Fundamentals of Physical Geography, Rawat Pub, New Delhi.
2. Singh Savindra- Environmental Geography, Prayag Pustak Bhawan, Allahabad.
3. Blij H. F. De Geography, Regions and Concept. John Wiley,and Sons.
4. Lal D. S. Climatology Sharda Pustak Bhawan Allahabad
5. G.C. Leong, Certificate Physical and Human Geography, latest addition.
6. Singh Savindra &Singh J. Disaster Management- P. Pub., Allahabad
7. Campbell J. B. Introduction to Remove Sensing, G,. Ford press.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:DISASTER MANAGEMENT
Course Code: GA110805T
Semester - Second
Paper- Fourth (Third Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Understand the nature of hazards and disasters.
- Assess risk, perception, and vulnerability with respect to hazards.
- Prepare hazard zonation maps.
- Assessing the nature, impact and management of major natural and man-made hazards affecting the Indian subcontinent.

DISASTER MANAGEMENT

Unit-I: Definition, meaning and concept of disaster and hazard.Types ofHazards- Natural and man-made.Concept of Disaster Management, Concept of Disaster Relief, Resume, Trigger mechanism, Response, Mitigation Risk and Vulnerability.

Unit-II: Natural Disaster- Geological, Water and climate, Environmental Man-Made disaster-Chemical, Industrial, Nuclear, Accident

Unit-III: Biological disaster- Epidemics, Pest- Attack, Cattle epidemic, Food poisoning.SocialResponse to Hazard- reduction Identification of multiple disaster-prone areas.

Unit-IV: Natural Disaster reduction Management, Decision making policy.Determination of acceptable level of Risk, Measures to control and mitigate disaster, Role of NDMA and SDMAs.

Books Recommended:

1. Alexander David (1993): Natural Disaster, London UCI Press.
2. Singh Jagbir (2007) "Disaster Management Future Challenges and Opportunities", 2007.
3. Bhargva, Gopal (1992) Environmental Challenges and Ecological Disaster: Global Perspective, Mittal, New Delhi.
4. Sharma, Vinod K. (1995): Disaster Management, National Centre for Disaster Management Indian Institute of Public Administration, New Delhi.
5. Parasuraman, S. and P.V. UnniKrishnan (2000): India Disaster Report: Towards Policy Initiatives Oxford University Press, New Delhi
6. World Disaster Report 1997
7. Hewitt, Kenneth, (1997) Regions at Risk-A Geographical Introduction to Disaster, Longman.
8. Lodha, R.M, (1997) Environmental Ruins: The Crisis of Survival, Indus Publishing Company, New Delhi.
9. Government of India. (1997) Vulnerability Atlas of India. New Delhi. Building Materials & Promotion Council, Ministry of Urban Development, Government ofIndia.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:ADVANCE QUANTITATIVE TECHNIQUES

Course Code: GA110806P

Semester - Second

Paper- PRACTICAL (Fourth Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Learn the significance of statistics in geography. Understand the importance of use of data in geography.
- Recognize the importance and application of Statistics in Geography
- Interpret statistical data for a holistic understanding of geographical phenomena. Know about different types of sampling.
- Develop an idea about theoretical distribution.
- Learn to use tabulation of data. Gain knowledge about association and correlation.

ADVANCE QUANTITATIVE TECHNIQUES

- Correlation analysis: Karl Pearson's Product moment, Spearman's Rank Correlation, Coefficient, and their limits; test of significance on correlation co-efficient, scatter diagram.
- Simple linear regression and multiple regression analysis: regression lines and residuals; Methods of constructing regression lines, properties of least square estimates, co-efficient of determination.
- Test of significance: Chi-square test, student 'T' test, variance estimate test.
- Test for Distributions in Space; nearest neighbour analysis; spacing of settlement.

Books Recommended:

1. Hammond, Quantitative Techniques in Geog, Oxford, 1974.
2. Gregory, S., Statistical Method for Geography, Longman, 1975.
3. Berry, B.J.L., & Marble, D.F., Spatial Analysis: A Reader in Statistical Geography, . New Jersey, 1968.
4. Cole, J.P., & King, C.A.M., Quantitative Methods in Geography, New York, 1968.
5. King, L.I., Statistical Analysis in Geography, New Jersey.
6. Johnson, R.J., Multivariate Statistical Analysis in Geography, 1978.
7. El hance, D.N., Elementary statistics.
8. Pal, S.K., Statistical Methods in Geography.
9. Alvi, Zamir Uddin., Statistical Geography.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:REMOTE SENSING
Course Code: GA110807P
Semester - Second
Paper- PRACTICAL (Fourth Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes.
- Read and prepare map to undertake survey exercises in a geographical area and apply different cartographic techniques (Topo-sheets, Aerial photographs etc.) to map the same.
- Learn the development and uses of remote sensing system and navigation satellite systems in India.
- Students can efficiently assess the scientific principles of Remote Sensing Techniques, observe and apply satellite based remote sensing data.

REMOTE SENSING

- Fundamental of Remote sensing, satellite, and sensing systems(sensors).
- Concept of resolution, photography vs. image.
- Electromagnetic spectrum and its uses in remote sensing.
- Zones of Remote sensing in Gamma, Ultraviolet, Visible, Infrared, and Microwave Regions.
- Stereoscopic Vision Test.
- Test orientation of photo under pocket and mirror stereoscope.
- Land use/ land cover identification on Aerial photographs.
- Interpretation of Satellite imageryfor extraction of thematic information.
- Visual Image Interpretation, Field check, and mapping of land resource in any selected area.

Books Recommended

1. Campbell, J.B. (2002): Introduction to Remote Sensing. 5th edition. Taylor and Francis, London.
2. Cracknell, A. and Hayer's, L. (1990): Remote Sensing Year Book, Taylor and Francis, London.
3. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London.
4. Deeksha Tulu, B.L. and Rajan, Y.S. (ed.) (1984): Remote Sensing. Indian Academy of Science, Bangalore.
5. Floyd, F. and Sabins, Jr. (1986): Remote Sensing: Principles and Interpretation, W.HFreeman,New York.
6. Guham, P.K. (2003): Remote Sensing for Beginners. Affiliated East-West Press Private Ltd., New Delhi.
7. Hallert, B. (1960): Photogrammetry, McGraw Hill Book Company Inc., New York.
8. Harry, C.A. (ed.) (1978): Digital Image Processing, IEEE Computer Society, California
9. Hord, R.M. (1982): Digital Image Processing of Remotely Sensed Data, Academic Press, New York.
10. Keuder, D.R. (1959): Aerial Photographic Interpretation: Principles and Application. McGraw Hill, New York.
11. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. 4th edition John Wiley and Sons, New York.
12. Nag, P.(ed.) 1992: Thematic Cartography and Remote Sensing.
Concept Publishing. Company, New Delhi.
13. Reeves, R.G. (ed.) (1983): Manual of Remote Sensing. Vols. 1 and 2; American Society of Photogrammetry and Remote Sensing Falls Church, Virginia.
14. Siegel, B.S. and Gillespie, R. (1985): Remote Sensing in Geology, John Wiley and Sons, New York.
15. Silver, M. and Balmori, D.(eds.) (2003): Mapping in an Age of Digital Media. Wiley-Academy, New York, and Chichester.
16. Spurr,R. (1960): Photogrammetry and Photo Interpretation, The Roland Press Company, London.
17. Survey of India, (1973): Photogrammetry, Survey of India, Dehradun.
18. Swain,P.H. and Davis, S.M. (ed.) (1978): Remote Sensing: The Quantitative Approach. McGraw Hill, New York.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: HISTORY OF GEOGRAPHICAL THOUGHT

Course Code: KA110901T

Semester -Third

Paper- First (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- To develop philosophical and historical aptitude among students in the context of evolution and development modern geographical ideas, theme, approaches, and knowledge.
- To understand and analyse the basic theme, ideas and approaches of different philosophies that have contributed in the development of geography as a branch of knowledge.
- To develop a critical thinking regarding different schools, paradigm, ideological revolution, and new sub branches of geography.
- To Critically evaluate the nature of geography as spatial science with changing space and time, recent trends and future of geography.

HISTORY OF GEOGRAPHICAL THOUGHT

Unit I. Nature and Philosophy of geography: Meaning and scope, paradigm&Positivism, majorconcepts (Interrelation, Areal differentiation & spatial organization); period of the development of geographic thought in ancient India, main aspects of geography in ancient India.

Unit II. Development of geographical thought during Greek, Roman and Dark Age:Scientific Character of Geography in the Classical Greek Period- Contributions of Thales, Anaximander, Hecataeus, Herodotus, Eratosthenes;Contribution of Romans-Strabo, and Ptolemy; General characteristic of Contribution of Arabs in scientific geography; Al Khwarizmi, Al Masudi, Al Baruni, and Ibn Khaldun.

Unit III. Concepts in geography: Environmental Determinism, Possibilism and Neo-determinism: their present relevance in geography. Development of Dualism in geography: Physical verses Human Geography and Regional verses Systematic Geography.

Unit IV. Development of Modern Geography: Contributions of German School Humboldt, Ritter, Ratzel, Contribution of French School-Vedal-De-La Blanche, Contribution of British School-Mackinder the relevance of "Heartland theory" in present day Geo-political order.

Books Recommended:

1. Ali, S.M., Arab Geography, AMU., Press, Aligarh.
2. Anu chin, V., Directions in Geography.
3. Bunge, W., Theoretical Geography.
4. Clavell, P., Epistemology and History of Geographical Thought, in progress in Human Geography, Vol.4.
5. Dickinson, R.E., The Makers of Modern Geog., London, 1969.
6. Dickinson, R.E., The Making of Modern Geography.
7. Davis, V.K., Conceptual Revolution in Geography.
8. Freeman. T.A., A Hundred Years of Geography: Introduction to Behavioural Geography.
9. Amede's, Douglas, An Introduction to Scientific Reasoning in Geog., John Wiley, 1971.
10. Hartshorne, R., Perspectives on Nature of Geography, Rand MacNally, 1959.
11. Johnstone, R.J., The Future of Geography, Methuen, London, 1988.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:REGIONAL DEVELOPMENT &PLANNING

Course Code: A110902T
Semester - Third
Paper- Second (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Learn about basic principles of Development and regional planning.
- Know about pioneering thinkers in the field of regional planning.
- The students will study about the different theoretical
- background and structure of the regional planning process.
- Recognize regional identities and environmental dimension of regionalization to address the issues and concern needed for regional planning.

REGIONAL DEVELOPMENT &PLANNING

Unit I. Concept and nature of Regional Planning, Types of Planning, Principles and Objectives of Regional Planning; Approaches of Regional Planning.

Unit II. Concept of Regions, Attributes of Region, formal and functional regions, Methods, and techniques used in the regionalization of formal and functional regions, Planning Regions in India.

Unit III. Theories of Regional Development (Albert O. Hirschman, Gunnar Myrdal, John Friedman, W.W. Rostow, Dependency Theory of Environmental issues in Regional Planning.

Unit IV. Global Economic Block, World Regional Disparities, Regional Imbalances/ Disparities in India- Causes and consequences; Regional Development and Social movement in India.

BooksRecommended:

1. Bhat, L.S., 1973, Regional Planning in India, Statistical Publishing Society, Calcutta.
2. Chandana, R.C., 2000, Regional Planning, Kalyani Publishers Ludhiana.
3. Chand, M., Puri, & V.K., 1983, Regional Planning in India, allied Publishers, New Delhi.
4. Friedman., J., & Alonso, W. 1967, Regional Development and Planning - A Reader, MIT Press,Cambridge Hars.
5. Glasson, 1980 Regional Planning, Hutchinson, London.
6. Gilkison, A., 1955, Regional and Development, Netherlands, Foundation of International Corop.London.
7. Mishra, R.P., 1969. Regional Planning Concepts, Techniques and Policies, University of Mysore, Mysore.
8. Mishra, R.P., et.al., 1974. Regional Development and Planning in India. Institute of Development Studies, Mysore.
9. Rao, V.L.B., 1960. Regional Planning, Asia Publishing House, New Delhi.
10.Kant Surya et. al (eds).: Reinventing Regional Development, Rawat Publication,Jaipur, and New Delhi.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:GEOGRAPHY OF RESOURCES

Course Code: A110903T
Semester - Third
Paper- Third (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Understand the concept and classification of resources
- Understand the approaches to resource utilization
- Appreciate the significance of resources
- Assess the pressure on resources, Analyse the problems of resources depletion with special reference to forests, water, and fossil fuels.
- Understand the concept of Sustainable Resource development
- Understand the distribution, utilization, problems, and management of metallic and non-metallic mineral resources
- Analyse the contemporary energy crisis and assess the future scenario
- Understand the concept of Limits to Growth, resource sharing and sustainable use of resources

GEOGRAPHY OF RESOURCES

Unit I. Nature, Scope, and significance of geography of resources. Definition and concept of natural resources, Classification of resources.

Unit II. Characteristics of natural resources: Resources conservation and management with reference to land and forest resource.

Unit III. Water resources-Hydrologic Cycle, Fresh water resources, surface and underground water supplies, problems of water supplies. Marine resources, major fishing grounds of the world, fish distribution and exploitation. India's natural resource: water resource, conservation and management and its utilization.

Unit IV. Energy resources- Conventional energy resources-coal, petroleum, non- conventional-solar and geothermal energy.

Books Recommended:

1. Alexander, J.W., Economic Geography, New Jersey, 1965.
2. Ali, S.A., Resources for Future Economic Growth, New Delhi, 1979.
3. Dehends, William, W., The Dynamics of Natural Resource Utilization in D. Meadow (Ed.), Massachusetts, 1972.
4. Duncan, G., Resource Utilization and Conservation, New York, 1975.
5. Earl, D.K., Forest Energy and Economic Development, Oxford, 1975.
6. Renner, G.T., Conservation of Natural Resources, New York, 1942.
7. Zimmerman, E.W., Introduction of World Resources (edited by H.L. Honker, The Ohio State University, New York, 1964.
8. Zimmermann, E.N., World Resources & Industries, New York.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:BIO GEOGRAPHY

Course Code: GA110904T
Semester - Third
Paper- IV (Fifth elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- The distribution patters of the plants and animals and the processes involved focusing on its development and content,
- the concept of habitat, plant-animal association, zoogeography as well as Phyto-geography with the objectives of understanding the geography of living organism in the earth in a more analytical perspective.
- Ability to see the animate world from geographical perspective.
- Use of the knowledge in further academic development.

BIO GEOGRAPHY

Unit I. Meaning and scope of Biogeography, Approaches to the study of Biogeography, relevance and significance of Biogeography, environmental factors affecting distribution offlora and faunas

Unit II. Soils as an ecological factor, Soil forming factors, Soil components, Soil profile and horizon, Soil erosion and conservation, concept, and types of ecosystems.

Unit III. Biomes with special reference to Tropical rain forests, Tropical Monsoon deciduous forest, Tropical and Temperate grass lands biomes, zoogeographical regions.

Unit IV. Evolution, Dispersal and distribution of plants, forest conservation in India, wild life conservation in India, Biodiversity, concept types and importance.

Books Recommended:

1. Simmon, I.G., Biogeography: Natural and Cultural, Longman, London 1974.
2. Watts, David, Principles of Biogeography, London.
3. Odum, Eugene P., Fundamentals of Ecology, Philadelphia.
4. Newbiggin, M.I., Plant and Animal Geography, London.
5. Cloudsle-Thompson, J.L., Terrestrial Environment, London.
6. Allee, W.C., & Schmidt, K.P., Ecological Animal Geography, New York.
7. Jones, R.L., Biogeography: Structure, Process Pattern and Change within a Biosphere.
8. Mathur, M.S., Essentials of Biogeography, New York.
9. Darlington, P., Zoogeography, New York.
10. Huggett, R.J., Fundamentals of Biogeography, Routledge, U.S.A., 1998.
11. Cox, C.B. and More, P.D., Biogeography:- An Ecological and Evolutionary Approach,London, 2000.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:AGRICULTURAL GEOGRAPHY

Course Code:GA110905T
Semester - Third
Paper- IV (Fifth elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- The students will be able to understand and analyse the historical perspective of agriculture.
- The students will be able to analyse the agriculture development and productivity and its impacts on various sectors.
- The students will be able to get updated knowledge of contemporary issues and strategies.

AGRICULTURAL GEOGRAPHY

Unit I: Agricultural Geography: Nature & scope, Origin, and dispersal of agriculture – Major theories of origin of agriculture and gene-ceatres of agriculture - New World and Old World

Unit II: Models and Regions in Agricultural Geography: Bases of classification; normative models; Regionalisation: Concept and criteria; Agricultural regions of India.

Unit III: Agricultural Development and Productivity in India: Concept, Criteria of agricultural development; Agricultural Productivity: Concept and Determinants, Regional imbalances, Socio-economic and human health consequences.

Unit IV: Environmental Consequences of Agriculture in India: Concept, process, regional patterns, and consequences: ground water depletion and contamination; salinity and alkalinity, deterioration of soil fertility and soil erosion.

Books Recommended:

1. Duckham, A.N. and Mansfield, G.B., Farming Systems of the world, London, 1970.
2. Griggs, D.G., An Introduction to Agricultural Geography, 1964.
3. Husain, Majid., Agricultural Geography, New Delhi.
4. John, R, Tarrant, Agricultural Geography.
5. Mohammad, A., Food Production and Food Problem in India, New Delhi.
6. Mohammad, N., Perspectives in Agricultural Geography, New Delhi.
7. Morgan, W.B. and Munton, P.J.C. Agricultural Geography. London, 1971.
8. Shafi, M., Agricultural Geography of South Asia, Macmillan, New Delhi 2000
9 Shafi, M., Agricultural Geography, Dorling Kindersley, New Delhi, 2006
10. Singh, J. and Dhillon, S.S., Agricultural Geography, 1970
11. Symons, L., Agricultural Geography, London, 1967
12. Wrigley, G., Tropical Agriculture, 1979

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:FIELD TRAINNING (TOUR REPORT)

Course Code: A110906P
Semester - Third
Paper- PRACTICAL (Sixth elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- This course will require regular field visits, and at the end of the course each student will submit a Field Report as a part of the evaluation.
- Understanding of various dimensions of geography through field visits.
- Application of Geographical Research strategies by visiting door to door to collect reliable and valuable data.
- Students were able to Evaluate their role in the society and they able to know the problems of society.
- The paper deals with representing socio-economic data in the form of maps which will be useful for the students in their project work.
- Handle logistics and other emergencies on field.

FIELD TRAINNING (TOUR REPORT)

The student of **MA. /M. Sc. (Final) III Semester** are required to study and submit their tour reports for evaluation and viva voce examination. **The duration of the main fieldwork/tour will be up to two weeks.** The class room teaching would include preliminaries of socio-economic and environmental surveys to equip the students for the field work and tour report.

The fieldwork will cover the following region/regions of India assigned by the department during the academic year:

1. The Deccan Region.
2. The Konkan/Malabar Coast
3. The Sunder Ban Delta
4. The Mahanadi Delta
5. The Krishna Delta
6. The Cauvery Delta
7. The North Eastern States
8. The North/North Western States
9. The Central India

- **The T.A. and D.A. of the staff accompanying with the students will be paid by the college/Institution,as admissible to their cadre as per government rules..**

Books Recommended:

1. Singh, R.L., (Ed.) India - A Regional Study.
2. Spate, O.H.K., India - A Regional Geography.
3. Wadia, D.N., Geology of India.
4. M.S. Krishna, Geology of India.
5. Ray and Chaudhary, Soils of India.
6. Ahmad, E., Coastal Geomorphology.
7. Ahmad, E., Some Aspects of Indian Geography.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:GEOGRAPHIC INFORMATION SYSTEM (GIS)

Course Code:GA110907P
Semester - Third
Paper- PRACTICAL (Sixth elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Training in the use Geographic Information System (GIS) software for contemporary mapping skills.
- Conducting field excursions and preparation of field report on research on problem in different areas of India.
- Apply GIS to the preparation of thematic maps.
- Understanding of GIS analysis workflow and integrated applications in various domains of Geography.

GEOGRAPHIC INFORMATION SYSTEM (GIS)

Fundamentals of GIS

Introduction of GIS: Definition, Information technology in geography, history and development in GIS, components of GIS, advantages of GIS over traditional techniques. Application of GIS in geographical studies.

Geographic data - human cognition of the spatial world, maps,and other representation of the world. Types of information in a digital map: scale projection and georeferencing. Spatial Data Geographic data and information, spatial - non-spatial data. GIS data formats, raster and vector data, their merits,and demerits.

Lab Work:

Lab 1: Introduction to Arc View's Modular Structure:

Task Set 1: Basic software and operating system concept,

Task Set 2: Introduction to Arc View

Lab II: Projection and Cartography:

Task Set 1: Basic concepts of projection,

Task Set 2: Concept of the theme in Arc View,

Task set 3: Cartographic design concepts

Lab III: Vector Data Model:

Task Set 1: The vector data model: points.

Task Set 2: The Vector data model: Lines and Polygons.

Task Set 3: Joining tabular data to spatial data.

Task Set 4: Creating Visualization

Lab IV: Digitizing and Data Automation:

Task Set 1: Digitizing in Arc View

Task Set 2: Creating a map.

Task Set 3: Creating a table and entering data

Lab V: Geo-coding: Matching addresses with locations:

Task Set 1: Geo-coding

Lab VI: Spatial Analysis:

Task Set 1: Classification

Task Set 2: Distance measure and Buffers

Books Recommended:

1. Cromley, R.G., Digital Cartography, Prentice Hall, N. Jersey, 1992
2. Fraser Taylor, D.R., "Geographical Information System", Pergamon Press, U.K., 1991.
3. Maguire, D.J., Good Child, M.F., and Rhind, D.W., "Geographical Information Systems: Principles and Application", Taylor and Francis Publication Washington, 1991.
4. Monmier, M.S., Computer Assisted Cartography: Principles and Prospects, P. Hall, New Jersey, 1982.
5. Piquet, D.J., and Markle, D.F., "Introductory Reading in Geographical Information System", Taylor and Francis Publication, Washington, 1990.
6. Shahab Fazal, GIS Basics, New age International Publisher

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:POPULATION AND DEVELOPMENT

Course Code: A111001T
Semester - Fourth
Paper- First (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Following completion of this course, a candidate ought to be able to grasp the many viewpoints on the population and development debate.
- The effects of demographic change on the economy, society, and politics will be easier Forstudents to visualise.
- They must be able to comprehend population policies and their critical role in guiding population management decisions towards sustainability.

POPULATION AND DEVELOPMENT

UnitI.Conceptual Frame: Population as resource; Population and development; Population and ecosystem; Demographic transition.

UnitII.Historical Background and Characteristics: History of human population; Relationship between population, Food, and energy; Population characteristics: developed and developing countries (case study of India).

Unit III.Problems and Policies: Optimum Population; Over Population & Under Population, Family welfare and planning; Population policies in India

UnitIV.Population and Development Conflict: Neo-Malthusian theory; FuturePerspectives:GrowthscenarioandrelationshipwithDevelopment.Populationproblems versus Development.

Books Recommended:

1. Champion, T.(ed.) (1993): Population Matters. Paul Chapman, London.
2. Ehrlich, P.R. and Ehrlich, A. H. (1996): Eco science: Population, Resources, Environment. 6th edition, W.H. Freeman and Company, San Francisco.
3. Firor, J. and Jacobsen, J.E. (2003): The Crowded Greenhouse: Population, Climatic Change and Creating a Sustainable World, Universities Press (India) Private, Ltd., Hyderabad.
4. Haggett, P. (2001): Geography, A Modern Synthesis. 5th edition, Harper and Row, New York.
5. Hammett, C. (eds.) (1996): Social Geography: A Reader. Arnold, London.
6. Meadow, D.H., Meadows, D.L., Randers, J. and Behrens, W.W. III (1973): The Limits to Growth, I R. Growth. Report of the Club of Rome. The New American Library, New York.

7. Meadows, D.H., Meadows, D.L. and Randers, J. (1992): Beyond the Limits Confronting Global Collapse, Envisioning a Sustainable Future. (A sequel to The Limits to Growth). Chelsa Green Publishers, Post Mills VT, USA.
8. Mestrovic, M. and Pester, E. (1974): Mankind at the Turning Point. II Report of the Club of Rome. The New American Library, New York.
9. Middleton, N. and O' Keefe, P. (2001): Redefining Sustainable Development. Pluto Press, London.
10. Ross, J.A. (ed.) (1982): International Encyclopaedia of Population. Free Press, New York.
11. Sharma, P.R. (ed.) (1991): Perspectives on the Third World Development. Rishi Publications., Varanasi.
12. Sharma, P.R. (ed.) (1994): Regional Policies and Development in the Third World. Rishi Publications, Varanasi.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:POLITICAL GEOGRAPHY

Course Code: A111002T
Semester - Fourth
Paper- Second (Core)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Learn the concept of nation and state and geopolitical Theories
- Understand the different dimensions of Electoral Geography
- Knowledge of politics of displacement.
- The paper indents to provide basic concept of State, Nation, and Nation State.
- The paper will be helpful for the students to know about the various political phenomenon of a county.
- It helps the leaner to understand various conflicts among the countries of the world.

POLITICAL GEOGRAPHY

Unit I. Definition and Historical Development of Political Geography. Geo-Politics vs Political Geography. Hartshorne's Functional, Whittlesey's Landscape and Joni's Unified Field theory.

Unit II. Definition and Components of State, Nation, and Nation State. Nationalism. Geographical factors of state: Physical, spatial,human, and Economic. Definition of Boundary and Frontier and their Classification.

Unit III. Mackinder's Geographical Pivot and Heartland Theory, Spykman's Rim Land Theory. Critical Assessment of Heartland and Rim Land Theories, and their Relevance to World's Geo politics. Concept of Colonization. Neo Imperialism: Political, Economic and Cultural Mechanism.

Unit IV. India: Federal or Union of States. India's recent relations with China and Pakistan.Nuclear Doctrine of India, Act East policy,Concept and Definition of geography of Election or Electoral Geography.

Books Recommended:

1. Alexander, L.M. World Political Pattern. London 1964
2. De Blij, H.J. Systematic Political Geography. New York, 1967.
3. Dikshit, R.D. Political Geography, New Delhi, 2004
4. Dikshit, R.D. Political Geography. A Century of Progress, New Delhi, 1999
5. Dikshit, S.K. Electoral Geography of India, Varanasi, 1993.
6. Dwivedi, R.L. Fundamentals of Political Geography, Allahabad, 2010.
7. Jackson, W.A.D. Politics &Geographic Relationship. Printice Hall '71
8. Kasperson;Structure of Political Geography. London '70
9. Pounds, N. Political Geography. London 1963.
10. Taylor, P. Political Geography, London, 1985.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: FIELD STUDY (SOCIO-ECONOMIC SURVEY)

Course Code: GA111003P
Semester - Fourth
Paper- PRACTICAL (Seventh Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- This course will require regular field visits, and at the end of the course each student will submit a Field Report as a part of the evaluation.
- Understanding of various dimensions of geography through field visits.
- Application of Geographical Research strategies by visiting door to door to collect reliable and valuable data.
- Students were able to Evaluate their role in the society and they able to know the problems of society.
- The paper deals with representing socio-economic data in the form of maps which will be useful for the students in their project work.
- Handle logistics and other emergencies on field.
- Develop skills in photography, mapping, and video recording.

FIELD STUDY (SOCIO-ECONOMIC SURVEY)

(A). Field Training Study Methods:

- Objectives and scope of the field enquiry.
- Methods of field work in different areas.
- Scale-macro, meso and micro.
- Preparation of questionnaire.
- Sampling techniques for the collection of data.
- Collection, processing, and presentation of data.

(B). Field Training Instructions:

- Fieldwork will be carried out on the basis of an interview schedule/questionnaire prepared.
- The candidate then used appropriate tables, maps, and diagrams to examine the data that had been gathered.
- On the basis of the candidate's survey, a report must be written.
- It is required to submit the report with the appropriate certification from the teacher in charge.
- **Under the guidance of the teacherwho will be accompanying them, students are required to do a field study of a remote place or region to investigate specific facets of the social, cultural, and physical landscape.**
- **A comprehensive report on the area/region shall be submitted by the students within two weeks on their return from the visited place.**

Books Recommended:

1. Archeer, J.E., & Dalton, T.H., Fieldwork in Geography, London, 1968.
2. El hance, D.N., Fundamental of Statistics, Allahabad, 1972.
3. Jones, P.A., Fieldwork in Geography, London, 1968.
4. Goddard, R.H., Field Techniques and Research Methods in Geography, Dubuque 1982.
5. Wheel so, K.S., & Harding, M., Geographical Fieldwork, London, 1965.
6. Mahmood, A., Statistical Methods in Geographical Studied, Rajesh Publication, Delhi, 1977.
7. Geography, S., Statistical Methods and the Geographers, Longmans, London.
8. Monkhouse, F.J., Maps and Diagrams, Methuen & Co., 1952.
9. Berry, B.J.L., & Marble, F., Spatial Analysis: A Reader in Statistical Geography, New Jersey, 1968.

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title: ADVANCE SURVEYING

Course Code: GA111004P
Semester - Fourth
Paper- PRACTICAL (Seventh Elective)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- Have an in-depth knowledge on Plate table survey; countering with Dumpy Level; measuring of height and traversing by Theodolite.
- Acquire knowledge and clear concepts of the different survey instruments.
- Acquire competence in handling surveying instruments in individual capacity.

ADVANCESURVEYING

- **Plane Table Survey**
  - Radiation Method with Telescopic Alidade
- **Prismatic Compass Survey**
  - Correction of bearing and plotting
  - Calculation of included angles and plotting
  - Elimination of Error-Bowditch Method
- **Dumpy Level Survey**
  - Rise and Fall System
  - Plotting of Longitudinal Sections.
- **Theodolite**
  - Measurement of horizontal angles

Books Recommended:

1.Purnima, B.C., Surveying and Levelling, Voll.

2. Alvi, Zamir Uddin, A Text Book of Surveying

Structure of Syllabus for the Program: M.A./M.Sc. Subject: Geography

Course Title:MAJOR RESEARCH PROJECT/ DISSERTATION

Course Code:KA111005P
Semester - Fourth

Paper- PRACTICAL (Compulsory)

Programme Specific Outcomes (PSOs)/ Course Outcomes (COs): After the completion of course, the students will have ability to following outcomes:

- The students will learn to write a project report / dissertation, after duly following all the steps in research methodology.
- Review of literature, collection and analysis of data, preparation of tables and maps, report writing, etc. in consultation with the Supervisor.
- The Dissertations written by the students prepare them to examine social and environmental issues along with the causes, consequences and remedial measures emerging at local and national levels.

MAJOR RESEARCH PROJECT/ DISSERTATION

A mandatory component of the practical in the M.A. IV semester programme is theMa jor Research Project / Dissertation.

Research project/Dissertation preparation guidelines for the students:

- For guidance, the assigned teacher will provide the students with a specific topic for their diss ertation.
- The Dissertation should have at least 100 pages.
- The Dissertation topic may come from one of the many subfields of geography, including Geomorphology, Climatology, Oceanography, Rural Geography, Urban Geography, Agricultural Geography, Political Geography, Electoral Geography, Regional Development & Planning, Geography of Tourism, Transport Geography, Remote Sensing and GIS, Industrial Geography, Geography of Health, Marketing and Commercial Geography, and any other geography-related topic.
- If possible, the Dissertation should be on a spatio-temporal basis.
- The Study should be based on Inductive or Deductive approach.
- The topic, aim, and objectives, research methods, and approaches for testing hypotheses, as well as the results of the report or dissertation, will all be included in the Dissertation. These components will be important for future geographic research.