

# Syllabus

*for*

**M.A./ M.Sc.**

*in*

**GEOGRAPHY**

[As per CBCS pattern recommended by UGC]

**w.e.f. 2022-2023**



**VEER BAHDUR SINGH PURVANCHAL UNIVERSITY  
JAUNPUR**

V.B.S. Purvanchal University, Jaunpur, U.P.  
 Department of Geography, Faculty of Arts  
 M.A./M.Sc., Geography, Two Years Semester Course, 2022-23

**SEMESTER-VII**

Course Code	Explanation	Title	Credits
A110701T	Theory	Geomorphology	4
A110702T	Theory	Environmental Geography	4
A110703T	Theory	Geography of India	4
A110704T	Theory	Fundamentals of Remote Sensing	4
A110705P	Practical	Statistical Methods , Air Photo Interpretation and Field Survey	4
	Minor		4
A110706R	Research Project	Survey Work	4
<b>Total</b>			<b>28</b>

**SEMESTER-VIII**

Course Code	Explanation	Title	Credits
A110801T	Theory	Economic Geography	4
A110802T	Theory	Climatology and Hydrology	4
A110803T	Theory	Population Geography	4
One Paper of the Special group to be selected from the following			
A110804T	Theory (Optional )	Geography of Tourism or Geography of Rural Development	4
A110805P	Practical	Geological maps, Block Diagrams, Study Tour and Report	4
A110806R	Research Project	Survey Report	4
<b>Total</b>			<b>24</b>

### **SEMESTER-IX**

<b>Course Code</b>	<b>Explanation</b>	<b>Title</b>	<b>Credits</b>
A110901T	Theory	Principles of Oceanography	4
A110902T	Theory	Social Geography	4
One Paper of the Special group to be selected from the following			
A110903T	Theory (Optional)	Disaster Management or Geography of Resources	4
One Paper of the Special group to be selected from the following			
A110904T	Theory (Optional)	Regional Planning & development or Transport Geography	4
A110905P	Practical	Topographical Maps, Weather Maps and Field Survey	4
A110906R	Research Project	Village Report	4
<b>Total</b>			<b>24</b>

### **SEMESTER-X**

<b>Course Code</b>	<b>Explanation</b>	<b>Title</b>	<b>Credits</b>
A111001T	Theory	Modern Geographical Thought	4
One Paper of the Special group to be selected from the following			
A111002T	Theory (Optional)	Political Geography or Settlement Geography	4
One Paper of the Special group to be selected from the following			
A111003T	Theory (Optional)	Agricultural Geography or Industrial Geography	4

One Paper of the Special group to be selected from the following

A111004T	Theory (Optional)	Urban Geography or Research Methodology	4
A111005P	Practical	Projections, Diagrams and Field Survey	4
A111006R	Research Project	Dissertation	4
<b>Total</b>			<b>24</b>

**External Expert**

**Convener**

**Prof. R.S. Yadav (BHU Varanasi)**

**Prof. Manoj Kumar Singh**

**PG members:**

- 1. Prof. Rajendra Kumar Singh**
- 2. Prof. Ravindra Kumar Pandey**
- 3. Dr. Ashiya Parveen**

**UG Members:**

- 1. Dr. Vindhyanchal Singh**
- 2. Dr. Pramod Kumar Tiwari**

**Examination and Evaluation Pattern  
for M.A./ M.Sc.- Year 4<sup>th</sup> & 5<sup>th</sup> (All Semester)  
To be implanted from Session: 2022-2023**

**THEORY**

<b>Year</b>	<b>Semester</b>	<b>Paper</b>	<b>Maximum Marks</b>
4 <sup>th</sup> & 5 <sup>th</sup>	All	Theory(All)	Internal-25 External-75

**(A) Examination and evaluation pattern/ method for Internal Assessment**

<b>Examination Pattern</b>	<b>Marks</b>	<b>Total Marks</b>
Assignment/ Seminar	<b>10</b>	<b>25</b>
Written Test	<b>15</b>	

**(B) Examination and evaluation pattern/ method for External Assessment**

<b>Examination Pattern</b>	<b>Section</b>	<b>Number of Questions</b>	<b>Marks for each question</b>	<b>Total of each question</b>	<b>Grand Total</b>
Descriptive Type (Already Prevalent)	Section- A  (very Short Answer Type Questions)	10	1	10	75
	Section- B  (Short Answer Type Questions)	5	7	35	
	Section- C  (Long Answer Type Questions)	2	15	30	

**Evaluation of Research Project (P.G.)**

<b>Year</b>	<b>Semester</b>	<b>Maximum Marks</b>	<b>Total Marks</b>
4 <sup>th</sup>	VII & VIII	Internal-25 External-75	<b>100</b>
5 <sup>th</sup>	IX & X	Internal-25 External-75	<b>100</b>

## Programme outcomes (After 2 years of study)

- a) This course intends to orient the learner with the approaches to the broader discipline of geography.
- b) It will help in developing analytical and critical thinking based on the themes and issues of geography.
- c) It eventually prepares the students to understand the development of the subject and delve around issues suited to the needs of the contemporary world.
- d) It will help in exhaustive understanding of the basic concepts of geography and awareness of the emerging areas of the field.
- e) Acquisition of in- depth understanding of the applied aspects of geography as well as interdisciplinary subjects in everyday life.
- f) The application of knowledge gained in the field of geography in classroom to the practical solving of societal problems.
- g) This programme orient students with tradition geographical knowledge along with advance contemporary skills like remote sensing and GIS.

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V.B.S. Purvanchal University, Jaunpur, U.P.  
M.A./M.Sc., Geography, Year 4<sup>th</sup> ,Semester –VII

Course Title:	<b>GEOMORPHOLOGY</b>
Course Code:	A110701T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will critically evaluate the interactive spaces of physical, human and environmental components of Earth. The course enables the students to analyze the fundamental concepts of lithosphere and establish the relations with geo-physical changes of geomorphic environment. Students will provide the geomorphic concepts for economic manifestations in everyday life.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT 1.</b> Meaning and Scope of Geomorphology, Recent Trends in Geomorphology, Basic concepts in Geomorphology: Structure, Process and Stage/Time -Davis and Penk.	<b>08</b>

<b>UNIT II</b> Concept of Plate tectonics; Mass movement of rock waste and resultant landforms; Concept, classification and analysis of slopes	<b>10</b>
<b>UNIT III.</b> Structural Geomorphology - Fold, Fault and Domal Structures and Landforms;– Denudational Chronology of peninsular India, Himalayas and Northern Plains.	<b>10</b>
<b>UNIT IV.</b> Applied Geomorphology: Terrain classification and its applications * Oil exploitation Engineering projects ,Drainage network analysis – Stream orders, Sinuosity index and Drainage density	<b>08</b>

### Books Recommended

1. Ahmed, E. (1985): Geomorphology. Kalyani Publishers, New Delhi.
2. Bloom. A. L. (1998/2000): Geomorphology. 3<sup>rd</sup> Edition. Prentice Hall of India, New Delhi.
3. Chorley, R.J. Schumm S A and Sugden D E. (1984): Geomorphology. Methuen and Company Ltd., London.
4. Dayal, P. (1994): A Text book of Geomorphology.Kalyani Publishers, New Delhi.
5. Fairbridge, R. W. (ed.) (1968): Encyclopedic of Geomorphology, Reinhold Book Corporation, London.
6. Gregory, K.J. and Walling. D.E. (1973): Drainage Basin Form and Process. Edward Arnold, London.
7. Jog, S. R. (ed.) (1995): Indian Geomorphology (2 vols.) Rawat Publications, Jaipur.
8. Kale, V. and Gupta, A. (2001): Introduction of Geomorphology. Orient Longman, Hyderabad.
9. King, C.A.M. (1996): Techniques in Geomorphology. Edward Arnold, London.
10. Pethick, J. (1984): An Introduction of Coastal Geomorphology. Arnold, London. Indian reprint 2000.
11. Sharma, P. R. (ed.), (1993): Applied Geomorphology in Tropics. Rishi Publications, Varanasi.
12. Singh, S. (2004): Geomorphology, PravalikaPrakashan, Allahabad.
13. Sparks, B.W. (1986): Geomorphology. Longmans, London.
14. Thornbury, W.D. (2005): Principles of Geomorphology. John Wiley and Sons, New York.
15. Wooldridge, S.W. and Morgan, R.S. (1959): The Physical Basic of Geography- An Outline of Geomorphology. Longman, London.
16. Worcester, P.G. (2017): A Text Book of Geomorphology, D.VanNontrand Company, Inc. Toronto, New York, London.
17. Sheldon Judson, Marvin E Kauffman & L.Don Leet, (1974) Physical Geology, 17<sup>th</sup> edition, Prentice Hall, Inc. Englewood Cliffs, New Jersey.

18. Tom, L. McKnight & Darrel Hess, Sixth edition, (2000) Physical Geography, A landscape Appreciation, Prentice Hall, Upper Saddle River, New Jersey.

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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester – VII

Course Title:	<b>ENVIRONMENTAL GEOGRAPHY</b>
Course Code:	A110702T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will be able to know the various aspects of ecological degradation and generate the enthusiasm for protection, planning, preservation and sustainable management of environment..

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT 1.</b> Meaning and Scope of Environmental Geography: Basic principles of Environmental Geography: Composition and types of environment; Ecological principles; Man-environment relationship.	<b>10</b>
<b>UNIT II</b> Ecosystem: concept and components: Trophic levels; Food chains and food webs: Energy flow in the ecosystem; Circulation of matter in the ecosystem.	<b>10</b>
<b>UNIT III.</b> Environmental degradation; Extreme events, hazards and disasters (earthquake, volcanoes, cyclones, floods); Environmental pollution (air, water, solid waste, soil and noise pollution); Environmental pollution in India; Environmental Problems - global warming, ozone depletion.	<b>12</b>
<b>UNIT IV.</b> Environmental management; concept and approaches; Environmental dimension in planning - sustainable development; environmental consciousness, Environmental policy.	<b>08</b>

### Books Recommended

1. AnjuneYulu, Y. (2002): Environmental Impact Assessment methodologies. B. S. Publication, Hyderabad.
2. AnjuneYulu, Y. (2004): Introduction of Environmental science. B. S. Publication, Hyderabad.



3. Athavale, R. N. (2003): Water Harvesting and Sustainable Supply in India, Rawat Publications, Jaipur.
4. Bharucha, Erach (2015): Paryavaran Adhyayan, Orient black Swam.
5. Bilas, R. (1988): Rural Water Resources Utilization and Planning Concept Publishing Company, New Delhi.
6. Huggett, R.J. (1998): Fundamental Biogeography. Routledge, London.
7. Nag, P. Kumra, V.K. and Singh, J. (1990): Geography and Environmental issues at Local, Regional and National Levels. (In 3 vols.), Concept Publishing Company, New Delhi.
8. Odum, E.P. (1975): Ecology. Rawman and Littlefield, Lanham, USA.
9. Rajagopalan, R. (2005): Environmental studies: From Crisis to Cure, Oxford University Press, New Delhi.
10. Sexena, H.M. (2000): Environmental Management, Rawat publications, Jaipur and New Delhi.
11. Singh, D.N. Singh, J. and Raju, K.N.P. (eds.) (2003): Water Crisis and Sustainable Management, Tara Book Agency, Varanasi.
12. Singh, O., Nag, P., Kumra, V.K. and Singh, J. (eds.) (1993): Frontier in Environmental Geography. Concept Publishing Company, New Delhi.
13. Singh, R.B. (ed.) (1990): Environmental Geography, Heritage Publication, New Delhi.
14. Singh, R.B. (ed.) (1995): Studies in Environmental and Development. Rakesh Prakashan, Varanasi.
15. Singh, S. (2006): Environmental Geography, PravalikaPrakashan, Allahabad.
16. Singh, S. (2007): Paryavaran Bhugol. PravalikaPrakashan, Allahabad.
17. Wrigley, N. (1985): Categorical Data Analysis for Geographers and Environmental Scientists, Longman, London.

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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester – VII

Course Title:	<b>GEOGRAPHY OF INDIA</b>
Course Code:	A110703T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	On completion of this course ,learners will be able to understand the wider aspect of geography of India.

<b>Syllabus</b>	<b>No. of Lectures</b>
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<b>UNIT I</b> Physiographical & Structural Regions of India: Indian Monsoon-Origin, Climatic Regions of India by Koppen, Trewartha, R.L. Singh, Classification of Indian soil, Soils erosion and conservation.	<b>10</b>
<b>UNIT II:</b> Indian Agriculture: Crop Production & Pattern: New Trends -Dry land farming, Green and White Revolutions, Eco –Farming; Agro-Climatic Regions, Conventional and Non- Conventional Energy resources, Production, Distribution of Mineral resources; locational factors of Indian Industries; Industrial Regions.	<b>12</b>
<b>UNIT III</b> . Urban & Rural Settlements- Types & pattern; Urbanization in India, Primate City, Functional Classification of city, Urban Morphology; Problems of Rural- Urban Settlement; National Policies & Programmes; Origin and Dispersal of Races in India, Major tribes-Distribution and Classification.	<b>10</b>
<b>UNIT IV</b> Five Year Planning in India: Achievements and Failures; Multi-level Planning: Planning at National, State, District, Block and Panchyat level: Planning Regions-Bases of delimitation & Classification.	<b>10</b>

### Books Recommended

1. Ahmed, Waqar, Amitabh Kundra and Richard Peet(eds.) 2010. India's New Economic Policy: A Critical Analysis, Jaipur/New Delhi: Rawat Publication.
2. Ganguly, S. And Neil, De Votta (eds.) (2003): Understanding Contemporary India. Lynne Rienner Publishers, Boulder and London.
3. Gole, P. N. (2001): Nature Conservation and Sustainable Development in India, Rawat Publications, Jaipur and New Delhi.
4. Johnson, B.L.C. (ed.) (2001): Geographical Dictionary of India. Vision Books, New Delhi.
5. Khullar, D.R. (2006): India. A Comprehensive Geography. Kalyani Publishers, New Delhi.
6. Krishnan, M.S. (1968): Geology of India and Burma. 4<sup>th</sup> Edition. Higgin Bothams Private. Ltd, Madras.
7. Nag, P. and Gupta, S.S. (1992): Geography of India. Concept publishing Company, New Delhi.
8. Singh, R.L. (ed.) (1971): India. A Regional Geography. National Geographical Society of India, Varanasi.
9. Spate, O.H.K., Learmonth, A.T.A. and Farmer, B.H. (1979): India and Pakistan. Methuen and Company Ltd. London.
10. Subbarao, B. (1959): The Personality of India. University of Baroda Press, Baroda.
11. Sukhwai, P.L. (1987): India. Economic Resources Base and Cotemporary Political Patterns, Sterling Publications, New Delhi.
12. Tirtha, R. (2002): Geography of India. Rawat publications, Jaipur and New Delhi.
13. Tiwari, R.C. (2007): Geography of India, PrayagPustak Bhawan, Allahabad.
14. Wadia, D.N. (1959): Geology of India. Macmillan and Company, London & Madras. Student edition.

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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester –VII

Course Title:	<b>FUNDMENTALS OF REMOTE SENSING</b>
Course Code:	A110704T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After the end of syllabus students will be efficient to decipher, inter operate and represent mapping of various geo-spatial data with the help of aerial photo graphs, remote sensing and photogrammetric technique.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Remote Sensing -definition and Scope, electro-magnetic radiation, characteristics: interaction with matter, type of remote sensing and remote sensing platform.	<b>10</b>
<b>UNIT II</b> Aerial photos: Types, Scale, resolution, geometric Properties of aerial photos, Stereoscopic parallax, Relief displacement.	<b>10</b>
<b>UNIT III</b> General orbital characteristics of remote sensing satellites, general characteristics of remote sensing sensors, characteristics of raw remote sensing data.	<b>10</b>
<b>UNIT IV</b> Elements of image interpretation, image processing techniques, visual and digital, Remote sensing in resource mapping and environmental monitoring. Land use and land cover mapping: a cover study.	<b>10</b>

### Books Recommended

1. Campbell, J. B. (2002): Introduction to Remote Sensing. 5<sup>th</sup> edition. Taylor and Francis, London.
2. Cracknell, A. and Hayes, L. (1990): Remote Sensing Year Book, Taylor and Francis, London.
3. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London.
4. Deekshatulu, 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.H.Freeman, 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. Leuder, 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. 4<sup>th</sup> 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.

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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester –VII

Course Title:	<b>STATISTICAL METHODS ,AIR PHOTO INTERPRETATION AND FIELD SURVEY</b>
Course Code:	A110705P
Credit:	04
Type of Course:	Practical
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After the end of syllabus students will be efficient to decipher, inter operate and represent mapping of various geo-spatial data with the help of statistical method and aerial photo graphs. Students will be able to correlate their class room knowledge with practical reality during empirical field based survey.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Statistical Methods: Measures of Central Tendencies. Measures of Dispersions, Rank Order Correlation of Spearman, Product Movement Method/ Co-efficient of correlation by Karl Pearson, Regression, Normal Frequency distribution curve and its	<b>12</b>

characteristics, Sampling Procedures: Random, Systematic and Cluster.	
<b>UNIT II</b> Aerial Photographs: Introduction, concept, history, platforms, types, scale, terminology and Interpretation of aerial photographs .	<b>10</b>
<b>UNIT III</b> Plotting of field book by Prismatic compass and solving problems. Problems related to surveying- solving three point and two point problems, correction of bearing, removing closing error, plotting of readings obtained by prismatic compass.	<b>10</b>

### Assessment of Practical Examination

External Assessment		Internal Assessment	
Units	Maximum Marks	Pattern	Maximum Marks
UNIT I	20	Assignment	10
UNIT II	20		
UNIT III	20	Written Test	15
Record file & Viva Voce	15		
<b>Total</b>	<b>75</b>	<b>Total</b>	<b>25</b>

### Books Recommended

1. Campbell, J. B. (2002): Introduction to Remote Sensing. 5<sup>th</sup> edition. Taylor and Francis, London.
2. Cracknell, A and Hayes, L. (1990): Remote Sensing Year Book, Taylor and Francis, London.
3. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London.
4. Deekshatulu, B.L. and Rajan, Y.S. (ed.) (1984): Remote Sensing. Indian Academy of Science, Bangalore.
5. D.N. Elahance, Fundamentals of Statistics.
6. D.N. Elahance, Political Problems in Statistics.
7. Floyd, F. and Sabins, Jr. (1986): Remote Sensing: Principles and Interpretation, W.H. Freeman, New York.
8. Gregory, S., Statistical Method and the Geographer.

9. Guham,P.K.(2003):Remote Sensing for Beginners.Affiliated East-West Press Private Ltd.,NewDelhi.
10. Harry,C.A. (ed.)(1978): Digital Image Processing, IEEE Computer Society, California.
11. Henery, E. Garrel, Statistics in Psychology and Education.
12. Hira Lal, PrayogatmakBhoogolKeAdhar (Hindi)
13. Hord,R.M.(1982):Digital Image Processing of Remotely Sensed Data,Academic Press,NewYork.
14. Leuder, D.R.(1959):Aerial Photographic Interpretation: Principles and Application. McGraw Hill,New York.
15. Lillesand,T.M.and Kiefer,R.W.(2000):Remote Sensing and Image Interpretation.4th edition.John Wiley and Sons,New York.
16. Nag,P(ed.)1992:Thematic Cartography and Remote Sensing,Concept Publishing.Company,New Delhi.
17. Reeves, R.G. (ed.)(1983):Manual of Remote Sensing,Vols. 1 and 2,American Society ofPhotogrammetry and Remote Sensing, Falls Church, Virginia.
18. Robinson, A.H., Elements of Cartography.
19. Sharma,J.P.PrayogatmakBhoogol Ki Rooprekha (Hindi)
20. Siegel,B.S.and Gillespie,R.(1985):Remote Sensing in Geology,John Wiley and Sons,NewYork.
21. Singh,R.L.,Elements of Practical Geography.
22. Singh,L.R. & Singh,R.N.Map work and practical Geography (Eng./Hindi)
23. Smith,H.T.V.Aerial Photographs and their Applications.
24. Survey of India,(1973): Photogrammetry,Survey of India,
25. Tiwari,R.C.and Tiwari,Sudhakar,Abhinav PrayogicBhoogol.

Department of Geography  
V.B.S. Purvanchal University, Jaunpur, U.P.  
M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester – VII  
**Minor (Other Faculty)**  
**Credits – 4**

Department of Geography  
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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester – VII

Course Title:	<b>SURVEY WORK</b>
Course Code:	A110706R
Credit:	04
Type of Course:	Research Project

# Semester-VIII

Department of Geography

V.B.S. Purvanchal University, Jaunpur, U.P.

M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester – VIII

Course Title:	<b>ECONOMIC GEOGRAPHY</b>
Course Code:	A110801T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	On completion of the course students will be able to develop the ideas regarding geographical aspects of economy, types of economic activities, and will also conceptualize, demarcate and analyze the geographical determinants of manufacturing activities and energy resources.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b>  Meaning, Scope, Evolution and Recent trends of Economic geography, Fundamental Concepts, location of economic activities and spatial organization of Economics. Sectors of economy-Primary, secondary, tertiary and Quaternary	<b>10</b>
<b>UNIT II</b>  Concepts of resources, resource classification and conservation, human resources, water resources, biotic resources, mineral and power resources. Von-Thunen's model of agricultural location and its modifications. Concept and techniques of delimitation of agricultural regions by Whittlesey. Agricultural regions of the world.	<b>12</b>
<b>UNIT III</b>  Classification of Industries: Resource based and footloose Industries. Theories of Industrial location-Weber and Isard. Case studies of selected industries: Iron and steel, Textiles, Sugar, Petro-Chemicals and chemical. Industrial regions of the World.	<b>10</b>
<b>UNIT IV</b>  Theories of transport and transport systems of the world. Economic regions and their salient features. Impact of WTO, Globalization, Liberalization & Privatization on the economy of developing World.	<b>08</b>

## Suggested Readings:

1. Chatterjee, S.P.: Economic Geography of Asia, Allied Book Agency, Calcutta, 1984.

2. Chorley, R.J. and Hagget, P. (ed.) Network Analysis in Geography, Arnold, 1969.
3. Jones C.F. and Darkenwald, G.G.: Economic Geography, McMillan Co. N.Y., 1975.
4. Millar E: Geography of Manufacturing, Prentice Hall, N.Y., 1962.
5. Raza M. and Agrawal, Y.: Transport Geography of India, Concepts, New Delhi, 1986.
6. Singh, K.N. and Siddiqui: Economic Geography, Pravalika Prakashan, Allahabad
7. Smith, D.M.: Industrial location: An Economic Geographical Analysis, John Wiley, N.Y. 1971.
8. Thomas, R.S.: The Geography of Economic Activities, McGraw Hill, N.Y. 1962.

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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester –VIII

Course Title:	<b>CLIMATOLOGY AND HYDROLOGY</b>
Course Code:	A110802T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will be able to conceptualize, analyze and apply the concepts of weather and climate and correlate it with daily weather events. Students will develop the causal relations of climate with other social, economic and cultural activities. Students will be able to understand wider aspect of hydrology and its relevance.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b>  Composition, mass and structure of the atmosphere, Insolation, Laws of Radiation, Solar Constant, Heat balance of the earth and atmosphere, Pressure and pressure belts, tri cell Circulation of wind, Jet stream, Permanent, Seasonal and Local winds.	<b>10</b>
<b>UNIT II</b>  Concepts, Classification, Characteristics of air masses and fronts, Climatic classification of Koppen, and Thornthwaite. <b>Climate Change-</b> Causes and theories: Global warming – Evidences, causes and effects; Atmospheric Hazards and disasters- Tropical Cyclones-Tornado, Typhoon Hurricane & thunderstorm and cloud-bursts; El-Nino, La-Nina, Walker Circulation, Southern Oscillation. (ENSO)	<b>12</b>
<b>UNIT III</b>  Definition and scope of hydrology, hydrological cycle and its sub cycles, Precipitation intensity and duration, Infiltration, Surface run off and Floods, Man's interference on hydrological cycle.	<b>10</b>



<b>UNIT IV</b>	<b>10</b>
Sub-surface water, Soil moisture, Ground water-occurrence, Storage, movement. Water table fluctuation and safe yield. Principles and determination of water balance and its application in crop production. Water pollution, Applied hydrology.	

### Suggested Readings

1. Berry R.G. and Chorley. R. J: Atmosphere, Weather and Climate, Rutledge, London and New York, 1998.
2. Critchfield, J.H.: General Climatology, Prentice Hall, New Delhi, 1993.
3. Lal, D.S.: Climatology, Chaitanya Publications, Allahabad, 1986.
4. Lydolph, P.E.: The Climate of the Earth, Rowman, 1985.
5. Robinson P.J. and Henderson S: Contemporary Climatology, Henlow, 1999.
6. Upadhyaya D.P., and Singh R.A.: Climatology and Hydrology.
7. Addison H: Land, Water and flood, Chapman and Hall, London, 1961.
8. Chorley, R.J.: Water, Earth and Man, Methuen, London, 1967.
9. Jones, J.A.A Global hydrology: Process, Resources and Environmental Management, Longman, London, 1997
10. Todd, D.K.: Ground water Hydrology, John Wiley, New York, 1959.

Department of Geography  
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M.A./M.Sc., Geography, Year 4<sup>th</sup>, Semester – VIII

Course Title:	<b>POPULATION GEOGRAPHY</b>
Course Code:	A110803T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	At the end of this course, it is expected that students will enable to describe and evaluate spatial and temporal dimension of population dynamics.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b>	<b>10</b>
Nature and Scope of population geography, development in population geography in world & India. Sources of population data; The Census, Vital Registration and Other Sources, Problems relating to reliability of data and mapping.	

<b>UNIT II</b>	<b>10</b>
Population Dynamics- Measurement of fertility and mortality; Migration – causes & consequences, types and patterns. Theories of Migration: Ravenstein , Lee’s Laws and Behavioral model.	
<b>UNIT III</b>	<b>12</b>
Population distribution, density and growth: Theories of population growth- Malthus, Neo-Malthus and Demographic Transition Model, density types, World Pattern of population distribution and density, India: population growth, distribution and density , population composition- Rural and Urban population, Sex Ratio, Literacy, Occupational structure .	
<b>UNIT IV</b>	<b>08</b>
Population-Resource regions of the World and India, Human development index and its components, Population policies and planning with special reference to India.	

### Suggested Readings

1. Bogue, D.J.: Principles of Demography, John Wiley, N.Y., 1969.
2. Chandana, R.C.: Geography of population: Concept, determinants and Patterns, Kalyani Publishers, 2000.
3. Clarke, John. I: Population Geography, Pergamon Press, Oxford, 1973.
4. Crook, Nigel: Principles of Population and Development, Pergamon Press, N.Y, 1997.
5. Daugherty Helen Gin, Kenneth C.W. Kammerer: An Introduction to Population, the Guilford Press, N.Y., London, 1998.
6. Garmier, J.B.: Geography of Population, Longman, London, 1970.
7. Mamoria, C.B.: India's Population Problem, Kitab Mahal, New Delhi, 1981.
8. Premi, M.K.: India's Population: Heading Towards a Billion, B.R. Publishing Corporation, 1991.
9. Srinivasan K. and M Blassoff: Population Development Nexus in India: Challenges for the New Millennium, Tata McGraw Hill, New Delhi, 2001.
10. Woods, R.: Population Analysis in Geography, Longman, London, 1979
11. Zelinsky, Wilber; A Prologue to Population Geography, Prentice Hall, 1966.

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Course Title:	<b>GEOGRAPHY OF TOURISM</b>
Course Code:	A110804T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75

Course Outcomes:	At end of this course, student will able to describe about the importance of geography in tourism and tourism potential hotspot in the various tourism generating regions of India.
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<b>Syllabus</b>	<b>No. of Lectures</b>
<p style="text-align: center;"><b>UNIT I</b></p> <p>Definition of tourism, Factors influencing tourism-historical, natural, Socio-cultural and economic; Motivating factors for pilgrimages, leisure and recreation, elements of tourism, tourism as an industry.</p>	<b>08</b>
<p style="text-align: center;"><b>UNIT II</b></p> <p>Geography of tourism: its spatial affinity, areal and locational dimensions comprising physical, cultural, historical and economic. Tourism types-cultural and adventure tourism, national and international tourism. Globalization and tourism.</p>	<b>12</b>
<p style="text-align: center;"><b>UNIT III</b></p> <p>Indian tourism: Regional dimensions of tourist attraction, Evolution of tourism, Promotion of tourism. Infrastructure and support system-accommodation and supplementary accommodation, other facilities and amenities.</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT IV</b></p> <p>Impacts of tourism- Economic and Social. Positive and negative impacts, Current trends, spatial patterns and recent changes, Impact of globalization on tourism. Major tourist destinations of India.</p>	<b>10</b>

### **Suggested Readings:**

1. Bhatia, A.K.: Tourism : Development and Practices, Sterling Pub.New Delhi, 1996.
2. Chandra, R.H. Hill Tourism Planning and Development, Kanishka Pub., New Delhi; 1998.
3. Hunter C and Green H: Tourism and the Environment: A Sustainable Relationship, Routledge, London, 1995.
4. Kaur J: Himalayan Pilgrimages and New Tourism, Himalayan Books, New Delhi, 1993.
5. Milton, D: Geography of World Tourism, Prentice Hall, N.Y.1993.
6. Voase, R: Tourism: The Human Perspective, Hodder and Stoughton, London. 1995.
7. Williams Stephen: Tourism Geography, Routledge, London, 1998

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Course Title:	<b>GEOGRAPHY OF RURAL DEVELOPMENT</b>
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Course Code:	A110804T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will be able to efficiently formulate the issues and challenges of rural settlement and critically evaluate the suitability of different plans adapted for rural development in varying spatial context.

<b>Syllabus</b>	<b>No. of Lectures</b>
<p style="text-align: center;"><b>UNIT I</b></p> <p>Rural development: A geographical perspective. Concept of rural development. Structure and spatial organisation of rural settlements. Rural markets and market Centers, growth Poles and growth centres. Theories of central places, Rural land use and its problems and Planning.</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT II</b></p> <p>Dimensions of rural economy: Physical and Human resources- their spatial patterns and interrelationships, Socio-economic dimensions, Infrastructural facilities, Socio-cultural organisations. Causes and consequences of rural migration. Effect of agriculture on rural development.</p>	<b>12</b>
<p style="text-align: center;"><b>UNIT III</b></p> <p>Social issues of rural areas- Poverty, Housing and shelter ,Deprivation, and Inequality, Women empowerment, Health care and unemployment. Environmental issues: Water supply, Sanitation, Drainage, Occupational health hazards.</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT IV</b></p> <p>Balanced development strategies of India-Critical study of Panchayati Raj system, Role and relationship of panchayati raj institutions(Village panchayat, panchayat Samiti and Zila parishad) and administrative structure (village, block and district). Integrated rural development strategy.</p>	<b>10</b>

### **Suggested Readings:**

1. Kuklinski, A.R. (ed): Growth Poles and Growth Centres in Regional Planning, Moutan, The Hague, 1972.
2. Kundu A. And Raza M; Indian Economy; The Regional Dimension, Spectrum Publishers, New Delhi, 1982.
3. Richardson, H.W.: Regional Economics, Weidenfeld and Nicholson, London, 1969.
4. Clout, H.D.: Rural Geography, Pergman, Oxford, 1977.
5. Ram Chandran, H: Village Clusters and Rural Development, Concept Publication, New Delhi, 1985.

6. Rao, E.N.: Strategy for Integrated Rural Development, R.B.Publication Cor. Delhi, 19860
7. Srinivas M.N.: Village India, Asia Publication House, Bombay,1968.
8. Wanmali, S; Service centres in Rural India, B.R. Publication Cor.Delhi, 1983.

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Course Title:	<b>GEOLOGICAL MAP, BLOCK DIAGRAMS, STUDY TOUR AND REPORT</b>
Course Code:	A110805P
Credit:	04
Type of Course:	Practical
Maximum Marks:	Internal-25 External-75

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Geological Maps -Drawing and interpretation of Geological cross-sections and maps inclined, folded, faulted and unconformable structures, igneous intrusions.	<b>10</b>
<b>UNIT II</b> Block Diagrams Selection of block Diagrams, one point perspective and two point perspective block diagram. Conversion of contour map into one point perspective blocks diagrams. Important landforms on block diagrams one point & two point block diagrams.	<b>12</b>
<b>UNIT III</b> 1. Study tour will be conducted by concerning department. T.A./D.A. and related expenses to teachers and supporting staff on tour study shall be met by the representative institutions. 2. The duration of study Tour will be a minimum of 5 to 7 days. 3. Normally Two teachers and one attendant will accompany the tour party. 4. Study tour will be conducted to different regions other than institute is located. (Mountainous Region, Plateaus Region, Coastal Region & Desert Region.) 5. A comprehensive tour report on the area / region shall be submitted by the students with in two weeks on their return from the tour and students have to appear for viva – voce examination.	<b>10</b>

**Assessment of Practical Examination**

<b>External Assessment</b>		<b>Internal Assessment</b>	
<b>Units</b>	<b>Maximum Marks</b>	<b>Pattern</b>	<b>Maximum Marks</b>
UNIT I	15	Assignment	10

UNIT II	15		
UNIT III	30	Written Test	15
Record file & Viva Voce	15		
<b>Total</b>	<b>75</b>	<b>Total</b>	<b>25</b>

**BOOKS RECOMMENDED:**

1. Sharma, J.P. Prayogatik Bhogol Ki Rooprekha (Hindi)
2. Singh, R.L., Elements of Practical Geography.
3. Singh, L.R. & Singh, R.N. Map work and practical Geography (Eng./Hindi)
4. Hira Lal, Prayogatik Bhogol Ke Adhar (Hindi)
5. Tiwari, R.C. and Tiwari, Sudhakar, Abhinav Prayogik Bhogol.

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Course Title:	<b>SURVEY REPORT</b>
Course Code:	A110806R
Credit:	04
Type of Course:	Research Project

## Semester-IX

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V.B.S. Purvanchal University, Jaunpur, U.P.  
M.A./M.Sc., Geography, Year 5<sup>th</sup> Semester – IX

Course Title:	<b>PRINCIPLES OF OCEANOGRAPHY</b>
Course Code:	A110901T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After the end of syllabus students will be able to examine and compare the different ocean and water bodies with their distinct oceanic bottom relief, circulation system and marine deposit.

<b>Syllabus</b>	<b>No. of Lectures</b>
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<b>UNIT I</b> Oceanography – nature, scope and development, distribution of land and water, Ocean bottom topography, bottom relief of Pacific, Atlantic and Indian Ocean.	<b>08</b>
<b>UNIT II</b> Characteristics of Ocean water: temperature , density and salinity. Factors affecting distribution of temperature , density and salinity.	<b>10</b>
<b>UNIT III</b> Movement of ocean water: currents - causes and characteristics, currents of Atlantic, Indian and Pacific Ocean, Waves, tides and theories of origin.	<b>12</b>
<b>UNIT IV</b> Ocean deposits and coral reefs: sources, types and distribution of ocean deposits, coral reefs –formation, condition of growth, types and theories of origin.	<b>10</b>

**BOOKS 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. Siddhartha, 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, John Wiley and Sons, New York.
7. Thurnman, H.V., 1978, Introduction to oceanography, Charles E. Merrill Pub. Co., London.
8. Weyl, P.K. 1970, Oceanography an Introduction of the Marine Environment, John Wiley and Sons Ltd., London.

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Course Title:	<b>SOCIAL GEOGRAPHY</b>
Course Code:	A110902T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will be able to assess the causal role of Geography in production of different social groups and shaping of their unique features. Students will be efficient and able to evaluate the emerging social spaces, stratification, social well being and issues of social justice through spatial perspective.

<b>Syllabus</b>	<b>No. of Lectures</b>
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<b>UNIT I</b>	<b>10</b>
Emergence of Social Geography: meaning, scope and significance of social Geography, Social Geography as an applied branch of Human Geography, relationship of social Geography with other social sciences.	
<b>UNIT II</b>	<b>10</b>
Social well being: Social well-being and its indicators, Human Development Index (HDI), inclusive growth, social segregation and ghetto formation, social exclusion.	
<b>UNIT III</b>	<b>10</b>
Gender Issues and social changes: Gender inequality, women empowerment, women literacy and health, social change with special reference to caste and tribal groups, Environment & Human health.	
<b>UNIT IV</b>	<b>10</b>
Social Differentiation and Region formation: Spatial distribution of tribes, caste and linguistic groups. Relationship between social identity and Economic conditions.	

**Books Recommended:**

1. Aijazuddin Ahmad, Social Geography.
2. Garden, J.F., Geography as a social science.
3. Gosal, G.S. & Mukherjee, A.B. religious groups in India.
4. Gregory, D. & Urry, J., Social relationship.
5. Hammelt, Chris (Ed), social Geography: A Reader.
6. Harvey, D, Social justice and the city.
7. John, E. (ed) social geography in International Perspective.
8. Jones, E & Eyles, J., An introduction to social geography.
9. John, E. (ed) Readings in social geography.
10. Kaushik, Devesh, Samajik Bhugol, Arjun Publishing House.
11. Kulkarni, K.M. geographical patterns of social well-being.
12. Maurya, S.D., Samajik Bhugol, Sharda Pustak Bhawan, Allahabad.
13. Pacliona, M. (ed) social geography Progress and prospects.
14. Paul Knox, social well-being a spatial perspective.
15. Pandey, Pushpa & Singh, Komal, Samajik Bhugol, SBPD Publications.
16. Rao. M.S.A. Urbanization and social changes.
17. Smith, David, social problem and the city.
18. Smith, David, The geography of social well-being.
19. Srinivas, M.N., Social changes in Modern India.
20. Wagner, P.L. & Mikesell, H.W. (eds) Readings in Cultural Geography.



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Course Title:	<b>DISASTER MANAGEMENT</b>
Course Code:	A110903T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After the end of this course, it is expected that students will be able to understand various aspect of natural calamities related to disaster impact region.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Disaster – meaning and concept; hazards, risk and vulnerability. Disaster: its effect on different social groups; poverty and vulnerability. Disaster management: prevention, preparedness and mitigation.	<b>08</b>
<b>UNIT II</b> Disaster – classification of disasters; Natural disaster – earthquake, floods, drought and global warming: causes, consequences and mitigation. Natural disaster – Examples from India.	<b>10</b>
<b>UNIT III</b> Disaster – man made disasters, their types – technological and industrial disasters. Social disasters: causes, consequences and mitigation. Man made disasters – Examples from India.	<b>10</b>
<b>UNIT IV</b> Disaster management – relief and response; reconstruction and rehabilitation. Disaster: strategies for survival, types of strategies. Importance of information in disaster management, significance of remote sensing and GIS. Planning in the context of disaster management.	<b>12</b>

**BOOKS RECOMMENDED:**

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Pub. , New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi.
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) “Disaster Management Future Challenges and Oppurtunities”, 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India.

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Course Title:	<b>GEOGRAPHY OF RESOURCES</b>
Course Code:	A110903T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will be able to visualize different resource rich and scarce areas in terms of water, forest, marine, mineral and energy resources. It will create the values of resource preservation and sustainable resource utilization among students.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Nature, scope and significance of geography of resources. Definition and concept of natural resources. Classification of resources.	<b>08</b>
<b>UNIT II</b> Characteristics of natural resources: Resource conservation and management with reference to land and forest resource.	<b>10</b>
<b>UNIT III</b> 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.	<b>12</b>
<b>UNIT IV</b> Energy resources-Conventional energy resources - coal, petroleum, non – conventional - solar and geothermal energy.	<b>10</b>

**BOOKS RECOMMENDED:**

1. Alexander, J.W., Economic Geography, New Jersey, 1965.
2. Ali, S.A., Resources for Future Economic Growth, New Delhi, 1979.
3. Behends, William, W., The Dynamics of Natural Resource Utilization in D.Meadow(Ed.),Masaclusetts, 1972.
4. Duncan, G., Resource Utilization and Conservation, New York, 1975.
5. Earl, D.K., Forest Energy and Economic Development, Oxford, 1975.

6. Ranner, G.T., Conservation of Natural Resources, New York, 1942.
  7. Zimmerman, E.W., Introduction to World Resources (edited by H.L. Honker, The Ohio State University, New York, 1964.
  8. Zimmermann, E.N., World Resources & Industries, New York.
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Course Title:	<b>REGIONAL PLANNING &amp; DEVELOPMENT</b>
Course Code:	A110904T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After the end of this syllabus, students will be able to demarcate the difference between formal and functional planning regions. They are expected to efficiently formulate, appreciate and apply specific theories and plans for regional growth and development.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Concept and Types of regional planning; City as unit of regional planning; Approaches to regional planning; Historical development of regional planning.	<b>08</b>
<b>UNIT II</b> Methodology and techniques of regional planning; Principles of rationalization; Indicators of development and their data sources; Measure of regional development and disparities; Planning process- Sectoral and spatial planning; Short-term and long-term perspective of planning; Multi regional and Multilevel planning.	<b>12</b>
<b>UNIT III</b> Regional development strategies: Export base theory, convergence theory, Growth poles and growth centers in regional development; Industrial dispersal, identification of planning regions; Regional planning strategies for backwards areas-drought prone area, Hill area, Tribal area and Rural area.	<b>10</b>

<b>UNIT IV</b>	<b>10</b>
Role of Urban centers in Regional Planning; Urban scenario in India; City regions and city problems; Problems of slum areas; Strategies for urban planning; Metropolitan planning; Preparation of master plans, City region planning.	

### Books Recommended

1. Chandna, R. C. (2000): Regional Planning: Comprehensive Text Kalyani Publishers. New Delhi.
2. Chaudhuri, J. R. (2001): An Introduction to Development and Regional Planning with special reference to India. Orient Longman, Hyderabad.
3. Cowen, M.P. and Shenton, R.W. (1996): Doctrines of Development. Routledge, London.
4. Doyle, T. and McEachern, D. (1998): Environment and Politics. Routledge, London.
5. Friedmann, J. (1992): Empowerment: The Politics of Alternative Development. Blackwell, Cambridge MA and Oxford.
6. Friedmann, J. and Alonso, W. (ed.) (1973): Regional Development and Planning. The MIT Press, Mass.
7. Hettne, B.; Inotai, A. and Sunkel, O. (eds.) (1999-2000): Studies in the New Regionalism. Vol. I-V. Macmillan Press, London.
8. Isard, W. (1960): Methods of Regional Analysis. MIT Press, Cambridge, MA.
9. Kane, M. and William M.K.T. (2007): Concept Mapping for Planning and Evaluation, Sage Publications, London.
10. Kuklinski, A. R. (1972): Growth Poles and Growth Centers in Regional Planning. Moutonand Co., Paris.
11. Kuklinski, A.R. (ed.) (1975): Regional Development and Planning: International Perspective, Sijthoff-Leydor.
12. Leys, C. (1996): The Rise and fall of Development Theory. Indian University Press, Bloomington, and James Curry, Oxford.
13. Mahapatra, A.C. and Pathak, C. R. (eds.) (2003): Economic liberalization and Regional Disparities in India. Special Focus on the North Eastern Region, Star Publishing House, Shillong.
14. Misra, R. P. (ed.) (1992): Regional Planning: Concepts, Techniques, Policies and Case Studies 2<sup>nd</sup> edition. Concept Publishing Company. New Delhi.
15. Misra, R.P, and Natraj, V.K. (1978): Regional Planning and National Development. Vikas, New Delhi.
16. Misra, R.P., Sundaram, K. V. Pradasa Rao, V. L. S. (1976): Regional Development Planning in India. Vikas Publishers, New Delhi.

17. Moseley, M.J., (1974): Growth Centres in Spatial Planning. Pergamon Press, Oxford.
18. Narman, A. and Karunanayake, K. (eds.) (2002): Towards a New Regional and Local Development Research Agenda. Dept. of Geography, Goteborg University (Sweden), series B, Nol00 and Centre for Development Studies, University of Kelaniya (Sri Lanka), No. 1.
19. Norgaard, R.B. (1994): Development Betrayed. The End of Progress and a Coevolutionary Revisioning of the Future, Routledge, London.
20. Pathak, C.R. (2003): Spatial Structure and Processes of Development in India. Regional Science Association. Kolkata.
21. Sanyal, B.M. (2001) Decentralised Planning: Themes and Issues. Concept Publishing Company, New Delhi.
22. Sharma P.V Rao, V L. and Pathak C. R (eds.) (2000): Sustainable Regionalspecial reference to Andhra Pradesh), Regional Science. Association, Kolkata and school of Economics, Andhra University. Vishakapatnam.
23. Sen, A. (1999). Development as Freedom. Oxford University press, Oxford.
24. Sen, A. and Dreze, J. (eds.) (1996): Indian Development: Selected Regional Perspectives. Oxford University Press, Oxford.
25. Smith, D. and Narman, A. (eds.) (199)' Development Theory and Practice Current Perspectives on Development and Development co-opreation. Longman, London.
26. Stohr, W. B. and Taylor, D.F.R. (eds.) (1981. Development from Above and Below? The Dialectics of Regional Planning in developing countries. John and sons Chichester.
27. Sundaram, K. V. (1997) the Decentralized Multilevel Planning; Principles and Practice (Asian and African Experiences). Concept publishing company, New Delhi.
28. Sundaram, K. V, (2004) the trodden Path: Essays on Regional and Micro Level Planning. Anaunya Publications., New Delhi.
29. Toye, J. (1987): Dilemmas of Development. Reflections on the Counterrevolution in Development Theory and Policy. Basil Blackwell, Oxford.
30. Verhelst, T. (1990): No Life without Roots-Culture and Development. Zed books, London.
31. Wprld Bank (2000): Attacking Poverty. World Development. Report 2000-01, The World bank and Oxford University Press, New York, See website [www.worldbank.org/poverly/warpoverty](http://www.worldbank.org/poverly/warpoverty)
32. World Bank (2000): Entering the 21<sup>st</sup> Century. World Development Report. The World Bank and Oxford University Press, New York and Oxford,

33. Yugandhar, B. N. and Mukherjee, A. (eds.) 1991): Readings in De-centralized Planning (with special reference to district planning), 2 vols. Concept Publishing., NewDelhi.

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M.A./M.Sc., Geography, Year 5<sup>th</sup>, Semester – IX

Course Title:	<b>TRANSPORT GEOGRAPHY</b>
Course Code:	A110904T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After the completion of this syllabus, students will be able to describe in detail the basic concept of transport geography and the importance of transport geography.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Nature, scope, significance, history and development of transport geography. Factors associated with the development of transport system-Physical, economic, social, cultural and institutional. Evolution of transport network.	<b>08</b>
<b>UNIT II</b> Characteristics and relative significance of different modes of transport: Railways, Roads, Airways and waterways. Accessibility and flow models, network structure, graph theoretic measures, models of network change, linear programming and gravity models.	<b>12</b>
<b>UNIT III</b> Theories related to freight rate structure, bases of spatial interaction: complementarity, intervening opportunity, transferability and potential models of spatial interaction. Transport system in India: Railways, Roads, airways and waterways, patterns of movement, Movement geometry.	<b>10</b>

<b>UNIT IV</b>	<b>10</b>
Transport of goods in developed and developing countries, Urban transportation-growth and problems. Transport and environmental degradation, Alternatives to transport system in Megacities of India, National Highway Development and planning in India. Transport policy and planning.	

**Suggested Readings:**

1. Chorley, R.J. and Hagget P; Models in Geography, Methuen & Co.London, 1967.
2. Hurst, M.E. (ed): Transportation Geography, McGraw Hill, 1974.
3. Hagget P. and Chorley R.J.: Network Analysis, Edward Arnold,London, 1968.
4. Hay A: Transport Economy, Macmillan, London, 1973.
5. Hoyle, B.S. (ed); Transport and Development, Macmillan, London,1973.
6. Raza M. and Agrawal Y.P.: Transport Geography of India, Concept, New Delhi, 1985.
7. Robinson H. and Bamford G.G.: Geography of Transport,Macdonald & Evans, London, 1978
8. Taffe, D.J. and Gauthier (Jr.) H.L.; Geography of Transportation,Prentice Hall, Englewood Cliffs, N.J., 1973.
9. White H.P. and Senior M.L.: Transport Geography, Longman,London, 1953.

Department of Geography  
V.B.S. Purvanchal University, Jaunpur, U.P.  
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Course Title:	TOPOGRAPHICAL MAPS, WEATHER MAPS AND FIELD SURVEY
Course Code:	A110905P
Credit:	04
Type of Course:	Practical
Maximum Marks:	Internal-25 External-75

Syllabus	No. of Lectures
<b>UNIT I</b> Topographical maps: scale, conventional signs and interpretation of toposheets.	<b>08</b>

<b>UNIT II</b> Weather maps: importance, symbols, instruments. Interpretation of weather maps. Technological development in weather forecasting.	<b>08</b>
<b>UNIT III</b> Sextant surveying	<b>08</b>

### Assessment of Practical Examination

External Assessment		Internal Assessment	
Units	Maximum Marks	Pattern	Maximum Marks
UNIT I	20	Assignment	10
UNIT II	20		
UNIT III	20	Written Test	15
Record file & Viva Voce	15		
<b>Total</b>	<b>75</b>	<b>Total</b>	<b>25</b>

#### Books Recommended:

1. Sharma, J.P. Prayogatmak Bhoogol Ki Rooprekha (Hindi)
2. Singh, R.L., Elements of Practical Geography.
3. Singh, L.R. & Singh, R.N. Map work and practical Geography (Eng./Hindi)
4. Hira Lal, Prayogatmak Bhoogol Ke Adhar (Hindi)
5. Tiwari, R.C. and Tiwari, Sudhakar, Abhinav Prayogic Bhoogol.

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Course Title:	<b>VILLAGE REPORT</b>
Course Code:	A110906R
Credit:	04
Type of Course:	Research Project



## Semester-X

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Course Title:	<b>MODERN GEOGRAPHICAL THOUGHT</b>
Course Code:	A111001T
Credit:	04
Type of Course:	Theory
Maximum Marks:	Internal-25 External-75
Course Outcomes:	At the end of this course students will be able to know and apply the recent theoretical and philosophical aspects of Geography.

Syllabus	No. of Lectures
<b>UNIT I</b> Development of Geography in second half of the 20th century; Concept of Paradigm; Paradigm shift, Positivism & Logical Positivism, Quantitative Revolution, Models, System Analysis in Geography.	<b>08</b>
<b>UNIT II</b> Reactions to Quantitative Revolution, Behavioral Geography - Cognition, Perception, Mental Maps, Decision making and Behavior, Time Space Geography, Humanistic Geography - Idealist & Phenomenological Approaches.	<b>12</b>
<b>UNIT III</b> Radical Geography, Structuralism, Realism, Functionalism, Welfare Geography, Post - Modernism.	<b>08</b>
<b>UNIT IV</b> Modern Developments, Applied Geography and Relevance, Debate, Spatial Inequality and Regional Imbalances, Feminist Geography, G.I.S. as a tool of geography, Future of Geography.	<b>10</b>

### Books Recommended:

1. Adams, P., Steven, H. and Karel, T. (eds.) (2001): Texture of Place. Exploring Humanistic Geographies, University of Minnesota Press, Minneapolis.
2. Anderson, K., Domosh, M., Pile, S. and Thrift, N. (eds.) (2003): Handbook of Cultural Geography. Sage Publications, London.

3. Barnes, T. and Gregory, D. (eds.) (1997): *Readings in Human Geography: The Poetics and Politics of Inquiry*. Arnold, London.
4. Bunkse, E. V. (2004): *Geography and the Art of Life*. John Hopkins University Press, Baltimore.
5. Buttner, A. (1971): *Society and Milieu in the French Geographic Tradition*. Rand McNally, Chicago.
6. Daniels, P., Bradshaw, M., Shaw, D. and Sidaway, J. (2000): *An Introduction to Human Geography. Issues for the 21st Century*. Prentice Hall, London.
7. Dear, M. J. and Flusty, S. (2002): *The Spaces of Post modernity: Readings in Human Geography*. Blackwell Publishers, Oxford.
8. Dikshit, R. D. (2004): *Geographical Thought. A Critical History of Ideas*. Prentice-Hall of India, New Delhi. (In English and Hindi).
9. Doel, M. (1999): *Poststructuralist Geographies. The Diabolical Art of Spatial Science*. Edinburgh University Press, Edinburgh
10. Gaile, G. and Wilmott, C. (eds.) (2003): *Geography in America at the Dawn of the 21<sup>st</sup> Century*. Oxford University Press, Oxford and New York.
11. Harvey, D. (1969): *Explanation in Geography*. Arnold, London.
12. Harvey, M. E. and Holly, P.B. (2002): *Themes in Geographic Thought*. Rawat Publications. Jaipur and New Delhi.
13. Hartshorne (1959) *Perspective on the Nature of Geography*, Rand Macnally & Co. London.
14. Hubbard, P., Kitchin, R., Bartley, B. and Fuller, D. (2002): *Thinking Geographically: Space, Theory and Contemporary Human Geography*. Continuum, London.
15. James, P.E. 1980. *All Possible Worlds. A History of Geographical Ideas*. 1st Edition, Sachin Publication Jawahar Nager, Jaipur.
16. Johnston, R, Gregory D, Pratt G, Watts M. and Whatmore S. (2003): *The Dictionary of Human Geography*. Blackwell Publishers, Oxford. 5th edition.
17. Johnston, R.J. (1985): *The Future of Geography*, Methuen and Company Ltd., New York. (2003 edition published).
18. Johnston, R.J. and Sidaway, J.D. (2004): *Geography and Geographers*. 6th edition, Edward Arnold, London.
19. Kapur, A. (ed.) (2001): *Indian Geography - Voice of Concern*. Concept Publishing. Company, New Delhi.
20. Mathews, J. A. and Herbert, D. T. (eds.) (2004): *Unifying Geography. Common Heritage, Shared Future*. Routledge, London.
21. Peet, R. (1998): *Modern Geographical Thought*. Blackwell Publishers Inc, Massachusetts.
22. Sauer, C. O. (1963): *Land and Life*. University of California Press, Berkeley.

23. Singh, R. L. and Singh, Rana P.B. (eds.) (1990): Literature and Humanistic Geography. National Geographical Society of India, BHU, Varanasi, Publication number 37
24. Singh, R. L. and Singh, Rana P.B. (eds.) (1992): The Roots of Indian Geography: Search and Research. National Geographical Society of India, B.H.U., Varanasi, Publication number 39.
25. Singh, Ravi S (ed.) 2009. Indian Geography: Perspectives, Concerns and Issues. Jaipur/NewDelhi: Rawat Publications
26. Soja, E. (1989): Post-modern Geographies. Verso Press, London. Reprinted 1997: Rawat Publications, Jaipur and New Delhi.
27. Taylor, G. (ed.) (1953): Geography in the Twentieth Century. Methuen and Company Ltd. And Company, London.
28. Tuan, Yi-Fu (1977): Space and Place. The Perspective of Experience. Edward Arnold, London.

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Course Title:	<b>POLITICAL GEOGRAPHY</b>
Course Code:	A111002T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	Students will be able to critically examine the geographical bases of political studies. They will be able to evaluate and correlate different theories with contemporary geopolitical and geo-strategic issues.

Syllabus	No. of Lectures
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<b>UNIT I</b> Meaning, scope, approaches, Development of Political Geography; Concept of State and Nation; Spatial factors of State; Buffer State, core area, ecumene, Capital city, frontiers and boundaries.	<b>08</b>
<b>UNIT II</b> Concept of geo-strategy; World geopolitics in changing perspectives- colonialism to federalism; Geostrategic ideas of Mahan, Mackinder, Spykman and their relevance in the modern world.	<b>10</b>
<b>UNIT III</b> Geopolitical significance of the Indian Ocean; Role of third world countries; Political geography and regional co-operation; Geopolitical study of USA, East Asia and South Asia. Strategic important of Indian Ocean.	<b>12</b>
<b>UNIT IV</b> Nature and scope of electoral geography; Geography of elections with special reference to India; Interstate Issues, Insurgence in Border States; Emergence of new States.	<b>10</b>

### Suggested Readings

1. Alexander, L.M.: World Political Patterns, Ran McNally, Chicago, 1963.
2. De Blij H.J. and Glassner, Martin: Systematic Political Geography, Jolin Wiley, N.Y 1968.
3. Deshpande, C.D.: India: A Regional Interpretation, Northern Book Centre, New Delhi, 1992.
4. Dikshit, R.D.: Political Geography: A contemporary Perspective, Tata McGraw Hill, New Delhi, 1996.
5. Dikshit, R.D.: Political Geography: A Century of Progress, Sage New Delhi, 1999.
6. Fisher, Charles: Essays in Political Geography, Methuen, London, 1968.
7. John R. Short: An Introduction to Political Geography, Routledge.
8. Moddie A.E.: Geography behind Politics, Hutchinson, London, 2000.
9. Pounds, N.J.G.: Political Geography McGraw Hill, N.Y., 1972.
10. Prescott, J.R.V.: The Geography of Frontiers and Boundaries, Aldine, Chicago.
11. Panikkar, K.M.: Geographical Factors in Indian History, 2 Vols, Asia Publishing House, Bombay, 1959.
12. Sukhwai, B.L.: Modern Political Geography of India, Sterling Publisher, New Delhi, 1968.
13. Taylor, P: Political Geography, Longman, London, 1985.

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Course Title:	<b>SETTLEMENT GEOGRAPHY</b>
Course Code:	A111002T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcome:	After the end of this course, students will be able to acquire clear concepts of rural and urban settlements. Inculcate a greater understanding of man- land relationship which is crucial for sustainable development.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Nature, scope, development and approaches of settlement geography, Definition and characteristics of settlements, Rural-urban continuum. Histogenesis of settlements: Spatio- temporal dimensions, distribution, size and spacing of settlements.	<b>08</b>
<b>UNIT II</b> Types, forms and patterns of rural settlements. functional classification of rural settlements, morphology of rural settlements. Central places and rural service centers: their nature, hierarchy and functions. Service centers as growth points. Rural-urban fringe- structure, characteristics and functions.	<b>12</b>
<b>UNIT III</b> House types and their spatial patterns. Origin, evolution, size, socio-spatial structure of Indian villages. Social issues in rural settlements-poverty, housing ,deprivation, and inequality. Environmental issues in rural settlements-water supply, sanitation, drainage and health hazards. Planning of rural settlements with special reference to India.	<b>10</b>
<b>UNIT IV</b> Meaning and scope of Urban Geography, Origin and Development of cities, recent trends in urbanization. Rural-Urban fringe, Umland, suburb and satellite, Morphology and Land use of Urban Settlements, Urban problems, Planning of Urban Settlements and master plan.	<b>10</b>

**Suggested Readings:**

1. Pacione, Michael, 1983: Progress in Urban Geography, Croom Helm, London.
2. Pacione, M., 1984: Rural Geography, Harper and Row, London.
3. Park, Robert E., Burgess, Ernest & McKenzie, Roderick D. (eds), 1925: The City, The Uni. of Chicago Press, Chicago, pp. 47-62.
4. Prasad, A. 1973: Chhotanagpur: Geography of Rural Settlement, Ranchi. Rao, B.P., 1971: Vishakhapatnam: A Study in Geography of Port Town, NGS, Varanasi, 139 pp.
5. Rao, V.L.S.P., 1964: Towns of Mysore State, Indian Statistical Institute (ISI) & Asia Publishing House.
6. Raza, Moonis (ed) 1979: A Survey of Research in Geography, 1969-1972, ICSSR, Allied Publishers Private Ltd., Bombay.
7. Reilly, William J., 1929: Methods for the Study of Retail Relationships, Research Monograph No. 4, Bureau of Business Research, Uni. of Texas.
8. Reilly, William J., 1931: The Law of Retail Gravitation, New York.
9. Robson, B.T., 1969: Urban Analysis: A Study of City Structure, Cambridge University Press, Cambridge.
10. Robson, B.T., 1975: Urban Social Areas, Oxford University Press, London.
11. Robson, William, A. (ed) 1957: Great Cities of the World, Macmillan, New York.
12. Rubenstein, James M. and Robert S. Bacon, 1990: The Cultural Landscape, Prentice Hall of India Pvt. Ltd. New Delhi, 502 pp.
13. Saxena, Sudha, 1970: Trends of Urbanization in Uttar Pradesh, Satish Book Enterprise, Agra.
14. Sen, L.K. et al., 1971: Planning Rural Growth Centres for Integrated Area Development, A Study in Miryalguda Taluka, NICD, Hyderabad.
15. Sen, L.K. et al., 1975: Growth Centres in Raichur: An Integrated Area Development Plan for a District in Karnataka, NICD, Hyderabad.
16. Sharma, R.C., 1972: Settlement Geography of the Indian Desert, Kumar Brothers, New Delhi, 199 pp.
17. Singh, Hari Har, 1972: Kanpur: A Study in Urban Geography, NGS, Varanasi.
18. Singh, Jagdish 1979: Central Places and Spatial Organisation in a Backward Economy: Gorakhpur Region-A Study in Integrated Regional Development, Uttar Bharat Bhoogol Parishad, Gorakhpur, 147 pp.
19. Singh, L.R., 1965: The Tarai Region of U.P.: A Study in Human Geography, Ramnarainlal Beni Prasad, Allahabad.
20. Singh, R.B., 1975: Rajput Clan Settlements in Varanasi District, NGS, Varanasi, 134 pp.
21. Singh, R.L. 1955: Banaras: A Study in Urban Geography, Nand Kishore & Bros. Varanasi.
22. Singh, R.L., 1964: Bangalore: An Urban Survey, NGS, Varanasi,

23. Singh, R.L. (ed), 1971: India: A Regional Geography, NGSI, Varanasi, 992 pp.
24. Singh, R.L. (ed) 1972: Rural Settlements in Monsoon Asia, NGSI, Varanasi, 510 pp.
25. Singh, R.L., 1973: Urban Geography in Developing Countries, Proceedings of the IGU Varanasi Symposium, NGSI, Varanasi, 371 pp.
26. Singh, R.L. & Singh, K.N. (ed), 1975: Readings in Rural Settlement Geography, NGSI, Varanasi,
27. Singh, R.L., K.N. Singh & R.P.B. Singh, (eds) 1976: Geographic Dimensions of Rural Settlements, Proceedings of the IGU Varanasi Symposium, NGSI, Varanasi, 288+ xxii pp.
28. Singh, R.L. & Rana P.B. Singh, (eds) 1978: Transformation of Rural Habitat in Indian Perspective, A Geographic Dimension, NGSI, Varanasi, 200 pp.
29. Singh, R.L. and Rana P.B. Singh, 1978: Spatial Planning in Indian Perspective: An Approach Towards Theory and its Application, NGSI, Varanasi, 50 pp.
30. Singh, R.L. & Rana P.B. Singh, (eds) 1979: Place of Small Towns in India, NGSI, Varanasi, 175 pp.
31. Singh, Rana P.B., 1977: Clan Settlements in the Saran Plain (Middle Ganga Valley), A Study in Cultural Geography, NGSI, Varanasi,
32. Singh, R.Y., 1978: The Malwa Region: Rural Habitat System, Structure and Change, NGSI, Varanasi,
33. Singh, R.Y., 1994: Geography of Settlements, Rawat Publications, Jaipur,
34. Singh, Savindra 1991: Environmental Geography, Prayag Pustak Bhawan, Allahabad,
35. Singh, S.B. (ed.), 1995: Emerging Frontiers of Urban Settlement Geography, M.D. Publications Pvt. Ltd. New Delhi,
36. Singh, U., 1962: Allahabad, A Study in Urban Geography, NGSI, Varanasi.
37. Sinha, B.N. & T.N. Achuta Rao, 1968: Urban Studies: An Aid to Research, Karnataka Uni. Dharwar, Smailes, A.E., 1962: The Geography of Towns, Hutchinson University Library, London.
38. Sovani, N.V., 1966: Urbanisation and Urban India, Asia Publishing House, Bombay.
39. Taneja, K.L., 1971: Morphology of Indian Cities, NGSI, Varanasi,
40. Taylor, G., 1964: Urban Geography, Methuen, London.
41. Taylor, G., 1965: Geography in the Twentieth Century, Methuen and Co. Ltd. London.
42. Thacker, M.S., 1965: India's Urban Problem, Uni. of Mysore Press, Mysore.
43. Thompson, W.S., 1948: The Growth of Metropolitan Districts in the United States 1900-1940, Washington, D.C.
44. Thunen, J.H. von 1826: Der Isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie (Rostock, 1826).

45. Tiwari, R.C., 2018: Settlement Geography, PravalikaPrakashanAllahabad,
46. Turner, R. 1962: India's Urban Future, Oxford University Press, Bombay.
47. Ullman, E.L. and M.F. Dacey, 1969: The Economic Base of American Cities, Uni. of WashingtonPress,Seattle, Washington.
48. Walker, Mabel L., 1938: Urban Blight and Slums, Harvard City Planning Studies, Vol. 12, Harvard Uni.Press.
49. Weber, Alfred, 1929: Theory of the Location of Industries (Translation of the original German edition of1909), Uni, of Chicago Press, Chicago.
50. Wingo et al., 1963: Cities and Space: The Future Use of Urban Land, John Hopkin Press, Baltimore.
51. Yeats, M.H. and B.J.Garner, 1971: The North American City, Harper and Row, London.
52. Zipf, George K., 1941: National Unity and Disunity, Principia Press, Bloomington.
53. Zipf, George K., 1949: Human Behaviour and the Principle of Least Effort, Addison-Wesley Press,Cambridge and New York.

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Course Title:	<b>AGRICULTURAL GEOGRAPHY</b>
Course Code:	A111003T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	At the end of this course students will be able to evaluate the agricultural dynamics which includes land use, agricultural systems and major drawbacks in agricultural development.

<b>Syllabus</b>	<b>No. of Lectures</b>
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<b>UNIT I</b>	<b>08</b>
Meaning, scope, approaches and development of agricultural Geography; Origin and dispersal of agriculture, major agricultural hearths; Diffusion of agricultural innovations.	
<b>UNIT II</b>	<b>12</b>
Determinants of agriculture- physical, economic, political, technological, socio-cultural; land reforms, measurements of agricultural productivity, cropping intensity, Cropping pattern: methods of delineating crop combination regions(Weaver and Rafiullah).	
<b>UNIT III</b>	<b>10</b>
Theories of agricultural location: Von Thunen's model and its modification- Sinclair's approach; Whittlesey's classification of agricultural regions; Agricultural typology, Agro-climatic regions of India. Land capability classification and land use planning.	
<b>UNIT IV</b>	<b>10</b>
Recent trends in Indian agriculture- Green revolution in India and its impact on Indian agriculture, white revolution; concept of second green revolution in India, Problems of Indian agriculture. Measures for Agricultural Development.	

### Suggested Readings

1. Baylist smith T.P.: The Ecology of Agricultural System, Cambridge University Press, London, 1987.
2. Gregor, HP. Geography of Agriculture, Prentice Hall, N.Y., 1970.
3. Mannion, A.M.: Agriculture and Environmental Change, John Wiley, London. 1971.
4. Morgan, W.B. and Norton, R.J.C.: Agricultural Geography. Methuen, London, 1971.
5. Morgan, W.B.: Agriculture in the Third World A Spatial Analysis, West view Press, Boulder, 1978
6. Sauer, C.O.: Agricultural Origins and Dispersals, M.I. Press, Westview Press, Mass, USA, 1969.
7. Singh J. and Dhillon S S: Agricultural Geography, Tata McGrawHill Pub. New Delhi, 1988.
8. Tarrant, J.R.: Agricultural Geography, Wiley, N.Y., 1974.

Course Title:	<b>INDUSTRIAL GEOGRAPHY</b>
Course Code:	A111003T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After completion of this course, the student will be able to assess the role of location and place in development and distribution of industries, importance of industrial corridors and site specific problems facing by different industrial regions.

<b>Syllabus</b>	<b>No. of Lectures</b>
<p style="text-align: center;"><b>UNIT I</b></p> <p>Nature, Scope and recent developments in industrial Geography; Factors of industrial location; Centralization and decentralization of Industries, Horizontal, vertical and diagonal linkages of modern industries.</p>	<b>08</b>
<p style="text-align: center;"><b>UNIT II</b></p> <p>Theories and models of industrial location; Weber, Losch and Hoover; Distribution and spatial pattern of major industries, Major industrial regions of the World.</p>	<b>12</b>
<p style="text-align: center;"><b>UNIT III</b></p> <p>Historical review of Indian industrialization since 1947; Evolution of industrial regions in India; Development of small scale and cottage industries; Multinational corporations and Industrial policy of India.</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT IV</b></p> <p>Problems of industrial development; industrial development and environmental degradation, Industries and economic development; Impact of globalization on industrial development; Industrial decentralization and its impact on urban fringe.</p>	<b>10</b>

### **Books Recommended**

1. Alexander, J.W.; Economic Geography, Prentice Hall, Englewood, Cliffs
2. Alexanderson, C: Geography of Manufacturing, Prentice Hall, Bombay, 1967.
3. Hoover, E.M.: The Location and Space Economy, McGraw Hill, N.W., 1948.
4. Isard, W; Methods of Regional Analysis, the Technology Press or M.I.T. & John Wiley & Sons, N.Y., 1956.
5. Miller, E: A Geography of Manufacturing, Prentice Hall, Englewood Cliffs, N.J., 1962.

6. Weber, Alfred: Theory of Location of industries, Chicago University Press, Chicago.

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Course Title:	<b>URBAN GEOGRAPHY</b>
Course Code:	A111004T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	This course helps to evaluate the structure, morphology, pattern and dimensions of changes in urban places and cities.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Meaning, scope, approaches and evolution of urban geography. Origin and growth of urban settlements. The models of urban growth: concentric zone, sectoral and multinuclei.	<b>08</b>
<b>UNIT II</b> Bases and process of Urbanization and urban development, Urban growth, urban hierarchy and rank size rule, Urban economic base: Occupational structure : basic and non-basic functions, Functional classification of cities, Morphology and land use, C.B.D., Commercial, Residential, Industrial and Institutional areas and modern urban landscape.	<b>12</b>

<b>UNIT III</b>	<b>10</b>
The urban profile, Demographic structure and characteristics of urban population. Movement of population within and beyond corporate limit. City as central place, Umland, Rural-Urban fringe.	
<b>UNIT IV</b>	<b>10</b>
Urban problems-Urban poverty, Urban renewal, Urban sprawl, Slums, transportation, Housing, Urban pollution, Solid waste, Urban crime and environmental health. Urban policy and planning, planning for new wards, Satellite towns, Green belt, Garden cities, megalopolis and conurbation.	

**Suggested Readings:**

1. Berry, B.J.L. and Horton, F.F.: Geographic Perspectives on Urban Systems, Prentice Hall, Englewood cliffs, N.J. 1970.
2. Dickinson, R.E. City and Region, Routledge, London, 1964.
3. Gibbs, J.P.: Urban Research Methods, Van Nostrand Co. Princeton, N.J. 1961.
4. Hall P. Urban and Regional Planning, Routledge, London, 1992.
5. Kundu, A.: Urban Development and Urban Research in India, Khanna Publication, 1992.
6. Rao, V.L. S.P.: Urbanisation In India: Spatial Dimensions, Concepts Publishing Co. New Delhi.
7. Smailes, A.E.: The Geography of Towns, Hutchinson, London, 1953.

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Course Title:	<b>RESEARCH METHODOLOGY</b>
Course Code:	A111004T
Credit:	04
Type of Course:	Theory(Optional)
Maximum Marks:	Internal-25 External-75
Course Outcomes:	After completion of this course, the student will be able to assess the role of research methodology in research work.

Syllabus	No. of Lectures
<p style="text-align: center;"><b>UNIT I</b></p> <p style="text-align: center;"><b>Introduction to research in Geography:</b> Concept and significance of research in geography; Philosophy and methods; Naturalism and anti-naturalism; realism, idealism and Behaviouralism.</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT II</b></p> <p style="text-align: center;"><b>Scientific Research; Inductive and deductive approaches;</b> Research design, Formulation of research problem; Development and testing of hypothesis; Techniques of data collection, Sampling and field survey.</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT III</b></p> <p style="text-align: center;"><b>Qualitative research:</b> Qualitative research design; Case study; Ethnography; Phenomenology and participatory research</p>	<b>10</b>
<p style="text-align: center;"><b>UNIT IV</b></p> <p style="text-align: center;"><b>Data Analysis, interpretation and report writing:</b> Data classification and tabulation; Data analysis and interpretation, writing thesis, project report and research paper.</p>	<b>10</b>

### Books Recommended

1. Ahuja, R. (2001): Research Methods, Rawat Publications, Jaipur and New Delhi.
2. Bhattacharyya, D. K. (2005) Research Methodology, Excel Books, New Delhi
3. Blackburn, J. and Holland, J. (eds.) (1998); Who Changes? Institutionalizing Participation in Development. IT Publications, London.
4. Blaxter, L, Hughes, C. and Tight, M. (1996); How to Research. Open University Press, Buckingham.
5. Denzin, N. K. and Lincoln, Y.S., (eds.) (2000): Handbook of Qualitative Research. Thousand Oaks CA. Sage Publications.
6. Dikshit, R. D. (2003): The Art and Science of Geography: Integrated Readings. Prentice-Hall of India, New Delhi.
7. Dorling, D. and Simpson, L. (eds.) (1999): Statistics in Society. Edward Arnold, London.
8. Flowerdew, R. and Martin, D. (eds.) (1997); Methods in Human Geography. A Guide for Students Doing a Research Project. Longman, Harlow.

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Department of Geography  
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M.A./M.Sc., Geography, Year 5<sup>th</sup>, Semester – X

Course Title:	<b>PROJECTIONS, DIAGRAMS AND FIELD SURVEY</b>
Course Code:	A110905P
Credit:	04
Type of Course:	Practical
Maximum Marks:	Internal-25 External-75

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>UNIT I</b> Projections- Classification, properties, choice, merits and demerits of projections. Drawing of the following map projections by using mathematical methods: Gall's, Mercator's, Mollweide's and interrupted Mollweide's projection, Sinusoidal and Interrupted sinusoidal projection, Lambert's conical equal area projection and International projection.	<b>12</b>

<b>UNIT II</b> Diagrams- Cartographic Representation of Statistical Data, Water surplus/Balance graph, Rainfall dispersion diagram, Traffic flow cartogram, Distribution maps- Isopleth, choropleth and multiple Dots, landuse maps, Locational quotient, Co-efficient of localization and localization curve..	<b>12</b>
<b>UNIT III</b> Horizontal and vertical measurement of angle by Theodolite and Height/depth Calculation.	<b>10</b>

### Assessment of Practical Examination

External Assessment		Internal Assessment	
Units	Maximum Marks	Pattern	Maximum Marks
UNIT I	20	Assignment	10
UNIT II	20		
UNIT III	20	Written Test	15
Record file & Viva Voce	15		
<b>Total</b>	<b>75</b>	<b>Total</b>	<b>25</b>

### Books Recommended:

1. Sharma, J.P. Prayogmatmak Bhoogol Ki Rooprekha (Hindi)
2. Singh, R.L., Elements of Practical Geography.
3. Singh, L.R. & Singh, R.N. Map work and practical Geography (Eng./Hindi)
4. Hira Lal, Prayogmatmak Bhoogol Ke Adhar (Hindi)
5. Tiwari, R.C. and Tiwari, Sudhakar, Abhinav Prayogic Bhoogol.



Course Title:	<b>DISSERTATION</b>
Course Code:	A110906R
Credit:	04
Type of Course:	Research Project

**Note:**

The dissertation should be designed under the following heads:

Topic  
Introduction  
Conceptual background  
Literature review  
Statement of problem  
Objectives  
Research questions  
Methodology  
Study area  
Analysis and interpretation of data  
Conclusion  
References