Dr. Bhimrao Ambedkar University, Agra

A State University of Uttar Pradesh (Paliwal Park, Agra -282004)

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A Documentary Support

for

Matric No. – 1.1.1

Programme Outcomes & Course Outcomes

under the

Criteria – I

(Curriculum Design and Development)

Key Indicator - 1.1

in

Matric No. – 1.1.1

BACHELOR OF ARTS (GEOGRAPHY)

2022

Mapping:

Local Need | *Regional* | *National* | *Global Need*

B.A. in Geography

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 comtemprary 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.	Course Code	Paper Title	Theory/Practical	Credits
1	I	A110101T	Physical Geography	Theory	4
1	I	A110102P	Elements of Map and Surveying	Practical	2
1	II	A110201T	Human Geography	Theory	4
1	II	A110202P	Thematic Mapping and Surveying	Practical	2

2	III	A110301T	Environment, Disaster Management and Climate Change	Theory	4
2	III	A110302P	Statistical Techniques and Surveying	Practical	2
2	IV	A110401T	Economic Geography	Theory	4
2	IV	A110402P	Weather Maps, Geological Maps and Surveying	Practical	2
3	V	A110501T	Regional Geography	Theory	4
3	V	A110502T	Basics of Remote Sensing and GIS	Theory	4
3	V	A110503R	Tour and Tour report	Practical	2
3	V	A110504R	Project Report-1	Practical	3
3	VI	A110601T	Geography of India	Theory	4
3	VI	A110602T	Evolution of Geographical Thoughts	Theory	4
3	VI	A110603P	Remote Sensing and GIS	Practical	2
3	VI	A110604R	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: A110101T	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 Lectures
I	Nature and Scope of Physical Geography, Origin of Universe, solar system and Earth. Geological Time Scale(with special reference to evidences from India), Interiorof the Earth.	8
II	Origin of Continents and Oceans, Isostacy, Earthquakes and Volcanoes, Geosynclines, Continental Drift theory, Concept of Plate Tectonics.	8
III	Rocks, Folding, Faulting, Weathering, Erosion, Cycle of Erosion by Davis and Penck, Drainage Pattern.	8
IV	Fluvial, Karst, Aeolian, Glacial, and Coastal Landforms	8
V	Composition and Structure of atmosphere: Insolation, Atmospheric pressure and winds.	8
VI	Airmasses and Fronts, cyclones and anti-cyclones, Humidity, precipitation and rainfall types.	7
VII	Ocean Bottoms, composition of marine watertemperature and salinity. Circulation of Ocean waterWaves, Currents and Tides, Ocean deposits, Corals and atolls.	7
VIII	Biosphere, Biotic succession, Biome, Zoo-geographical regions of the world.	6

Suggested Readings:

1. Singh, Savindra (2018), Physical Geography (Eng./Hindi) Allahabad, India: PrayagPustak
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.

Program/Class: Certificate/BA	Year: First	Semester: First
Subject: Geography		
Course Code: A110102P	Course Title: **Elements of Map and Surveying**	

Course Learning 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: Nature and Scope. Scales–Concept and application; Graphical Construction ofPlain, Comparative, Diagonal Scales and Vernier scale.	7
II	Map Projections: Classification, Properties and Uses; Graphical Construction of Polar Zenithal, Stereographic, Bonne's and Mercator's Projections, and reference to Universal Transverse Mercator (UTM) Projection.	7
III	Topographical Map: Coverage, Scale and Topo Symbol, Interpretation Survey of India Toposheets. Representation of landforms by Contours. Slope Analysis – Wentworth's method.	8
IV	Basics of Surveying: Surveying: meaning, classification,merits and demerits. Plane Table Surveying.	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. 5thedition.
3. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
4. Sharma, J. P. (2001): Prayogik Bhugol., Rastogi Publication, Meerut 3rd. edition.
5. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindiand 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

BA 1st Year, Sem. II CourseI
(Theory)

Program/Class: Certificate/BA	Year: First	Semester: Second
Subject: Geography		
Course Code:A110201T	Course Title: **Human Geography**	

Course Learning 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 Lectures
I	Concept and Nature, Meaning and Scope of Human Geography. Development of Geographical understanding in India with special reference to Puranas.	7
II	Man and Environment relationship - Determinism, Possibilism, and Neo-determinism	7
III	Distribution of population and world pattern, globalmigration - causes and consequences, concept of 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 Regions, Cultural Diffusion, Race, Religion and Language.	8
VII	World Tribes: Eskimos, Kirghiz, Bushman, Masai, Semang, Pygmies.	8
VIII	Indian Tribes: Bhotias, Gaddis, Tharus, Bhil, Gond, Santhal, Nagas.	8

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

Program/Class: Certificate/BA	Year: First	Semester: Second
Subject: Geography		
Course Code:A110202P	Course Title: **Thematic Mapping and Surveying**	

Course Learning 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	Maps – Classification and Types, Principles of Map Design. Diagrammatic Data Presentation – Line, Bar and Circle.	7
II	Thematic Mapping Techniques – Properties, Uses and Limitations; Areal Data -- Choropleth, Dot, Proportional Circles; Point Data – Isopleths.	7
III	Cartographic Overlays – Point, Line and Areal Data. Thematic Maps – Preparation and Interpretation.	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. 5thedition.
3. Sharma, J. P. (2001): Prayogik Bhugol., Rastogi Publication, Meerut 3rd. edition.
4. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindiand English editions). Kalyani Publishers, New Delhi,.
5. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
6. Sharma, JP. (2008): Prayogatmak Bhugol 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.

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

Programme/Class: Diploma/BA	Year: Second	Semester: Third
Subject: Geography		
Course Code: A110301T	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, ClimateChange and Disaster Management.
- Understanding of the concept of appraisal and conservation of Environment andNatural 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

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 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, soil exhaustion, Desertification, Air pollution, water pollution Disposal of solid waste.	8
IV	Ganga Action Plan, Tiger project, Tehri dam & Narmada Valley project.	8
V	Science of Climate Change: Understanding Climate Change; Green House Gases and Global Warming.	8
VI	Global Climatic Assessment – IPCC, Impacts of Climate Change, National Action Plan on Climate Change.	7
VII	Disasters, Hazards, Risk, Vulnerability, Type of Disasters, Disaster Management, 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 ofHome Affairs.
7. Singh, Savendra (2019) Pryavaran Bhugol, Pravalika Publication, Allahabad
8. Kapur, A. (2010). *Vulnerable India: A Geographical Study of Disasters*. Delhi, India:Sage Publication.
9. Singh, Savendra (2019) Apada Prabandhan, 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.

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

Programme/Class: Diploma/BA	Year: Second	Semester: Third
Subject: Geography		
Course Code: A110302P	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 StatisticalMethods in Geography; Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio)	8
II	Tabulation and Descriptive Statistics: Frequency Distribution Table, Cross Tabulation, Graphical Presentation of Data (Bar diagram, Histograms, Frequency Curve and Cumulative Frequency Curves), Measurement of Central Tendencies (Mean, Median and Mode), Measurement of Partitions (Deciles, Quartiles and Percentiles), Dispersion (Standard Deviation, Variance and Coefficient of Variation).	8
III	Sampling: Probability sampling Non-probability sampling. Correlation: Rank Correlation and Product Moment Correlation.	7
IV	Instrumental Survey: Sextant	7

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

Program/Class: Diploma /BA	Year: Second	Semester: Fourth
Subject: Geography		
Course Code: A110401T	Course Title**: Economic Geography**	
Course Learning 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 Lectures
I	Meaning, concepts and approaches of Economic Geography; agricultural region of the world (Derwent Whittlesey).	8
II	Resource: meaning, concept and classification. Spatial organization of economic activities.	8
III	Economic organization of space, Forestry, fishing and mining activities.	7
IV	Agricultural typologies, agricultural land use model (J.H.Von Thunen)	7
V	Types of industries; Factors of location of industries; iron and steel industry, cotton textiles and sugar; 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

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

Program/Class: Diploma /BA	Year: Second	Semester: Fourth
Subject: Geography		
Course Code:A110402P	Course Title: **Weather Maps, Geological Maps and Surveying**	

Course Learning 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 Lectures
I	Weather Maps, Study and Interpretation of WeatherMap, Weather Forecasting.	7
II	Geological Maps: Types, Signs, Bed and Beddingplane, Rock Outcrop, Dip, Strike etc. Construction of Geological Sections.	7
III	Instrumental Survey: Indian Clinometer.	8
IV	Instrumental Survey: Theodolite	8

BA 3rd

Year, Sem. V

Course I

(Theory)

Programme/Class: Degree/BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code: A110501T	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 Lectures
I	Definition of Region, Evolution and objectives of regional planning. Planning practices in Ancient India.	8
II	Types of Regional planning, Formal, Functional, andPlanning 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 (Economic, Social and Environmental).	7
VIII	Need for regional planning in India, Five Year Plans and Regional Planning, multi- level planning in India.	6

Year, Sem. V
Course II
(Theory)

Program/Class: Degree /BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code:A110502T	Course Title: **Basics of Remote Sensing and GIS**	

Course Learning Outcomes
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 Lectures
I	Remote Sensing: Definition, Type, Scope and Historical Development. Types of Satellites.	**7**
II	Electro-magnetic radiation: Characteristics, spectral regions and bands. Stages or Process of Remote Sensing.	7
III	Remote sensing satellites: Platform and sensors. Resolution: Spatial, Spectral, Temporal, Radiometric Resolution.	8
IV	Remote Sensing data processing and applications: 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

Year, Sem. V,
Course III
(Practical)

Programme/Class: Degree/BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code: A110503R	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	Topics	No. of Lectures
I	How to prepare Field Book, steps and methods forpreparing Tour report, Methodology for Research in FieldTrip, 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……..……

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 color photo. One copy will also be submitted to the head in universities and Principalin colleges.
9. Teacher shall always 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/guest

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

Programme/Class: Degree/BA	Year: Third	Semester: Fifth
Subject: Geography		
Course Code: A110504R	Course Title: **Project Report-1**	

Course outcomes: Students will be able to understand In-depth knowledge of research methodology.
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	Topics	No. of Lectures
I	Meaning, types 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, CourseI
(Theory)

Program/Class: Degree /BA	Year: Third	Semester: Sixth
Subject: Geography		
Course Code:A110601T	Course Title: **Geography of India**	

Course Learning 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

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 Lectures
I	Space relationship of India with neighbouring countries; Structure and relief; Drainage system and watersheds; Physiographic regions; Ek Bharat Shrestha Bharat: A Geographical Prospective.	8
II	Mechanism of Indian monsoons and rainfall patterns, Tropical cyclones, and western disturbances; Floods and droughts; Climatic regions; Natural vegetation; Soil types and their distributions.	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: Evolution of industries; Locational factors of industries; Industrial houses and complexes including public sector undertakings; Industrial regionalization; New industrial policies; Special Economic Zones; Tourism including eco-tourism.	7

V	Cultural Setting: Historical Perspective of Indian Society; Racial, linguistic and ethnic diversities; religious minorities; major tribes, tribal areas, and their problems; cultural regions.	8
VI	Population: Growth, distribution, and density of population; Demographic attributes: sex-ratio, age structure, literacy rate, work-force, dependency ratio, longevity; migration (inter-regional, intraregional and international) and associated problems; Population problems and policies; Health indicators.	8

VII	Agriculture: Infrastructure: irrigation, seeds, fertilizers, power; Institutional factors: landholdings, land tenure, and land reforms; Cropping pattern, agricultural productivity, agricultural intensity, crop combination, land capability; Agro and social-forestry; Green revolution and its socio-economic and ecological implications.	6
VIII	Settlements: Types, patterns, and morphology of rural settlements; Urban developments; Morphology of Indian cities; Functional classification of Indian cities; Conurbations and metropolitan regions; urban sprawl; Slums and associated problems; town planning; Problems of urbanization and remedies.	8

Suggested Readings:

1. Chauhan, P.R. and Prasad, M. (2003): Bharat Ka Vrihad Bhugol, 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 Publishersand 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 ofIndia, Vikas Publishing House Private Ltd. New Delhi.
10. Singh , J. (2003): India: A Comprehensive Systematic Geography. Gyanodaya Prakashan, Gorakhpur
11. Singh, J. (2001): Bharat: Bhougolik Aadhar Avam Ayam, Gyanodaya Prakashan, Gorakhpur.(Hindi)
12. Singh, R.L. (ed.) (1971): India: A Regional Geography. National GeographicalSociety of India, Varanasi.
13. Spate, O.H. K., Learmonth A. T. A. and Farmer, B. H. (1996): India, Pakistan andSri Lanka. Methuen, London, 7th edition.
14. SukhwaI, 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 VI,
, Sem.
Course II
(Theory)

Program/Class: Degree /BA	Year: Third	Semester: Sixth
Subject: Geography		
Course Code:A110602T	Course Title: **Evolution of Geographical Thought**	

Course Learning 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 Lectures
I	Contribution of Indian Geographers in Ancient India.	7
II	Early Origins of Geographical Thinking, Concepts of distributions; relationships, interactions, area differentiation and spatial organization in Geography	7
III	Dualisms in geography; systematic & Regional geography, physical & human geography, Systematic and with regional geography. The myth and reality about dualisms.	8
IV	Contribution of Greek & Roman geographers in ancient world.	7
V	Contribution of Arab geographers in Middle ages, Renaissance period in Europe. Renowned travelers and their geographical discoveries.	8
VI	German school of thought - Kant, Humboldt, Ritter, Richthofen, Ratzel, Hettner French school of thought - Contribution of Blache & Brunhes.	8
VII	Soviet geographers, American school - Contribution of Sample, Hunthington & Carl Sauer. British school - Contribution of Mackinder, Herbertson & L.D. Stamp.	7
VIII	Paradigms in Geography, Thomas Kuhn theory about the growth and development of science. Application ofKuhn Model in Geography.	8

BA 3rd Year VI,

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Sem. Course
III (Practical)

Program/Class: Degree/BA	Year: Third	Semester: Sixth
	Subject: Geograp hy	
Course Code: A110603P	Course Title**: Remote Sensing and GIS**	

Course Learning 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 Lectures
I	Overview of image processing & GIS Packages (Including open source Software's). – ARC GIS, ERDAS, MAP INFO, ILWIS, GEOMEDIA, IDRISI, GRASS, SAGA, QGIS.	5
II	Creation of Shape File in GIS Software's. Coordinate system and projections in GIS Software's. GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.	5
III	Geo-Referencing of Maps. Creation of Point, Line and Polygon Files and features. Preparation of Maps with Legend, Scale, North Arrow etc and Export of Map in various Formats.	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. Chaunial, D. D. (2004): Remote Sensing and Geographical Information System(inHindi), 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. Deekshatulu, B.L. and Rajan, Y.S. (ed.) (1984): Remote Sensing. Indian Academyof Science, Bangalore.
6. Floyd, F. and Sabins, Jr. (1986): Remote Sensing: Principles and Interpretation. W.H. Freeman, New York.
7. Gautam, N.C. and Raghavswamy, 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 ResourcePerspective. 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. ConceptPublishing 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.

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Course III

(Practical)

Program/Class: Degree/BA	Year: Third	Semester: Sixth
Subject: Geography		

BA 3rd Year VI,

Course Code: 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	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 these technology must be used in data analysis or representation. Note: 1. Each faculty member shall teach and guide tohis/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: Openfor all ……..……

Suggested Continuous Evaluation Methods: Seminar, Presentations, VIVA

Suggested equivalent online courses