

Syllabus

Semester Courses of **M.A/M.Sc.** (**Geography**) Based on National Education Policy 2020 Programmed on the basis of Choice Based Credit System (C.B.C.S.)

REVISED - 25-7-2022

Approved by:

Board of Studies- Geography

Maharaja Suhel Dev State University,
Azamgarh-276 128, Uttar Pradesh (INDIA)

1 Convener - Just 2. Bos. Member Mni &

Semester Courses of M.A/M.Sc. (Geography) Based on National Education Policy 2020 Programmed on the basis of Choice Based Credit System (C.B.S.E.)

M.A./MSc.(Previous) GEOGRAPHY SYLLABUS

Those who offered as one of the optional subject at B.A./BSc. May be admitted to M.A. GEOGRAPHY course. No one is allowed as private candidate.

M.A. (Previous) is divided into two semesters. In the first semester students will opt for four major papers (core subject) from his own faculty which is compulsory. One minor subject closely related to his/her subject from other faculty either in first semester or in second semester as minor subject is of one paper. One major research project that will be related to main subjects of inter or intra faculty and interdisciplinary/ multidisciplinary. In research project there will be a supervisor teacher and a co-supervisor teacher from industry/ company/ technical institute/ research institute may be allowed. In the second semester, there is four papers- two papers are compulsory and third and fourth paper has to be selected from the four optional papers. There will be one major project also in second semester. Each theory paper will be of three hours duration (Maximum Marks 75). There will be 25% internal evaluation in each theory papers divided as-

Attendance/interaction	05 Marks
Sessional Test	15 Marks
Assignment	05 Marks

Format of the Question Paper: There will be Section-A of one Compulsory Question consisting of 10 parts of Very Short answer type questions. Each part will have to be answered in about 50 words. Section-B will consist of five Short Answer type questions each with internal choice. Each question will have to be answered in about 200 words. Section-C will consist of five Long Answer type questions. Any two questions from Section-C will have to be attempted. Each question will have to be answered in about 500 words.

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M.A./M.Sc. Geography Semester-wise Distribution of courses

Year	Semester	Category/Type of The Course	Course Code	Paper Title	Theory/ Practical	Credits	
		Major/ Compulsory	A110701T	Geomorphology	Theory	5	
	I	Major/ Compulsory	A110702T	Fundamentals of Economic Geography	Theory	5	
		Major/ Compulsory	A110703T	Regional Geography of India	Theory	5	
		Major/ Compulsory	A110704T	Cartography	Theory	4	
		Major/ Compulsory	A110705P	Practical Geography (Cartography)	Practical	1	
1		Compulsory	A110706R	Major Research Project	Research Project	4	
		Major Compulsory	A110801T	Geographical Thought	Theory	5	
	M			A110802T	Cartography	Theory	4
		Major Compulsory	A110803P	Practical Geography (Cartography)	Practical	1	
		OPTIONAL A110	A110804T	Environmental	Theory	5	
	II	(Choose any TWO)	A110805T	Geography Population Geography	Theory	5	
			A110806T	Regional Development and Planning	Theory	5	
			A110807T	Geography of Rural Development	Theory	5	
		Compulsory	A110808R	Major Research Project	Research Project	5	
		Major Compulsory	A110901T	Climatology and Hydrology	Theory	5	
		Major Compulsory	A110902T	Cartography	Theory	4	
			A110903P	Practical Geography (Cartography)	Practical	1	
	III	OPTIONAL	A110904T	Urban Geography	Theory	5	
		(Choose any TWO)	A110905T	Political Geography	Theory	5	



			A110906T	Transport Geography	Theory	5
			A110907T	Marketing Geography	Theory	5
2		Compulsory	A110908R	Major Research Project	Research Project	4
2		Compulsory	A111001P	Practical Geography (Cartography)	Practical	5
		OPTIONAL (Choose any	A111002T	Agricultural Geography	Theory	5
		Three)	A111003T	Geography of Rural Settlement	Theory	5
	IV		A111004T	Geography of Tourism	Theory	5
			A111005T	Social Geography	Theory	5
			A111006T	Disaster Management	Theory	5
			A111007T	Remote Sensing	Theoretical	5
		Compulsory	A111008R	Major Research Project	Research Project	4

M.A./MSc.(Previous) GEOGRAPHY SYLLABUS

P rogramme Course/ Class M.A/ Msc.	Year- M.A. (Previous)	Semester-1
	Subject- Geography	
Course Code	A110701T	
Course Title-	Paper-1 - Geomorphology	
Type of Course	Theory	
Credit	5	
Course Assessment	Sessional-25	
	End semester -75	
Course objectives and outcome	Students will be exposed to the nature of lithospher system, earth movements and geomorphic process application of geomorphic knowledge at various economicultural levels. Students will critically evaluate the intersof physical, human and environmental components of course enables the students to analyze the fundamenta Geomorphology and lithosphere and established the regeophysical changes of geomorphic environment. Studenthe geomorphic concepts for economic manifestations in each of the system.	ses and the c, human and active spaces of earth. The concept of elations with the nts will learn

Unit	Syllabus	No of lectures
I	Meaning and scope of Geomorphology. Fundamental concepts in geomorphology. Modern geomorphologies, Hutton, Davis, Penck. Strahler and King. Recent trends in geomorphology, Geomorphology in India.	15
II	Earth Movements- Isostasy-doctrine of Isostasy, Views of Airy and Pratt Homes. Continental Drift Theory-Concept of Wegner Plate Tectonic Theory- concept and related views.	15
III	Role of Geological structure, Climatic and Biotic factors in the formation of landforms. Theories of landform development	15
IV	Concepts of Erosion. Concept of Davis and Penck. Interruption in the cycle and Polycyclic relief. Dynamics of landscape development in Humid, Arid, Karst and Glacial Regions	15
V	Morphometric Techniques ,Evolution of slopes, Applied Geomorphology. Drainage Network Analysis, Stream Order, Sinuosity Index and Drainage Density. Micro Landform study of the following regions -Chottanagpur, Son Basin and Uttaranchal Region	15



- 1- Chorley, R.J.: Spatial Analysis in Geomorphology, Methuen, London, 1972.
- 2- Cooke, R.U. and Doornkamp, C.: Geomorphology in Environmental Management: A Introduction, Clarendon Press, Oxford, 1974.
- 3- Cotton, Charles: Geomorphology: An Introduction to Landforms.
- 4- Haroon, M. Pathak, G: Geomorphology (Hindi), Wisdom Publication, Varanasi 2022.
- 5- Stoddart, D.R.: (ed) Process and Form in Geomorphology, Routledge New York, 1996.
- 6- Skinner, B. J. and Porter, S.C.: The Dynamic Earth, JohnWiley, New York, 1995.
- 7- Anhert, Frank: Introduction to Geomorphology, Routledge, New York, 1998.
- 8- Sharma, H.S.; Perspective in Geomorphology, Concept, New Delhi, 1980.
- 9- Thornbury, W. D.: Principles of Geomorphology, Jhon Wiley New York, 1960.
- 10- Singh, S: Geomorphology (Hindi, English) Pravalika Prakashan, Parvag 2015.
- 11- Wooldridge, S. W. & Morgan, R.S.: An Outline of Geomorphology.
- 12- Bloom, A., L.: Geomorphology- A systematic Analysis of late Cenozoic landforms
- 13- Thornbury ,W.: Principals of Geomorphology, New Age International Publisher (2018)
- 14- Hagget ,RJ: Fundamentals of Geomorphology, Taylor and Francis New Delhi (2016)
- 15- Rawat, M S: Environmental Geomorphology and Watershed Management, Concept Publishing Company, New Delhi (2021)



Programme/ Course/Class MA/MSc.	Year- M.A (Previous)	SEMESTER-I
	SUBJECT - Geography	
Course Code	A110702T	
Course Title-	Paper- II - Fundamentals of Economic Geography	
Types of Course	Theory	
Credit	5	
Course Assessment	Sessional-60	
	End semester-75	
Course Objectives and outcome	To educate the students about nature and types of with relation to location, space, place and geograp completion of the course students will be able to geographical aspects of economy, graph the activities, and also conceptualize, demarcate geographical determinates of manufacturing acresources. Understand the effect of global globalization on developing countries.	chical resources .On develop the ideas of types of economic and analyze the tivities and energy

Unit	Syllabus	No of lectures
I	Meaning, scope, and evolution of economic geography. Approaches to the study of Economic Geography. Recent Trends. Fundamental concepts. Relation of economic geography with economics and other branches of social sciences.	15
II:	Concept of Resources , Resources classification. Principle of resource Adequacy and Principle of resource conservation and planning. Human resource , water resources, mineral and power resources.	15
III	Factors of location of economic activities, Spatial organization of economies, Primary, Secondary, Tertiary, Quaternary and Quinary activities. Physical, Socio-economic and cultural factors. Classification of Agricultural system - Whittlessy's classification VonThunen's model of agriculture location and its modifications Theory of Optimum Physical conditions and limits	15
IV	Classification of industries —Resource based and footloose industries—Iron and steel ,textiles and engineering. Theories of industrial locations-Weber's ,Hoover, Losch, Plander and Isarad. Market Competition Theory. Industrial Regions of the world problems and prospects of WTO and Globalisation.	15
V	Development of transport and modes of Transportation-Rail, Road and Water. Transport. Cost accessibility and connectivity comparative cost advantage theory of Transport. Transport system of the world. Economic regions of the world and their salient features. Economic Development. Theoretical aspect of economic development. Indicators of socio- economic development Rostow's model of stages of development. Inequality and patterns of development in India.	15

- 1- Alexander, J.W. (19880: Economic Geography. Printice-Hall, New Delhi,,
- 2- Coe, N. 2007): Economic Geography: A Contemporary Introduction, Blackwell. Publishers, Inc, Massachustts.
- 3- Chatterjee S.P.: Economic Geography of Asia, Allied Book, Agency, Calcutta, 1984
- 4- Chorley R.J and Hagget, P.(ed) Network Analysis in Geography, Arnold,1969
- 5- Jones C.F and Darkenwald G.G. :Economic Geography, McMillan Co.N.Y., 1975.
- 6- Millar E: Geography of Manufacturing, Prentice Hall ,N.Y 1962.
- 7- Raza M and Agrawal, Y: Transport Geography of India, Concepts, New Delhi ,1986.
- 8- Smith, D.M: Industrial Location An Economic Geographical Analysis, John Wiley N.Y.1971.
- 9- Thomas R.S.: The Geography of Economic Activities, McGraw Hill N.Y., 1962
- 10- Haroon ,M; Fundamental s of Economic Geography (Hind) Vasundhra Prakashan Gorakhpur, (2021)

MA/MS	Sc	real. W.A (Flevious)	Schlester 1
1417 1/ 1410	30.	Subject - Geography	
Course	Code	A110703T	
Course	Title	Paper-III- Regional Geography of India	
Types/	Course	Theory	
Credit		5	
Course	Assessment	Sessional 25 End Semester - 75	
Course Come	The objective of this course in to develop the under-standing a physical features of Indian geography. To familiarize the students physiography climate and to conceptulize the regional approach as examine regional differentiation in the study of Indian geography Students will be exposed to historical economic, cultural social physical characters of India. Students will get an introduction to regions of the India in terms of both their uniqueness and similarities. The students will develop the art of regionalization techniques of focusing about diversity Indian Regions students will be ab visualize and recognized about regional in identities and socioculdimension of regionalization to address the issues and concerns ne for regional planning.		the students with approach and to adian geography. Itural social and troduction to the ad similarities. techniques while will be able to and socio- culture.
Unit		Syllabus	No to Lecture
Ι	Himalyan orogeny struicture, Relief and Relief and division of recent theories of its	ral regions of India, Physiographic region of India. Evolution of extra peninsular India . Its Geological Evidence Regarding its present day evolution. Indo-Gangetic plain, Indian Monsoon, Mechanism and origin .Climatic Regions. Geographical factors behind hal integration .	15
II	federalism and national integration. Agriculture land use, Agriculture Regionalization, Agro-climatic region, Agriculture Regions, Green, Blue, and White Revolution and their impact on agriculture, Recent Trends in Indian Agriculture. Impact of WTO, Liberalization and Globalization on Indian agriculture. Industrials lane and Industrial Regions.		15
III	Urbanization and M	growth development and problems ,Population Regions etropolitan Regions and Regional Development and regional Issues in Regional Development and	15
IV	Basis of Regionlisation, Geopoltical , Climatic , Agro-climatic , Physiographic, Historical, Demographic socio- economic division of Regionalisation, Basis and efforts of Regionalisation of India , Meso, Macro Micro, Regions of India.		15
V	Detailed geographic	eal study of following regions - Middle Ganga plain, sam Valley Thar desert region, Chhattisgarh region,	15

Year. M.A (Previous)

Semester 1st

Suggested Readings:

Programme/ Course/Class

- 1- Centre for Science and Environment state of india's Environment, New Delhi (1988)
- 2- Tiwari, R.C, (2020): Geography of India (Hindi) English) Paravalina Prakashan Paryagraj.
- 3- Deshpande, C.D.: India: A Regional Interpretation, ICSSR and Northern book Centre 1992.



- 4- Dreze, Jean and Amartyasen (ed): India: Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1996
- 5- Kundu A, Raza M: Indian Economy: The Regional Dimension, Spectrum Publishers, New Delhi, 1982.
- 6- Singh, R. L. (ed): India: A Regional Geography, National Geographical Society, India, Varanasi,1971.
- 7- Spate, O.H.K. and Learnmoth, A.T.A: India and Pakistan, Methuen, London, 1967.
- 8- Tirtha R. and Gopal Krishna: Emerging India, Reprinted by Rawat Publications, Jaipur 1996.
- 9- Tiwari, RC: Geography of India, (Hindi, English), Pravalika Prakashan, Paryagraj, (2020).
- 10- Hussain, Majid: Geography of India (Hindi, English), McGraw Hill, New Delhi (2019).
- 11- Mahesh, C, Puri Vk,: Regional Planning in India, Allied Publishers Pvt Ltd, New Delhi, (2012)
- 12- Alka Gautam: Advanced Geography of India, (Hindi, English) Sharda Pustak Bhavan, Allahabad. (2015)

P rogramme Course/ Class M.A/ Msc.	Year- M.A (Previous)	SEMESTER-I
	Subject - Geography	
Course Code	A110704T	
Course Title	Paper-I V Cartography	
Types of Course	Theory	
Credit	04	
Course Assessment	100 MM (25+75)	
Course Objective and out come	To enhance the potential of students in a techniques and its application in Geographical students are considered in the develop the cartographic students and respect the geographic information or The course will create the ability of understand maps and aerial photographs.	udies and research. kills of students to the map.
	Note. Log tables and calculator will be allowed i	n the examination.

Unit	Paper code: A110704T - Cartographic work (Theory)	Mark
I	Statistical Methods in Geography: Measures of Dispersion, Standard Deviation, Frequency distribution curve and its Characteristics, Coefficient of correlation and regression, sampling methods Random stratified, systematic and cluster	
II	Geological Map- Drawing and interpretation of Geological Cross Sections and Maps- Inclined, folded, faulted and unconformable structure, Igneous, intrusion.	25+75
III	Block Diagram one and two points perspective.	

- 1. Monkhouse, F.J and Wilkinson, F.J. (1985): Maps and Diagrams Methuen, London
- 2. Raize, E (1962): General Cartography, John Wiley and Sons, New York. 5th Edition.
- 3. Haroon, M (2021): Prayogatmak Bhugol, (Hindi), Wisdom Publication, Varanasi.
- 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. (Hindi and English editions), Kalyani Publishers, New Delhi ...
- 6. Singh L.R (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
- 7. Sharma, J.P. (2008): Prayogatmak Bhugol ki Rooprekha(Hindi), Rastogi Publication Merrut.
- 8. Ashis, Sarkar (2013): Quantitative Geography Techniques and Presentation, Orient Blackswan, New Delhi

- 9. Mahmood, Aslam, (2020): Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi.
- 10. Alvi, Zamir, (2002): Statistical Geography: Methods and Applications, Rawat Publication
- 11. Ashis, Sarkar: (2015): Practical Geography A Systematic Approach, Orient Blackswan Private Limited-New Delhi.
- 12. Khullar ,D.R. (2020): Remote Sensing and Quantative Methods, Kalyani Publishers, New Delhi

P rogramme Course/ Class M.A/ Msc.	Year- M.A (Previous)	SEMESTER-I
	Subject - Geography	
Course Code	A110705P	
Course Title	Paper-I V Cartography	
Types of Course	PRACTICAL	
Credit	01	
Course Assessment	100 MM (25+75)	
Course Objective and out come	To enhance the potential of students in techniques and its application in Geographical st Larger objective in to develop the cartographic depict and respect the geographic information of The course will create the ability of understand maps and aerial photographs. Note. Log tables and calculator will be allowed	tudies and research. skills of students to n the map. ling and reading of

Unit	A110705P: Practical Geography (Cartography)	Mark
I	Air Photo interpretation	
II	Study Tour	25+75
III	Sessional Assignment, Record and viva voce.	

- 13. Monkhouse, F.J and Wilkinson, F.J. (1985): Maps and Diagrams Methuen, London
- 14. Raize, E (1962): General Cartography, John Wiley and Sons, New York. 5th Edition.
- 15. Haroon, M (2021): Prayogatmak Bhugol, (Hindi), Wisdom Publication, Varanasi.
- 16. Sharma, J.P. (2001): Prayogik Bhugol, Rastogi Publication, Meerut 3rd edition.
- 17. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions), Kalyani Publishers, New Delhi,.
- 18. Singh L.R (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
- 19. Sharma, J.P. (2008): Prayogatmak Bhugol ki Rooprekha(Hindi), Rastogi Publication Merrut.
- 20. Ashis, Sarkar (2013): Quantitative Geography Techniques and Presentation, Orient Blackswan, New Delhi
- 21. Mahmood, Aslam, (2020): Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi.
- 22. Alvi, Zamir, (2002): Statistical Geography: Methods and Applications, Rawat Publication
- 23. Ashis, Sarkar: (2015): Practical Geography A Systematic Approach, Orient Blackswan Private Limited-New Delhi.
- 24. Khullar ,D.R. (2020): Remote Sensing and Quantative Methods, Kalyani Publishers, New Delhi

P rogra MA/M	amme Course/ Class Sc.	YEAR- M.A (Previous) SEM	ESTER-II
		Subject - GEOGRAPHY	
Course	Code	A110801T	
Course	Title	Paper1- Geographical Thought (Compulsory)	
Types	of Course	Theory	
Credit		05	
Course	Assessment	Sessional – 25 End semester-75	
come		among students in the context of evolution and development of geographical ideas, theme approaches and Students will be acquainted with the philosophers of different thought that contributed in the development of geography as a knowledge. After the end of course, students will the able to visualize the baideas, dichotomies and approaches of geographic knowledge was to its historical perspective approaches, varying schools and era of their Students will be able to critically evaluate the nature of geograph science with changing space and time.	at school of a branch of a sic themes with relation
Unit		Syllabus	No of Lecture
Ι	The field of Geography and its place in the classification of sciences, changing definition of geography. Selected concept of geography – Areal Differentiation, Earth Surface, Landscape, Region, Physical and Cultural Region and regionalization, Regional Typology, Spatial organization.		15
	Regional Typology	Spatial organization.	13
II	German and French	School- Contribution of Humboldt, Ritter, Ratzel, Richthofen	15
III	German and French Hettner, Albert Pench Anglo American Sc	Spatial organization. School- Contribution of Humboldt, Ritter, Ratzel, Richthofen, k, Blach Brunche, Demangeon, Demartonee. hool. Contribution of Mackinder, Herbertson, Dudley Stamp.	
	Regional Typology German and French Hettner, Albert Pence Anglo American Sc Davis, Semple, Hunt Dualism in Geograph vs human Geography	School- Contribution of Humboldt, Ritter, Ratzel, Richthofen, k, Blach Brunche, Demangeon, Demartonee. hool. Contribution of Mackinder, Herbertson, Dudley Stamp, tington, Hartshorne, Sauer, Development of Geography in India. hy- systematic vs regional, physical geography, myth and reality above dualism, trends and dern geography, environmental determinism, possiblism	15

- 1. Able Ronald Adams john S. Gould Peter: Spatiat Organisation The Geographer's View of the World.: Prentice Hall N.J, 1971.
- 2. Amedo, Douglas: An Introduction to Scientific Reasoning in Geography, John willey, USA, 1971.
- 3. Dikshit, R.D: (ed): The Art and Science of Geography: Integrated Reading, Prentice Hall of India, New Delhi, 1994.
- 4. Hartshorne, R: Perspective on the Nature of Geography, Rand Mcnally & Co,1959.
- 5. Husain, M: Evolution of Geographical Though (Hindi English), Rawat Pub. Jaipur, 1984.
- 6. James, PE: All Possible World: A History of Geographical Ideas, Sachin Publication, Jaipur, 1980.
- 7. Johnston, R. J: Philosphy and Human Geography, Edwad Arnold, London, 1988.
- 8. Johnston, R.J: The Future of Geography, Methuen, London, 1988.
- 9. Minshull, R: The Changing Nature of Geography, Hutchinson University Library, London, 1970.
- 10. Haroon, M.: History of Geographical Thought (Hindi) Wisdom Publication, Varanasi.
- 11. Kaushik, SD, Rawat, D: Geographical Thought and Methodology. Rastogi Publication, (2021).

Programm M.A / MS	me/ Course/ Class Sc.	Year. M.A (Previous)	emester II
		Subject - Geography	
Course C	ode	A110802T	
Course T	itle	Paper – II- Cartography (Compulsory)	
Types/ Co	ourse	Theory	
Credit		04 + 01	
Course A	ssessment	100 MM (25+75)	
Course Objective and out come		To enhance the potential of students in advate techniques and its application in geographical studies. The course will create the ability of students to methods of relief slope analysis and climatic analythematic mapping. The expected learning outcome of this course appropriate use of statistical techniques in varying geographical studies. In addition to the ability of and reading maps, student will develop cartographic be able to create maps on their own. Note. Log tables and calculator will be allowed in the	es and research. adopt various ysis as well as the would be, g avenues of understanding to skill and will
Unit	Paper Code:	A110802T - Cartographic work (Theory)	Mark
I	Test of Significance - Chi- square test, student "t" test variance estimate test probability		
II	Simple linear Regression and Multiple regression, regression line .Method of constructing properties of least square estimates, coefficient of determination		25+75
III	Methods of slope analys Drainage structure.	is:- Wentworth, Smith, Henry Raisz and Robinson	

- 1. Monkhouse, F.J and Wilkinson, F.J. (1985): Maps and Diagrams Methuen, London
- 2. Raize, E (1962): General Cartography, John Wiley and Sons, New York. 5th Edition.
- 3. Haroon, M (2021): Prayogatmak Bhugol, (Hindi), Wisdom Publication, Varanasi.
- 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. (Hindi and English editions), Kalyani Publishers, New Delhi.
- 6. Singh L.R (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
- 7. Sharma, J.P. (2008): Prayogatmak Bhugol ki Rooprekha(Hindi), Rastogi Publication Merrut.
- 8. Ashis, Sarkar (2013): Quantitative Geography Techniques and Presentation, Orient Blackswan, New Delhi.
- 9. Mahmood, Aslam, (2020): Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi.

M.A/ M	mme Course/ Class	Year- M.A (Previous)	SEMESTER-II	
		Subject - Geography		
Course		A110803P		
Course		Paper-I V Cartography		
	f Course	PRACTICAL		
Credit		01		
Course	Assessment	100 MM (25+75)		
		To enhance the potential of students in techniques and its application in Geographica Larger objective in to develop the cartographic depict and respect the geographic information. The course will create the ability of understamaps and aerial photographs. Note. Log tables and calculator will be allowed.	nical studies and research aphic skills of students to tion on the map. erstanding and reading or	
	A1108	03P: Practical Geography (Cartography)		
1.	Surveying and plotting	g by Dumpy level and Abney level Maximum	25+75	
2.	Village Report			
3.	0	ent, Record and viva voce.		

- 10. Monkhouse, F.J and Wilkinson, F.J. (1985): Maps and Diagrams Methuen, London
- 11. Raize, E (1962): General Cartography, John Wiley and Sons, New York. 5th Edition.
- 12. Haroon, M (2021): Prayogatmak Bhugol, (Hindi), Wisdom Publication, Varanasi.
- 13. Sharma, J.P. (2001): Prayogik Bhugol, Rastogi Publication, Meerut 3rd Edition.
- 14. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions), Kalyani Publishers, New Delhi.
- 15. Singh L.R (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
- 16. Sharma, J.P. (2008): Prayogatmak Bhugol ki Rooprekha(Hindi), Rastogi Publication Merrut.
- 17. Ashis, Sarkar (2013): Quantitative Geography Techniques and Presentation, Orient Blackswan, New Delhi.
- 18. Mahmood, Aslam, (2020): Statistical Methods in Geographical Studies, Rajesh Publications , New Delhi.



Programme/ Course/Class MA/MSc.	Year-M.A.(Previous)	Semester-II	
	Subject-Geography		
Course Code-	A110804T		
Course Title-	Paper-III- Environmental Geography (Optional)		
Types of Course	Theory		
Credit	5		
Course Assessment	Sessional-25 End semester-75		
Course objective and outcomes	To create the environmental aptitude among stude will develop their deep understanding of environmental the main objective is to familiarize the students issues, approaches about physical environmental acquainted with contemporary environmental challenges. Students will able to know the various aspects degradation and evolve and generate enthusiasm	ronmental issues. Ints with concept, It. Student will be It problems and It of ecological	

Unit	Syllabus	No of Lectures
I	Geography as study of Environmental. Meaning Scope, Concepts are Approaches of Environmental Geography, Environment and Society. Relations of - Environmental Geography with other sciences Components and Types of Environment, Approaches to the study of main environment relationships.	15
II	Concept of Ecology and Ecosystem, Ecosystem, meaning types and components of Ecosystem: Abiotic and biotic components of environment and Ecosystem. Ecological Production, trophic level, Food Chain and Food Web. Ecological Pyramid and Flow of Energy, Bio-Gas-Chemical cycles – Nitrogen Cycle, Oxygen, Carban cycle, Hydrological cycle, Calcification and characteristic of Biomes	15
III	Environmental degradation and pollution: concepts and Types of Environmental degradation, causes of Environmental degradation. Sources and types of pollution, Air Pollution, water, noise and soil. Advance effects of air pollution o weather and climate, Global climate, Global warming, Ozone depletion, green home effects water, surface and water pollution its adverse on human health.	15
IV	Environmental perception, Human Health, ecological effect, urbanisation, insulation and environment degradation, Environmental monitoring and Management-Environmental planning and Management. Environmental Management methods and approaches. Ecological and economic and social basic of Environmental management. Ecological properties, survey, evaluation, preservation and conservation of resources. Environmental impeachment with special reference to India. Environmental planning at National, Regional and Local level.	15
V	Environmental Policy, Environmental protection Act with special reference to India. Environmental Impact Assessment (EIA). Environmental Management Planning (EMP) Fluctuation of sea rise and climate change, Evidence of Climate changes	15



- 1- Strahler, A.N. and Strahler A.H.: Geography and Man's Environment, John Wiley & Sons, New York., 1976
- 2- Detwyler, T.R.: Man's Impact of the Environment, McGraw Hill. N.Y.
- 3- Clapham, W.B.,: Natural Ecosystem, MacMillan, London, 1973.
- 4- Dassman, R.F.: Environmental Conservation, John Wiley, N.Y., 1976.
- 5- Singh, S.; Environmental Geography (English & Hindi), Prayag Pustakalaya, Alld., 1998.
- 6- Tivy: Biogeography, Longman, London, 1982.
- 7- Chanalanc R.C.(1998), Environmental Awareness, Kalyani Publishers.
- 8- Gaur, S and Chandrasekhar. T (2006) Global Environmental cruses, Book enclave, Jaipur.
 9- Park, C.C. (1980): Ecology and Environmental cruses, Book enclave, Jaipur.
- 9- Park, C.C. (1980).: Ecology and Environmental management Butterworths London
- 10- Chris Barrow (2005),: Environmental Management and Development Rout ledge.
- Castree Nocl Demerith, D, liverman, D(2009)- A Companion into Environmental Geography, wiley-Blackwell.

Programme/ Course /Class	YEAR- M.A (Previous)	SEMESTER-II	
MA/MSC.			
	Subject - GEOGRAPHY		
Course Code	A110805T		
Course Title	PAPER-IV- Population Geography (Optional)		
Types of Course	Theory		
Credit	5		
Course Assessment	Sessional25 End Term 75		
Course objectives and out come	To enhance The skill of Students on theoretical a Population geography, Population, Composition population resource relations. At the end of this expected that students will enable to describe and dimension of population dynamics.	sition, dynamics and f this course, it is	

Unit	Syllabus	No of lectures
I	Population Geography-Definition, Concepts, Scope, methods, approaches and development of Population Geography, Relation with Demography, Sources and types of population data, Census, Sample Survey and vital registration System, reliability of data and their problem of mapping	15
II	Population dynamics – Measurement of fertility and Mortality, Age and sex structure, occupational structure, Literacy and Education, Measurement of Birth and death Rate.	15
III	World Population Growth, causes and consequences. Population distribution factors affecting population distribution, World patterns of population. Demographic Transition theory, Concepts of under population ,over population, optimum population and population explosion in India.	15
IV	Population Composition, Rural and Urban Population. Urbanization in India, Trends of Urbanisation in Iindia. Gender issues. Types, causes, determinants, Theories and consequences of migration, Demographic Transition theory.	15
V	Human Resource Development and Human Development Index, Population Problems with special reference to India, food, housing, Unemployment and poverty, Population Policies in developing and developed countries, Success and failure of family planning and family welfare Programme. Population Policy (NPP), 2000.	15

- 1. Bougue D.J: Principles of Demography. John Wiley, N.Y. 1969
- 2. Chandana, R.C.: Geography of Population: Concept, Determinants and Patterns, Publishers, 2000.
- 3. Clarke, John. I: Population Geography, Pergaman Press, Oxford, 1973.
- 4. Crook, Nigel: Principles of Population and Development, Pergaman Press, N.Y. 1997.
- 5. Daugherty Helen Gin, Kenneth C.W. Kammeyer: An Introduction to Population, The Guilford Press, N.Y, London, 1998
- 6. Garnier, 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 Toword a Billion, B.R. Publishing Corporation, 1991.
- 9. Trewartha, GT: A Geography of Population: World Pattern, New York (1969)
- 10. Woods, R: Population Analysis in Geography, Longman, London 1979.
- 11. Zelinsky, Wilber: A Prologue to Population Geography Prentice Hall 1966.
- 12. Maurya, S.D.: Population Geography, (2017), Pravalika Prakashan, Allahabad.
- 13. Izhar Hassan,M: Population Geography A Systematic Exposition,(2020), Taylor & Francis, New Delhi.
- 14. JhinganM. L.Bhatt B.K. and Desai: Demography ,Virid Publication New Delhi (2015)
- 15. Khan, L.H.: Socio-Economic and Structural Analysis of Internal Migration, New Delhi(2010)
- 16. Siddiqui, F.A: Regional Analysis of Population Structure, New Delhi, (1984)

Programme Course/ Class M.A./M.Sc	Year-M.A.(Previous)	Semester-II	
	Subject-Geography		
Course Code-	A110806T		
Course Title-	Paper-V- Regional Development and Planning (Optional)		
Types of Course	Theory		
Credit	5		
Course Assessment	Sessional-25 End semester-75		
Course objective and outcomes	The course is designed to develop the knowledge a attributes calcification and approaches and theorie regional planning and development. After the end of the course, students wise able to dedifferences among formal, functional and planning are expected to efficiently formulate, appreciate and specify theques and plan for regional growth and details.	to demarcate the ning regions. They e and apply the	

Unit	Syllabus	No of
		Lectures
I	Concept and Nature of Regional Planning Philosophy and Purpose of Planning. Development of planning thought. Theories of Regional Development. <u>Economic base theory</u> , <u>International Trade</u> multiplies, Aggregate Growth Model. The concept of growth centers. Growth centre strategy of Regional Planning Rural Economy, Core-periphery relationship.	15
II	Concept of Regions. Attributes of Regions Types of Regions, Functional and Formal Region Uniform and Nodal Regions, Single purpose and composite Regions in the context of Planning. Regional Hierarchy. Approaches for the delimitation of different types of Regions and their utility in planning resource base approach—Growth centre Approach.	15
III	Basic Needs, Approach and Habitat transformation Delineation of Planning Regions, Planning regions of India, Planning processes-sectoral, Temporal and spatial Dimensions. Planning for a regions development and multiregional planning in a National context Indicators of Development and measuring levels of development with special reference to India.	15
IV	Regional Planning for rural development with special reference to UP. Infrastructure Elements irrigation, power, transportation and communication and marketing. Industralisation in Regional Planning. Population resource equilibrium and spatial organisation in Regional Planning. Regional Planning as development strategy since independence concept of Multilevel planning, Decetralized planning. People participation with planning process.	15
V	Environmental issues in Regional Planning, Planning for sustainable development, Regional imbalance Disparities in India-causes and consequences. Regional Development and social Movement in India. Global Economic block. World Regional Disparities'.	15

- 1- Bhatt, L.S.: Regional Planning in India, Statistical Publishing Society, Calcutta, 1973.
- 2- Freidman, J. and Alonso W: Regional Development Policy: A Case study of Venezuela MIT Press, Cambridge Mass-1966
- 3- Gosal G.S. and Krishnan G: Regional Disparities in Levels of Socio-Economic Development in Punjab, Vishal Publications Kurukshetra, 1984.
- 4- Kuklinshki A.R.(ed): Growth Poles and Growth Centres in Regional Planning, Mountonj, The Hague, 972
- 5- Kundu A and Raza M: Indian Economy: The Regional dimension Spectrum Publishers, New Delhi, 1982
- 6- Losch, A: The Economics of Location, University Press, New Haven, 1954.
- 7- Mishra, R.P. Regional Planning: Concepts, Techniques and Policies, University of Mysore, 1969.
- 8- Mishra R.P. and Others (ed): Regional Development-Planning in India: Strategy, Institute of Development Studies, Mysore, 1974.
- 9- Mitra, A: Levels of Regional development. Census of India vol 1. Part I (A) (i) and (ii) New Delhi, 1965.
- 10- Tarlok Singh: India's Development Experience, MacMillan, New Delhi, 1999.
- 11- Mishra, R.P. et. Al: Multi Level Planning, Heritage Publishers, Delhi, 1980.
- 12- Chandlan, R.C. (2000) Regional Planning Kalyani Publications, New Delhi.
- 13- Chand, M, Puri V.K(1983) Regional Planning in India Allied Publisher, New Delhi.
- 14- Friedman, J and Alose, w. (1967), : Regional Development and Planning "A Reader, NIT Press, Cambridge.

Programme Course/ Class M.A./M.Sc	Year-M.A.(Previous)	Semester-II	
	Subject-Geography		
Course Code-	A110807T		
Course Title-	Paper-VI- Geography of Rural Development (Optional)		
Types of Course	Theory		
Credit	5		
Course Assessment	Sessional-25 End semester-75		
Course objective and outcomes	The Focus of the course is to develop an idea ab to understanding the rural development. The familiarize the students about general concepts, rural development geography. To account the student settlement infrastructure, morphology, challenges for reveal development. Student will be able to efficiently formulate challenges of reveal settlement and critically evalor of different plans adopted for rural development context.	opment. The objective is to concepts, nature and issues of count the students about nature norphology, infrastructure and by formulate the issues and critically evaluate the suitability	

Unit	Syllabus-	No of
		Lectures
I	Rural Development concept and Geographical perspective theoretical frame work of ruler development. Rural markets and markets centers, growth points and growth centers. Theories of central places, rural urban relationship and their integration. Rural settlements and Rural land use and its problems.	15
Π	Dimensions of rural economy: Physical and human resources their spatial patterns and interrelationship socio-economic dimensions infrastructural facilities socio cultural organization, migration and their and there and their causes characteristics population agriculture and its characteristics.	15
III	Social issues of rural area poverty housing and shelter deprivation and inequality empowerment women healthcare social tension and underdevelopment environmental issues access to environmental infrastructure water supply and sanitation drainage occupational health education and ruler development	15
IV	Balanced development strategies of India. Rural and sustainable development, rural Governance Panchayat Raj System, role and relationship of Panchayat Raj institution (village Panchayat, Panchayat Samiti and Zila Parishad and administrative structure (village, block and district) failure and success of various schemes sponsored by government for rural development government agencies and NGOS. Rural Development Experience in Uttar Pradesh.	15
V	Integrated rural Development strategies critical review of rural development strategies in India Integrated Rural Development Programmes (IRDP) community Development Programmes Mahatma Gandhi Rural Employment guarantee act National rural health mission (NRHM)	15

- 1- Kuklinski A.R (ed): Growth poles and Growth Centers in Regional Planning, Mouton, 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, Wiedenfeld 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, B.R. Publication Cor Delhi, 1986.
- 7- Sriniwas M.N: village India, Asia publication house Bombay, 1968.
- 8- Wanmali, S: Service centers in Rural India B.R. Rublication Cor. Delhi, 1983,
- 9- Singh, Kartar-Rural Development: Princefrles, Policies and Management.
- 10-Maheshwari R.S:- Rural Development in India
- 11- Cheslism, M: Rural settlement and Land use

M.A./MSc Geography (Final) Geography Syllabus

M.A./Msc. (Final) is divided into two semesters (III& IV). In the third semester there is two compulsory papers and two optional papers will have to be selected from four optional papers. There will be one major project both in third and fourth semesters. In fourth semester there is one compulsory General Practical (Cartography) which will be conducted by the department concerned and students will choose three optional papers from six given optional papers

Programme Course/ Class M.A./M.Sc.	Year-M.A.(Final)	Semester-III	
	Subject- Geography		
Course Code-	A110901T		
Course Title-	Paper 1- Climatology and Hydrology (compulsory)		
Types of Course	Theory		
Credit	5		
Course Assessment	Seasonal – 25 End semester - 75		
Course objective and outcomes	The course is intended to develop the students knowl Physical principles and process governing the weath atmospheres circulation at global and regional scale. It shill of students to observe weather and climates respect to physical and social changes influencing the Students will develop shill in appreciation of heretical hydrology. They will learn field as well as laboratory estimating different hydrological attributes. Students will able to conceptualize, analyze and appl of weather and climate and correlate with daily we Students will develop the causal relations of climate with economic and cultural activates. Students will be also the techniques for modeling the climate covering both technical aspects	the weather climate and hal scale. To upgrade the climates elements with noing the earth system. If heretical knowledge of aboratory techniques for and apply the concepts in daily weather events. Climate with other social, ill be also able to utilize	

Unit	Syllabus	No. of Lectures
I	Definition, Scope and evolution of climatology and its relationship, with meteorology. Composition and mass and structure of atmosphere. Involution process of heating and cooling, Heat balance and heat budget of the earth and atmosphere, Distribution of temperatures, Temporal, vertical and horizontal Green house effects.	15
II	Air Pressure and air belts, atmospheric motion. Forces controlling motion air, vertical motion and vorticity, jet stream permanent, seasonal and local winds their origin types and distribution.	15

III	Concepts, Classification, Characteristics of air masses and fronts. Oceanic atmospheric interactions-El-Nino, Southern Oscillation (ENSO) and La-Nina. Climate Classification of Koppen's and Thornthwaite, Climate change: evidence and possible causes, global warming. Applied climatology and weather forecasting.	15
IV	Definition and scope of hydrology. Hydrological cycle and its sub cycle. Elements of Hydrological cycle, precipitation intensity and durations, infiltration and surface run off and urabn flooding Man's interference on hydrological cycle, human impact on hydrological system of drainage basis. Factors affecting evaporation transpiration, potential and actual evapo-transpiration- their measurement and computation	15
V	Sub-surface water, soil moisture, ground water-occurrence, storage, recharge and discharge, water table fluctuation and safe yield, The global water budget. Principles and determination of water balance and its application in crop production water pollution Applied hydrology.	15

- 1. Barry R.G. and Chorley R.J.: Atmosphere, Weather and Climate Routledge, London and New Year, 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. Haroon, Mohammad: Climatology and Hydrology, Hindi Vasundhara, Prakashn, Gorakpur, 2017
- 7. Addision 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.
- 11. Savindra Singh, : Climatology, Parvalika Prakashan, Paryagaraj, 2021
- 12. Kieth, D and Mayas, L.W., Ground Water Hydrology, 3rd Edition, Wiley, Chichester
- 13. Triwartha, G.T.: An Introduction to Climate, MC Graw Hill,1968
- 14. Sharma, R.K: A Text of Hydrology and Water Resource.
- 15. Mather J.R.: Climatology: Fundaments and Application, Mac Graw Hill, NewYork, 1974

Programme M.A./M.Sc	e Course/ Class	Year-M.A.(Final)	Semester-III
		Subject-Geography	
Course Co		A110902T	
Course Titl		Paper-II- Cartography	
Types of C	ourse	Theory	
Credit		4	
Course Ass	essment	MM 100 (25+75)	
Course Obj	ective and out come	The expected learning outcome of this of appropriate use of statistical techniques in variety geographical studies. In addition to the ability and reading maps, student will develop cartographical to create maps on their own. Note. Log tables and calculator will be allowed	arying avenues of y of understanding uphic skill and will
Unit		01T Cartographic work (theory)	No. of Lectures
I	mathematical methods Gnomonic, Steregraphic interrupted Mollweide sinusoidal projection. International Projection	sification, properties, choice, merits and demerits ag of the following map projections by using s: Gall's, Mercator's, Equatorial cases of and Orthographic projections, Mollweide's and e's projection, Sinusoidal and Interrupted Lambert's conical equal area Projection and	15
II	Cartographic Represe Rainfall disperson diagramultiple Dots, landuscolocalization and localization	ntation of statistical Data: What surplus graph, ram, Distribution maps-Isopleth, choropleth and e maps, Locational quotient, Co-efficient of tion curve.	15
III	surveying-solving three	lata and solving problems: Problems related to point and two point problems, correction of ag error. plotting of readings obtained by primatic yel.	15

- 1- Monkhouse, F.J and Wilkison, F.J. (1985): Maps And Digrams. Methuen, London
- 2- Raisz, E. (1962): Gerena certography. John Wiley and Sons, New York. 5th edition.
- 3- Haroon, M. (2021): Prayyogatmak Bhugol, Wisdom Publication, Varansari.
- 4- Sharma, J.P. (2001): Prayogik Bhugol, Wisdom Publication, Meerut 3rd. Edition.
- 5- Singh, R.L and Singh, Rana P.B (1993): Elements of Pracatical Geography. (hindi And English editions). Kalyani Publishers, New Delhi,.
- 6- Singh, L.R (2006): Fundamentals, of Practical Geography, Shrda Pustak Bhawan, Allahabad.
- 7- Sharma, JP. (2008): Prayogatmak Bhugol Ki Rooekha, Rastogi Publications-Meerut.

M.A./M.S	ne Course/ Class	Year-M.A.(Final)	Semester-III
		Subject-Geography	
Course Co	ode-	A110903P	
Course Ti	tle-	Paper-II- Practical Geography (Carto	ography)
Types of 0	Course	Practical	
Credit		4	
Course As	ssessment	MM 100 (25+75)	
	A11090	techniques and its application in Geo Larger objective in to develop the car depict and respect the geographic inf The course will create the ability of maps and aerial photographs. Note. Log tables and calculator will l 3P: Practical Geography (Cartography	rtographic skills of students to cormation on the map. Tunderstanding and reading of the allowed in the examination
1-	Project report on any o	ptional paper	25+75
2-	Measuring horizontal a Measuring height by Se	nd vertical angles by Theodolite, extant	

- 8- Monkhouse, F.J and Wilkison, F.J. (1985): Maps And Digrams. Methuen, London
- 9- Raisz, E. (1962): Gerena certography. John Wiley and Sons, New York. 5th edition.
- 10-Haroon, M. (2021): Prayyogatmak Bhugol, Wisdom Publication, Varansari.
- 11-Sharma, J.P. (2001): Prayogik Bhugol, Wisdom Publication, Meerut 3rd. Edition.
- 12-Singh, R.L and Singh, Rana P.B (1993): Elements of Pracatical Geography. (hindi And English editions). Kalyani Publishers, New Delhi,.
- 13-Singh, L.R (2006): Fundamentals, of Practical Geography, Shrda Pustak Bhawan, Allahabad.
- 14- Sharma, JP. (2008): Prayogatmak Bhugol Ki Rooekha, Rastogi Publications-Meerut.

Programme Course/ Class M.A./M.Sc.	Year-M.A.(Previous)	Semester-III
	Subject-Geography	
Course Code-	A110904T	
Course Title-	Paper-III- Urban Geography (optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Sessional-25 End semester-75	
Course objective and outcomes	The course aims to understand describe and dem dynamic and its surrounding, with historical existence will provide. The course help to evaluate knowledge on spatial analysis of functions morphology, pattern and dimensions of chan places and cities. The students are expected the letter the spatial pattern of urban society and apply the concept and theory they learn for interpret and tackle and real world urban issuperspective of geography.	the structure urban areas ages of urban o under stand know how to

Unit	Syllabus	No of
		Lectures
I	Meaning Nature, Scope and evolution of Urban Geography, Attributes of Urban Places duving ancient, medieval and modern period origin and Growth of urban settlements. Bases and process of urbanization and urban development. Classification of urban settlements. Urban profile, demographic structure and characteristics of urban population.	19
II	Models of Urban growth, Burgess's Concentric Zone Theory, Hoyt's Sectoral Model, Harris and Ullman, Multiple Nuclei Model, Urban growth, Urban, Hierarchy, and rank-size rule, Theories of Urban growth, Christaller, Losch, Peroux, Law of Primate city	18
III	Urban economic base: occupational structure basic and non-basic Functions, Functional classification, urban morphology and land use Structure, built up Non-built up CBD, commercial, residential, Industrial and institutional areas, City—region relations and modern Urban landscape. City Surrounding Relations- The urban economic base terminology, concepts, geographic qualities of the basic, non basic concept, The city Sphere of influence (Umland), Rural-Urban fringe Conceptual explanation.	19
IV	City as central place, urban fringe, urban problems, urban poverty, urban Renewal, urban sprawl, slums, transpiration, urban pollution, solid waste ,urban crime and environmental health. Urban policy and planning, city planning, green Belts spatial patterns and trends of urbanization in India, patterns of urban growth in India. Globalization and urban learning special study of KAVAL Towns of UP.	19

- 1- Berry B.J.L. And Horton F.F.: Geographical perspectives on urban systems, prentice Hall, Englewood clifts, N.J. 1970
- 2- Dickinson R.E. city and Region , Roultedge , London , 1964
- 3- Gibbs, J.P. Urban Research Methods, Van Nostrand Co Princeton, N.J.1961.
- 4- Hall p:urban and regional planning Roulade London 1992
- 5. Kundu, A :urban Development and urban research in India , Khanna publications, 1992
- 6. Rao ,V.L. S.P. Urbanization in India: spatial Dimensions, Concepts publican Co. New Delhi.
- 7. Smailes A.E.: The Geography of Towns, Hutchinson, London 1953.
- 8. Maurya'S. D.: Urban Geography (Hindi, English) Sharda Publications Allahabad.

Programme Course/ Class M.A./M.Sc.	Year-M.A.(Final)	Semester-III
	Subject Geography	
Course Code-	A110905T	
Course Title-	Paper- IV- Political Geography (Optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Seasonal – 25 End semester - 75	
Course objective and outcomes	The course will explain the historical evolution of Political Geography. It will help to understand about models related to geopolitics and geo-strategy. It will knowledge about political attributes that evolved vistructure and geographic influence like state, nativelections, and frontier of world in general and India in Students will be able to critically examine the geographolitical studies. They will be able to evaluate and continuous with contemporary geopolitical and geo-strates.	out theoretical ill provide the with territorial on, boundary, particular. phical bases of relate different

Unit	Syllabus	Minimum No. of
Ι	Introduction to Political Geography Definition, Nature Scope and Development of Political Geography. Contemporary Geographical Tradition in Political Geography. Recent Trends and approaches of Political Geography. Major schools of thought in Political Geography. Political Geography vs geopolitics. The methodology of political geography. A critical analyses of the functional unified theory, genetic functional and system approaches.	Lectures 19
II	Concept of Nation and State, Geographic elements of state, state, nation, state formation, Nation building, frontier and boundaries colonialism, Neo-imperils in political, economic and cultural, Mechanism, Geo-political significance of core-periphery theory, neocolonialism, feudalism and other forms of governance.	19
III	Global Strategic Model: Mackinder's Geographical pivot, heartland model Spykeman's Rim Land Model. Critical Assessment of heartland and rim land model and their relevance to world's Geopolitics. The changing patterns of super power and super nationalism.	18
IV	Political Geography of India contemporary origin of India's Federalism. India, basis of federalism in India-Geopolitical and language changing political map of India, Inter-state issues and emerges of new states. India a Global strategic view India's border with neighboring countries especially with Pakistan, China and Bangladesh. Geo-political significance of India Ocean. Nature of	19

federal capitals with special reference to New Delhi. Elements of Electoral geography, Concept, Definition and approaches of study of Election Geography. Development of Election Geography.

- 1 Alexander, L.M.: World Political Patterns, Ran McNally, Chicago, 1963.
- 2 De Blij H.J. and Glassner, Martin: Systematic Political Geography, John wiley. N.Y. 1968
- 3 Dikshit. R.D.: Political Geography: A Contemporary Perspective, Tata McGraw Hill. New Delhi, 1996
- 4 Dikshit, R.D.: Political Geography: A Century of Progress, Sage New Delhi, 1999
- 5 Sukhwal. B.L: Modern Political Geography of India, Sterling Publisher, New Delhi, 1968
- 6 Taylor, P: Political Geography, Longman, London, 1985.
- 7 Fisher, Charles: Essays in Political Geography, Methuen, London, 1968
- 8 Pounds. N.J.G.: Political Geography, McGraw Hill, N.Y., 1972.
- 9 John R. Short: An Introduction to Political Geography, Routledge London, 1982.
- 10 Moddie A.E.: Geography Behind Politics, Hutchinson, London, 2000
- 11 Prescott, J.R.V.: The Geography of Frontiers and Boundaries, Aldine, Chicago.
- 12 Deshpande, C.D.: India: A Regional Interpretation, Northern Book Centre, New Delhi, 1992.
- 13 Panikkar, K.M.: Geographical Factors in Indian History, 2 Vols, Asia Publishing House, Bombay, 1959
- 14 Adhikari S, Political Geography, Rawat-Publication, Jaipur, 2004
- 15 Pant, Harsh: Politics and Geopolitics Decoding India's Neighborhood Challenges, Rupa Publication, New Delhi, 2021
- 16 Dwivedi, R.H, Misra, H.N: Fundamentals of Political Geography, Surject Publication, New Delhi, 2019
- 17. Mohanthy, G.S.: Political Geography (2021)
- 18. Dasgupta, Rupak: Global Politics, (2019) Pearson, India.
- 19. Sen, Jyotirmoy: Political Geography, Kalyani-Publication, Ludhina, 2019
- 20. Tiwari, R.C.: Political Geography(Hindi), Pravalika-Publication, Paryagaraj, 2020

Programme Course/ Class	Year-M.A.(Final)	Semester-III
M.A.		
	Subject- Geography	
Course Code-	A110906T	
Course Title-	Paper- V-Transport Geography (optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Seasonal – 25	
	End semester - 75	
Course objective and outcomes		

Unit	SYLLABUS	Minimum No. of Lectures
I	Nature, Scope, Significance and development of transport geography, evolution of transpiration-preindustrial era, 19th and 20th centuries. Factors associated with the development of transport system physical, economic, social, cultural and institution. Evolution of transport network. Characteristics and relative significance of different modes of transport: Railway, Roads, Airways and waterways.	19
П	Accessibility and flow models, network structure, graph theoretic measures, measurement of accessibility, models of network change, Linear programming and gravity models. Theories related to freight rate structure, bases of spatial interaction: complementarily, intervening opportunity, transferability, gravity, potential models of spatial interaction	19
III	Transport system in India: Railways, Roads, airways and waterways, patterns of movement, simple models of interaction, movement geometry. Transport policy and planning, transport development in developing countries, urban transportation-growth and problems.	19
IV	Transport and regional planning, transport and environmental degradation vehicular pollution and congestion. Alternatives to transport system in Megacities of India. National Highway development and planning in India.	18

- 1 Chorley, R.J. and Haggest P; models in Geography, Methuen & Co London, 1967.
- Hurst, M.E(ed): Transportation Geography, McGraw Hill,1974.
- 3 Haggest P. and Chorley R.J; Networks Analysis, Edward Arnold, London, 1968.
- 4 Hay A: Transport Economy, Macmillan, London, 1973.
- Hoyle, B.S. (ed): Transport and development, Macmillan, London 1973.
- Raza M. and Agarwal Y.P; Transport Geography of India, concepts New Delhi,1985.
- 7 Robinson H. and Bamford G.G: Geography of Transport Macdonald & Evans, London, 1978.
- White, H.P. And senior, M.I.: Transport Geography,longman,London,1953.

Programme Course/ Class M.A./M.Sc	Year-M.A.(Final)	Semester-III
	Subject-Geography	
Course Code-	A110907T	
Course Title-	Paper- VI- Marketing Geography(Optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Seasonal – 25 End semester - 75	MM 100
Course objective and outcomes	The basic objectives of this course are to provide the broad introduction to marketing concepts, help you factors that influence marketing decisions, and focus vital role of marketing organization in today's international Economy. On completion of this course, be able to demonstrate strong conceptual knowledge i area of marketing, trade, trade blocks and also ca compare different marketing theories and models wi international experiences.	understand the attention on the national and the student will n the functional n evaluate and

Unit	Syllabus	Minimum No. of Lectures
I	Definition, Scope, Nature, Growth signification and Development of marketing Geography. Approaches of study: Community, spatial, social economic and behavioral. Components of Market Morphology. Development of Marketing Geography in India. Development of Market place and Exchange system.	19
П	Element of Market place-seller consumers good and services, business establishment. Classification of structure, hierarchy of market centers and market area, The Theoretical Framework for study of Market centers: Central Place Theory. Chris taller Locsh Models of Market Location, B.J.Berry,'s Model, Reilly's Models of interaction and Trade area delimitation.	19
III	Skinner's classification of markets, Markets periodicity and market cycles their spatio-temporal synchronization. Rural-Urban Markets. Market structure in different-regional setting. Marketing and social structure. Role of Markets Town in Rural and Urban in development.	18
IV	Spatial Dimension of consumer behavior, culture and consumer behavior: Trade classification and structure –Local, regional,	19

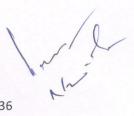
national and international—Historical Development of trade. Factors of development of Trade. Agriculture marketing in India. Globalization relating to WTO. Free Market economy.

- 9 Acharya, S.S & Agarwal , N.L (1987) Agricultural Marketing in India, Oxford & IHB publication Co, New Delhi.
- Berry,B.J,L.(1967) Geography of Market Centres and Retail Distribution. prentice Hall, Englewood cliffs, N.J
- Davis, R.L. (1976) Marketing Geography, . Methuen, London,
- Dixit,R.S.(1984)) Marketing Centres and Their Spatial Development in the Umland of Kanpur, Allahabad.
- Garnier, B, j and Delobez . A (1977) Geography of Marketing, Longman, London.
- 14 Khan.N (1991) Agricultural Development and Marketing, H.K. Publisher, New Delhi
- Losch, A (1954) Economics of Location. Yale University press, New Heaven.
- N.C.A.E.R (1983) Market Town and Spatial development in India, NCAER, N.D.
- Saxena, H.M (1984) Geography of Marketing. Concepts and Methods, New Delhi.
- Saxena, P. Marketing and Sustainable Development. Rawat Publications, New Delhi.
- 19 Singh, G.N(1987) Agricultural Marketing in India. Hugh publication, Allahabad.
- 20 Rajgopal(2001) Rural Marketing. Rawat publication, New Delhi.
- 21 Dixit, R.S.: Geography of Marketing and

Programme Course/ Class M.A./M.Sc	Year-M.A.(Final)	Semester-IV
	Subject- Geography	
Course Code-	A111001P	
Course Title-	Paper-I - Practical Geography (Cartography) Compulsory	
Types of Course	Practical	
Credit	5	
Course Assessment	Lab Cum Field work -100 %	MM.100 (25+75)
Course objective and outcomes	The objective of this course is to develop cartographic and research skill. NOTE-The practical examination shall be conducted in one part carrying 75 marks +25 marks(sessional) by department. Log-table and Calculator will be allowed in the lab. The examination shall be conducted by a board of two examiners of which one examiner shall be external.	

Unit	Syllabus	MM	No. of Lectures
I	Cartographical Representation of Statistical Data System Analysis- Measurement of Spatial Patterns and inequality,Z score Lorenz curve and Nearest neighbor analysis.	20	15
II	Introduction to Research Methodology- Framework or Research- Concept and Significance of research in Geography, Philosophy & Methods Empricism, Positvism, Behaviourism. Primary and Secondary Data; Data Collection Arrangements, Statistical and Cartographic Techniques, Analysis of data and map, Quantative and qualitative interpretation.	20	20
III	Measuring Height by Indian Clinometer	10	15
IV	Dissertation on an area of Geography	25	
	Sessional, Practical Record viva and internal assessment	25	

- 1- Monkhouse, F.J and Wilkison, F.J. (1985): Maps And Digrams. Methuen, London
- 2- Raisz, E. (1962): General Cartography, John Wiley and Sons, New York. 5th edition.
- 3- Haroon, M. (2021): Prayyogatmak Bhugol, Wisdom Publication, Varansari.
- 4- Sharma, J.P. (2001): Prayogik Bhugol, Wisdom Publication, Meerut 3rd. Edition.
- 5- Singh, R.L and Singh, Rana P.B (1993): Elements of Pracatical Geography. (hindi And English editions). Kalyani Publishers, New Delhi,.
- 6- Singh, L.R (2006): Fundamentals of Practical Geography, Shrda Pustak Bhawan, Allahabad.
- 7- Sharma, JP. (2008): Prayogatmak Bhugol Ki Rooekha, Rastogi Publications-Meerut.



Program M.A.	nme Course/ Class	Year-M.A.(Final)	Semester-IV
		Subject- Geography	
Course	Code-	A111002T	
Course '	Title-	Paper- II- Agriculture Geography (Optional)	
Types o	f Course	Theory	
Credit		5	
Course	Assessment	Seasonal – 25 End semester –75	
Course objective and outcomes To acquaint with or theoretical approaches factors, theories and major challenges of agriculture with spatial dimensurable provide the basic information of various types of the agricultures on the earth surface. At the end of the course study be able to evaluate the agricultural dynamics include I agricultural system and major draw back in agriculture deve		dimensions. It the agricultural rse students will clude land use, re development.	
Unit		syllabus	Minimum No. of Lectures
I	geography. Basic Development of production and agriculture detern policy, cropping degree of com	ifiecance, development and approaches of agricultural concepts historical perspective and secret trends. agricultural technology in plant production, animal other agricultural fields. origin and dispersal of minant of agricultural landuse.landreforms and landuse pattern, crop concentration, intensity of cropping, merciaization, diversification and specilization, oductivity, carrying capablity of land. the concept of scape.	19
II	location based on and its recent m regions. whittlese	f crop combination regions, theories of agricultural several mulidimensional factors: von thunen;s theory nodification. methods of dilineation of agricultural ey's classisication. of agricultural regions. agriultural rld: their location and characteristics.	18
Ш	Agricultural land productivity in income food deficit and	use and cropping pattern in india. regional pattern of dia, green, white and lue revolutions and their impacts. food surplus regions of india. Concept of second ares of Agricultural Development	19
IV	Specific poblems planning, Agricu nutrition and hung insecticides, pest degrdation, empl marketing, type Marketing, Govt	s in indian agriculture and their management and altural policy of india. contemporary issues-food, ger, food aid programmes. role of irrigation, fertilizers, icides and teahnological know how in environmental loyment in agricultural sector. Indian Agricultural es and Structure. Formal marketing-Regulated Purchase Centre. Informal Marketing. Liberation pact on Agriculture, environment, food security and	19

- 1- Baylist Smith T.P.: The Ecology of Agricultural System, Cambridge University Press, London, 1987.
- 2- Gregor, H.P.: Geography of Agriculture, Prentice Hall, N.Y., 1970.
- 3- Mannion, A.M.: Agriculture and Environmental Change, Johnwiley, London, 1971.
- 4- Morgan, W.B.: and Norton, R.J.C.: Agricultural Geography Methen. London, 1971.
- 5- Morgan, W.B.: Agriculture in the Third World: A Spatial Analysis, Westview Press, Boulder, 1978.
- 6- Saure. C.O.: Agricultural Origins and Dispersals, M.I.T. Press, Westview Press Mass., USA, 1969
- 7- Singh J. and Dhillon S.S.: Agricultural Geography, Tata Mcgraw Hill pub., New Delhi, 1988.
- 8- Tarrant, J.R.: Agricultural Geography, Wiley, N.Y., 1974.
- 9- Duckhan, A.N. and Masfield, G.B., Farming Systems of the World, London, 1970.
- 10- Griggs, D.G., an Introducation to Agricultural Geography, 1964.
- 11- Husain, Majid., Agricultural Geography, New Delhi.
- 12- John, R, Tarrant., Agricultural Geography.
- 13- Mohmmad, A, food production and food problem in India, new delhi.
- 14- Mohmmad, N., Perspectives in Agricultural Geography, New Delhi.
- 15- Shafi, M., Agicultural Geography of South Asia, macmillon, new delhi 2000.
- 16- Shafi, M., Agicultural Geography, Dorling Kinderstey, New Delhi, 2006.
- 17- Symons, L., Agricultural Geography, London, 1967.
- 18- Wrigley, G., Tropical Agriculture, 1979
- 19- Garg, H.S. Kirshi Bheegol (Hindi), SBPD, Publication Agra,(2021)
- 20- Mishra, Mukesh: Agricultural Geography, Saukats Publication, (2021)
- 21- Chopra, Grish: Agriculture Geog, Common Wealth Publication (2017)

Programme Course/ Class M.A./M.Sc.	Year-M.A.(Final)	Semester IV	
	Subject- Geography		
Course Code-	A111003T		
Course Title-	Paper-III- Rural settlements Geography (Optional)		
Types of Course	Theory		
Credit	5		
Course Assessment	Seasonal – 25 End semester –75		
Course objective and outcomes	The primary aim of studying settlement geography is t spatial structure characteristics of human settlement environmental conditions. The course deals with mu- perspective on the formation, evolution of rural structure will help the students to make an understory	an settlement under varied eals with multi disciplinary n of rural settlement. The	

Unit	SYLLABUS	Minimum No. of Lectures
Ι	Nature, scope, significance, development and approaches of rural settlement geography. definition and characterisitics of rural settlements, human settlement as a system. rural-urban ontinucm. histogenesis of rural settlements: spatio-temporal dimensions and sequent occupance. distribution size and spacing of rural settlements.	19
П	Types, froms and patterns of rural settlement: cause, and effect, funtional classification of rural settlements, morphogenesis of rural settlements, morphology of rural settlements. central places and rural setvice centres: their nature, hierarchy and functions, service centres as growth points. Theory of Christaller and Losch and its application. Rural-urban fringe-structure, characterisitics and function.	19
Ш	Cultural landscape, elements in rural settlement in different geographic environments with spacial reference to india, house types and their spatial patterns. origin, evolution. size, socio-spatial structure of indian village.	18
IV	Social issues in rural settlements-poverty, housing, deprivation, and nequality, environmental issues in rural settlement-water supply, sanitation, drainage and health hazards. planning of rural settlement with special reference to india.	19

- 1- Aalm, S.M. et al: Settlement system in india, oxford and IBP publication co. new Delhi, 982.
- 2- Chisholm M; Rural settlements and landuse, johnwiley N.Y, 1967.
- 3- Grover N; Rural Settlemens: A cultural geographical Analysis, Inter India Publication, Delhi; 1985.
- 4- Danial P. and hopkinson M; The geography of Settlements, Oliver and



- Boyd, Edinbury, 1986.
- 5-Hudson F.F.: a geography of settlement, macdonald and evans, N.Y, 1976.
- 6-Wanmali, S: Service Centres in Rural India ,B.R. publication corportation, new delhi, 1983.
- 7-Tiwari, R.C. Settlement Geography (Hindi)- Parvatika, Prakashi, Allahabad
- 8-Ghos, Sumitra: Introduction to Settlement Geography (1998) Original, Longmen, Calcutta
- 9-Singh R.Y: Geography of Settlement Rawat Publication 1994, New Delhi
- 10-Sing, R.L: Geographic Dimension of Rural settlement, National Geographic Society of India, 1976
- 11-Brian, K.R.: Land space of settlements: Prehistory to the Present, Routledge, London(1996)
- 12-Maurya, SD: Settlement Geography, Sharda Pustak Bharavi, Paryagaraj (2020)

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Programme Course/ Class M.A.	Year-M.A.(Final)	Semester-IV
	Subject- Geography	
Course Code-	A111004T	
Course Title-	Paper- IV- Geography of Tourism (Optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Seasonal – 25 End semester –75	
Course objective and outcomes	To equip the students with the knowledge of tourism to lay emphasis on the importance of geography in tratourism. At end of this course, student will able to describe abimportance of geography in tourism and tourism pote the various tourism generating regions of India.	out the

Unit	Syllabus	Minimum No. of Lectures
I	Definition of Tourism Geography, Definition, Nature and Scope, Tourism Geography as Applied Geography: Factors influencing tourism-historical, natural, socio-cultural and economic; motivating factors for pilgrimages, leisure and recreation, elements of tourism, as an industry. Tourism in India, Past and Present	19
II	Geography of tourism; its spatial affinity, areal locational dimensions comprising physical, cultural, historical and economic. Tourism types-cultural, eco-ethno-coastal and adventure tourism, national and international tourism. globalization and tourism	19
Ш	Indian Tourism: regional dimensions of tourist attraction, evolution of tourism, promotion of tourism. Infrastructure and support system, transport, accommodation, other facilities, tourism circuits short and longer detraction agencies and intermediacies. Indian hotel industry.	18
IV	Impacts of Tourism-Physical, economic, social and perceptional, positive and negative impacts. Environmental laws and tourism. Current trends, spatial patterns and recent changes, role of foreign capital and impact of globalization on tourism.	19

- 1- Bhatia, A.k.: Tourism: Development and Practices, stering pub. New Delhi, 1996.
- 2 Chandra, R.H. Hill Tourism: Planning and Development, Kanishka pub, New Delhi, 1998.
- 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, Holder and Stoughton, london, 1995.
- Williams Stephen: tourism geography, Routledge, london, 1998.
- 8 Biju, M.R.: Sustainable Dimensions of Tourism Management, Mittsl Publication, N.D. 2006
- 9 Lea, J., Tourism and Development in the Third World, Routledge, London1988.
- Nigam, d., Tourism, Environment and Development of Garhwal Himalayas, Mittal Publications, 2002.
- Robinson, H., A Geography of Tourism, MacDonald and Evans, London, 1996.
- Sharma, J.k. (Ed.), Tourism Planning and Development- A New Perspective, Kansihka Publisher, New Delhi, 2000.
- 13 Sinha, P.C. (Ed.)., Tourism Impact Assessment, Anmol Publishers, New Delhi, 1988.
- 14 Siddiqui, S., Eco- Friendly Tourism in UP. Himalayas, B.R. Publishers, New Delhi, 2000.
- 15 Singh, I., Manipur, A Tourist Paradise, B.R. Publishers, New Delhi, 2005.
- Robinson, H, (1976), A Geography of Tourism, MacDonald and Evans Ltd. Estober, Plymouth

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Programme Course/ Class M.A.	Year-M.A.(Final)	Semester-IV
	Subject-Geography	
Course Code-	A111005T	
Course Title-	Paper-V- Social Geography	
Types of Course	Theory	
Credit	5	
Course Assessment	Seasonal – 25 End semester - 75	
Course objective and outcomes	The Course helps to understand the theoretical emergeography, social well being, gender issues, social differegional dimensions of sociological changes. Studintroduced to demographic, social and cultural attibute as migration, social relations and cultural identity. Students Will be able to assess the causal role of production of different social groups and shaping of features. students Will be sfficient well being, and it justice through spatial perspective.	rerentiation and dents Will be as of Earth such regeography in of their unique

Unit	Social Geography	Minimum No. of Lectures
I	Emergence of social geography; meaning nature scope and significance of Social Geography, approaches to study of social geography; empiricist, positivist, structuralist and radical approaches. Social Geography as an applied branch of human geography, the affinity and relationship of geography with other social sciences.	19
II	Social well-being: Social well-being and its indicators, Human Development Index (HDI), inclusive growth, social segregation and ghetto formation.	18
Ш	Gender Issues and Social change: Gender inequality, women empowerment, woman literacy and health, social change with special reference to caste and tribal groups, rural-urban divide, rural-urban interaction and social change.	19
IV	Social Differentiation and region formation: Spatial distribution of tribes, cost and linguistic groups, relationship between social identy and ecinimic conditions.	19

- 1 Aijazuddin Ahmad., Social Georaphy.
- 2 Garden, J.F, Geography as a Social Scince.
- 3 Gosal, G.S. & Mukherjee, A.B., Religious Groups in India.
- 4 Gregory, D.& Urry, J., Social Relations.
- 5 Hammelt, Chris. (Ed), Social Geography; A Reader.
- 6 Harvey, D., Social Justice and the City.
- 7 John, E.(ed.) Social Georaphy in International perspective.
- 8 Jones, E.& Eyles, J., An Introduction to Social Geography.
- 9 Jones, E(ed.) Readings in Social Geography.
- 10 Kulkarni, K.M., Geigraphical Patterns of social Well-Being.
- Pacliona, M.(ed.) Social Geography, Progrss and Prospects.
- 12 Paul Knox, Social Well-Being, A Spatial Perpective.
- Rao. M.S.A., Urbanization and Social Change.
- 14 Smith, David., Social problem and the City.
- 15 Smith, David., The Geography of Social Well-being.
- 16 Sriniwas, M.N., Social Change in moern India.
- Wagner, P.I. & Miksell, H.W. (eds.) Readings in Cultural Geogaphy
- Sen, Jyotirmoy, "Text Book of Social and Cultural Geography, Kalyani Publisher, New Delhi (2015)
- 19 Kannan, Monika, "Social Geography: An Insight into Trafficking, Blue Rose Publication, New Delhi (2018)
- Cater, John and Trevor, Jones: Social Geography: An Introduction to Contemporary issue; Edward Arnold, London (1989).
- Ali A: Social Well-Being in West Bengal, Ayshuman Publication House, New Delhi (2018)

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Programme Course/ Class M.A.	Year-M.A.(Final)	Semester-IV
	Subject-Geography	
Course Code-	A111006T	
Course Title-	Paper-VI - Disaster Management (optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Sessional -25 End semester -75	
Course objective and outcomes	To develop the skill of understanding about natural disaster and, also realize the consequence as well as particles and of this lesson, it is expected that student project on given topic varying from natural calamit impact regions.	reparedness. ts will prepare

Unit	SYLLABUS	Minimum No. of Lectures
I	Disaster - meaning and concept; hazards, risk and vulnerability. Disaster: its management – plans, managing environment. Disaster its effect on different social groups; poverty and vulnerability. Disaster management: prevention, preparedness and mitigation.	19
II	Disaster – classification of disaster; Natural disaster – earthquake, floods, cyclones, drought and global warming: causes, consequences and mitigation. Natural disaster examples from India.	18
Ш	Disaster- man- made disasters, their types- technological and industrial disasters. Social disasters: causes, consequences and mitigation. Man made disasters – examples from India.	19
IV	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.	19

- 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 Publication, New Delhi.
 - 6- Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
 - 7- Stolman, J.P. et at.(2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Doredrecht.
 - 8- Singh Jagbir (2007) Disaster Management Future Challenges and Opportunities, 2007. Publisher-I.K. International Pvt. Ltd. S-25, Green Park Extension, UPhaar Cinema market, New Delhi.
 - 9- Pathak, Ganesh: Disaster Management (Hindi) Rajesh Publications, New Delhi. Pathak Ganesh: Environment and, Disaster Management and Climate Change, (Hindi) Rajesh Publication, (2020) New Delhi)

Programme Course/ Class M.A.	Year-M.A.(Final)	Semester-IV
	Subject-Geography	
Course Code-	A111007T	
Course Title-	Paper- VII- Remote Sensing: Theoretical Concept (Optional)	
Types of Course	Theory	
Credit	5	
Course Assessment	Seasonal – 25 End semester - 75	
Course objective and outcomes	This course aims to develop the students "Know theoretical bases, principles, types and application of retechique and aerial photography in geographical studies. After the end of course, students will efficiently assess principles and law invoved in Remote sensing technic will be ble to observe the component and application of stremote sensing data.	emote sensing the scientific ques. Students

Unit	syllabus	Minimum No. of Lectures
I	Remote Sesing: Meaning, Definition, significance and utility of remote sensing in Geogrphy. History and Deveopment of Remote Sensing. Advantages and Limitations of Remote Sensing. Stages of remote sensing. Ideal and Real remote sensing.	19
П	Principals of remote sensing. EMR: its properties, electromagnetic spectrum and characteristics of different wavelength regions. EMR: interaction mechanisms. Atmospheric interaction and their types; surface interaction and their types; spectral signature. spatial, spectrul, radiometic and temporal resolutions.	19
III	Aerial photography, its geometry, Relief Displacement and image Formations. Classification of Aerial Photographs and their Utility. Elements of image Recognition and Aericl Photo interpretetion, The multi-concept.	18
IV	Types of remote sensing: Active and Passive Remote sensing. Types and characteristic of Remote Sensing Platforms; Geostationary and polar orbiting Satellites. Digital Image Prosesing: Pre-Processing-Radiometric, Geometric and atmospheric Correction; Enhancements; Image Classification-supervised and unsupervised.	19

- Sabins, Floyd F. Remote Sensing; Principal & Interpretation, Freeman, New York, 1986
- Lollesand, T.m & Klefer, R.W., Remote Sensing and Interpretetion, John Wiley & Sons, New York, 1987
- 3. Curran, Paurl J; Principles of Remote Sensing, Longman, London, 1985
- Estes, J.E. and LW Senger, Remote Techniues for environmental Analysis, Hamilton, Santa Barbara, California, 1974
- Lillesand, Thomas M.and RW Klefer, Remote Sensing and Image Interpretation, John Wily & Sons, New York, 1987
- 6. Slater, PN, Remote Sensing: Optical System, Addison-Wesley, Reaing, 1980
- 7. Jamles, B. Camp Bell, Introducation to Remote Sensing-2nd Edi. Taylor & Francis, London.
- 8. Fazal, S., Remote Sensing Basics, Kalyani Publishers, New Delhi, 2009
- Reddy, A. Taxtbook of Remote Sensing and Geographical Information Systems, BS Publication Hyderabad, 2001
- 10. Lilles & Klefer, Remote Sensing & Image Interpretetion.
- 11. Reeves, R.G. (Ed.) Mannual of Remote sensing (Vol.2) Virinia, 1975.
- 12. Sabins, F.F., Remote sensing: principal & Interpretatio, 1982.
- 13. Smith, H.T.V., Aerial Photographs & their Application, N.Y., 1943.
- 14. Spurs S.H., Photogrammetry & Photo Interpretetion, N.D., 1960.
- 15. Stershew, A.I., Aerial Photography.
- Tomar, M.a., & Maslakar, A.R., Aerial Photographs in Landuse & Forest & Survey, Dehra-Dun, 1974.
- 17. Thomas, E.A., Interpretation of Aerial Photographs, Minnesota.
- 18. Usill, G.W. (Revised by Hearn, G.S.G) Pract. Surverying, London, 1960.
- 19. White, L.P., Aerial Photography & Remote sensing for soil survey.
- James, B. Camp bell., Introduction to Remote Sensing-2nd Edi. Taylor & Francis, London.

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