

# Rani Durgavati University, Jabalpur

Department of Post Graduate Studies and Research in Geography



2022-23

**Learning Outcomes based Curriculum Framework**

**(LOCF)**

**for**

**M.A. /M.Sc. (CBCS) Geography**

**Postgraduate Programme**

**2020**

M.A./M.Sc.Geography (4 Semester Programme) shall have 4 theory papers, two papers of practical and one paper of Skill Development. It is necessary to secure minimum of 35% marks with grade point 4 separately in each theory and practical paper in each semester. It is also mandatory to secure minimum 35% marks with grade point 4 in the Continuous and Comprehensive Evaluation (CCE) in each semester to qualify for appearing in subsequent full examination of the respective semester.

ContinuousEvaluation: I to IV

- (i) In each Semester, every theory paper will be asserted for 100 marks out of which 60 marks are for term end examination and 40 marks for continuous evaluation.
- (ii) During the Semester, a teacher offering the course will conduct continuous evaluation of each student at three points in time through the modality of three tests of 20 marks

each. At least two of these tests have to be written tests while the third maybe in form of a test/ quiz/ seminar/ assignment for theoretical courses. Marks of the two best tests out of three will be counted for CCE. Each test will be of one hour duration based on unit/ portion of prescribed theory paper taught.

- (iii) The teacher offering the course will be responsible for setting the question paper and evaluating the answer books of tests and end semester examination of that course. In case of non-availability of permanent faculty alternative arrangements will be made by the university.
- (iv) Total marks obtained in end semester examination and best of two tests under continuous evaluation will be decide grade of the course.
- (v) Grading will be on a 10 point scale as given below:

<b>Letter Grade</b>	<b>Grade Points</b>	<b>Description</b>	<b>Range of Marks</b>
O	10	Outstanding	90-100
A+	9	Excellent	80-89
A	8	Very Good	70-79
B+	7	Good	60-69
B	6	More Average	50-59
C	5	Average	40-49
P	4	Pass	35-39
F	0	Fail	0-34
Ab	0	Absent	Absent

- (vi) If a student obtains F or Ab grade in any course, he/she will be treated to have failed in the course. He/She has to appear in the examination of the course as and when conducted by the University Teaching Department (UTD). Marks obtained earlier in continuous assessment may be carried forward and added to the marks obtained in repeat end-term examination to decide the grade of the repeat course.
- (vii) Theoretical and practical courses can be repeated whenever offered or arranged by the Department but within the maximum duration of the programme. He/She can avail multiple repeat attempts to pass the course.
- (viii) The Semester Grade Point Average (SGPA) And Cumulative Grade Point Average (CGPA) will be calculated as the weighted average of valid and virtual credit point secured by the student. The SGPA and CGPA shall be rounded off up to 2 decimal place and shall be recorded in the Grade sheet.

- (ix) SGPA is a measure of the performance of the student in a semester. It is a ratio of total credit points secured by a student in various courses registered in a semester and total course credits taken during that semester i.e.

$$SGPA(S_i) = \frac{\sum (C_i \times G_i)}{\sum C_i} = \frac{\text{Total Credit Points}}{\text{Total Credits}}$$

Where  $C_i$  is the number of credits of the  $i$ th course in a semester and  $G_i$  is the grade point scored by the student in the  $i$ th course.

- (x) SGPA is a measure of overall cumulative performance of a student over all the semesters completed. The CGPA is the ratio of total credit points secured by a student in various courses in all the semesters completed.

$$CGPA = \frac{\sum (C_i \times S_i)}{\sum C_i}$$

Where  $S_i$  is the SGPA of the  $i$ th semester and  $C_i$  is the total number of credits in the  $i$ th semesters.

- (xi) Dissertation/ project/ internship report with 9 credit points shall be asserted by one external examiner to be appointed by the Vice-Chancellor from a panel of examiners suggested by the Head and Supervising teacher/examiner appointed by the Head of the concerned Department.
- (xii) A comprehensive viva-voce of virtual credits will be conducted at the end of each semester of the programme by a board of four examiners at least one of whom shall be external examiners in consultation with the Head of the concerned Department. Three examiners shall form the quorum in this regard. Head will coordinate the comprehensive viva-voce. Grade awarded in the viva-voce shall be shown separately in the grade sheet.
- (xiii) If the number of the students in a programme is very large then more than one board may be constituted. Each board shall however have at least two members, one internal and one external.
- (xiv) On completion of all requirements for the award of the degree, the CGPA will be calculated and this value will be indicated on the degree along with the division. The final degree will also indicate the division obtained as follows:

**I Division with distinction** - The candidate has earned minimum number of credits for the award of the degree in first attempt with CGPA of 8.00 or above.

**I Division** - The candidate has earned minimum number of credits for the award of the degree in first attempt with CGPA of 6.0 or above but less than 8.00

**II Division-** The candidate has earned minimum number of credits for the award of the degree in first attempt with CGPA of 5.00 or above but less than 6.0.

**Pass Division:** The candidate has earned minimum number of credits for the award of the degree in first attempt with CGPA of 4.00 or above but less than 5.00.

- (xv) The student will be promoted to the next semester if he/she secured at least 12 valid credits in a semester. In case the student secure less than 12 valid credits in any semester, than the student will be asked to repeat the entire semester and the semester will be treated as zero semesters.
- (xvi) Repetition of a theory practical course is allowed only to those candidates who get F or Ab in the course. The student has to pay the prescribed fee for repeating the course.
- (xvii) The guidelines issued by UGC time to time will be adopted for implementation.

**M.A. / M.Sc. Geography (4 Semester Programme)**  
**Geography Semester wise Scheme**

**M.A. / M.Sc. Geography SEMESTER I**

Course No./Theory						
Theory Course Code	Paper No.	Title of Paper	Duration	Teaching Hrs.(4.5 hrs-18 wks)	Credit	Maximum Marks
GEC 101	Paper I	Geomorphology	45 Min	87	4.5	60+40(CCE)=100
GEC 102	Paper II	Economic Geography	45 Min	72	4.5	60+40(CCE)=100
GEC 103	Paper III	Geography of India	45 Min	72	4.5	60+40(CCE)=100
GEC 104	Paper IV	Geographical Thought	45 Min	72	4.5	60+40(CCE)=100
GEC 105	Paper V	Practical – I	45 Min	72	4.5	60+40 (Session) =100
GEC 106	Paper VI	Practical – I	45 Min	72	4.5	60+40 (Session) =100
GEC 107	Paper VII	Skill Development	45 Min	72	4	
				Total-	31	600
Seminar/Tutorial						
GEC 108		Seminar/Tutorials CVV	45 Min	72	4	
Grand Total - 35						

**M.A. / M.Sc. Geography SEMESTER II**

Course No./Theory						
Theory Course Code	Paper No.	Title of Paper	Duration	Teaching Hrs.(4.5 hrs-18 wks)	Credit	Maximum Marks
GEC 201	Paper I	Climatology	45 Min	72	4.5	60+40(CCE)=100
GEC 202	Paper II	Resource Management	45 Min	72	4.5	60+40(CCE)=100
GEC 203	Paper III	Geography of India	45 Min	72	4.5	60+40(CCE)=100
GEC 204	Paper IV	Environmental Geography	45 Min	72	4.5	60+40(CCE)=100
GEC 205	Paper V	Practical – I	45 Min	72	4.5	60+40 (Session)=100
GEC 206	Paper VI	Practical – I	45 Min	72	4.5	60+40 (Session)=100
GEC 207		Skill Development	45 Min	72	4	
				Total-	31	600
Seminar/Tutorial						
GEC 208		Seminar/Tutorials CVV	45 Min	72	4	
Grand Total -35						

### M.A. / M.Sc. Geography SEMESTER III

Course No./Theory						
Theory Course Code	Paper No.	Title of Paper	Duration	Teaching Hrs.(4.5 hrs-18 wks)	Credit	Maximum Marks
GEC 301	Paper I	Oceanography	45 Min	72	4.5	60+40=100
GEC 302	Paper II	Urban Geography	45 Min	72	4.5	60+40=100
GEC 303	Paper III	Geography of Tourism	45 Min	72	4.5	60+40=100
GEC 304	Paper IV	Agricultural Geography	45 Min	72	4.5	60+40=100
GEC 305	Paper V	Practical – I	45 Min	72	4.5	60+40 (Session) =100
GEC 306	Paper VI	Practical – II	45 Min	72	4.5	60+40 (Session) =100
GEC 307	Paper VII	Skill Development	45 Min	72	4	
				Total-	31	600
Seminar/Tutorial						
GEC 308		Seminar/Tutorials CVV	45 Min	72	4	
Grand Total -35						

### M.A. / M.Sc. Geography SEMESTER IV

Course No./Theory						
Theory Course Code	Paper No.	Title of Paper	Duration	Teaching Hrs.(4.5 hrs-18 wks)	Credit	Maximum Marks
GEC 401	Paper I	Research Methodology in Geography	45 Min	72	4.5	60+40=100
GEC 402	Paper II	Remote Sensing Techniques	45 Min	72	4.5	60+40=100
GEC 403	Paper III	Geography of Madhya Pradesh	45 Min	72	4.5	60+40=100
GEC 404	Paper IV	Geography of Population	45 Min	72	4.5	60+40=100
GEC 405	Paper V	Regional Planning & Development	45 Min	72	4.5	60+40=100
GEC 406	Paper VI	Biogeography	45 Min	72	4.5	60+40=100
GEC 407	Paper VII	Geography of Health	45 Min	72	4.5	60+40=100
GEC 408	Paper VIII	Geography of Manufacturing	45 Min	72	4.5	60+40=100
GEC 409	Paper IX	Political Geography	45 Min	72	4.5	60+40=100
GEC 410	Paper X	Practical – I	45 Min	72	4.5	60+40 (Session) =100
GEC 411	Paper XI	Practical – I	45 Min	72	4.5	60+40 (Session) =100
GEC 412	Paper XII	Skill Development	45 Min	72	4	
Compulsory Paper + Any 3 Optional Paper + Practical+ Skill				Total-	31	600
Seminar/Tutorial						
GEC 413		Seminar/Tutorials CVV	45 Min	72	4	
Grand Total – 35						



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SEMESTER - I

**M.A. / M.Sc. SEMESTER - I**  
**PAPER - I**  
**Geomorphology**

GEC 101 – Course 1 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Course contents:-**

- Unit-I : Introduction of Geomorphology- Definition, Meaning, Nature and Scope, History of development of Geomorphology, Recent trends.
- Unit-II : Methods of study of landforms, Fundamental concepts - Geological structures and landforms - Evolution of landforms.
- Unit-III : Environmental change - Climatic change and geochronological methods, Morphogenetic Regions.
- Unit-IV : Earth Movements - Epeirogenic, Orogenic and Cymatogenetic, Isostacy.
- Unit-V : Plate tectonics, Seismicity, Vulcanicity, orogenic structures with reference to evolution of Himalayas.

**Suggested Readings:-**

1. Chorley R.J.: . Spatial Analysis in Geomorphology Methuen, London, 1972
2. Davis, W.M. : Geographical Essays, Dover, New York, 1964.
3. Sharma, H.S. (ed.) : Perspectives in Geomorphology, Concept, New Delhi 1980
4. Thornbury.W.D. : Principles of Geomorphology, John W.i ley, New York, 1960.
5. Oliver, C.D. Weathering, Long man, London, 1979.
6. Garner, H.F. The Origin of Landscape - A Synthesis of Geomorphology, Oxforx University Press, London,1974.
7. सिंह, सविन्द्र : भू आकृति विज्ञान, वसुंधरा प्रकाशन, मेरठ
8. कौषिक, एस.डी. : भू आकृति विज्ञान, रस्तोगी, मेरठ
9. पर्मा, हरिषंकर, प्रमिला कुमार : भू आकृति विज्ञान, म.प्र. हिन्दी ग्रंथ अकादमी, भोपाल
10. मामोरिया और न्याति : भू आकृति विज्ञान, षिवलाल, आगरा
11. राठौर, भरतसिंह : भू-वैज्ञानिक संरचनाएँ, म.प्र. हिन्दी ग्रंथ अकादमी, भोपाल।



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SEMESTER - I

**M.A. / M.Sc. SEMESTER - I**  
**PAPER - II**  
**Economic Geography**

GEC 102 – Course 2 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Objective - The Economy of the world is changing in recent times. The change is primary, secondary and tertiary stage is dynamic in nature. in view of this, the objectives of this course are to integrate the various of economic development to acquaints the students about dynamic aspects of economic geography.**

**Course contents:-**

- Unit-I : Scope, content and recent trends in economic geography, relation of economic geography with economics and other branches of social sciences. location of economic activities and spatial organization, classification of economies. Sector of economy (primary, secondary and tertiary).
- Unit-II : Factors of localization of economic activities: Physical, social, economic, and cultural, concepts and techniques of delimitations of agriculture region, crop combination and diversification, Von Thunen's model and its modification.
- Unit-III : Classification of industries: Resources based on foot-loose industries. Theories of industrial localization-Weber, Losch and Isard: case studies of selected industries- Iron and steel, Aluminum.
- Unit-IV : Modes of transportation and transport cost: accessibility and connectivity, Typology of market, network in rural society, market system in urban economy, role of market in the development of trade and commerce.
- Unit-V : Economic development of India. Regional disparities. Impact of green revaluation on Indian economy, globalization and Indian economic its impact on environment.

**Suggested Readings:-**

1. Berry B.J.L. : Geography of market centres and retail distribution , prentice hall New York 1967
2. Chatterjee, S.P. : Economic geography of Asia, Allied Book Agencies, Calcutta. 1984
3. Drazin, J and Sen A India : Economic development and social opportunities, oxford university press , New Delhi 1996





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4. सिंह के एन एवं सिंह जे आर्थिक भूगोल के मूलतत्व ज्ञानोदय प्रकाणन, गोरखपुर 2001
5. श्रीवास्तव वी.के. एवं राव वी.पी.–आर्थिक भूगोल, वसून्धरा प्रकाणन, गोरखपुर, 2001
6. सिन्हा बी.एन.पी. एवं अन्य आर्थिक भूगोल राजेण पब्लिकेणन्स, नई दिल्ली 2000



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SEMESTER - I

**M.A. / M.Sc. SEMESTER - I**  
**PAPER - III**  
**Geography of India: Physical & Resources**

GEC 103      -      Course 3 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Objective** - The Course is aimed at presenting a comprehensive integrated and empirically based profile of India, besides the objective is to highlight the linkages of systematic geography of India with The regional Personality of the country. The course is designed so as to present the course is designed so as to present the role of the geographical Positioning of India in moulding its geopolitical personality and its interrelations with other countries.

**Course contents:-**

- Unit-I : India : Characteristics of location, Unity and diversity. Major terrain units and their characteristics, drainage system and their functional significance to the country.
- Unit . II : The Indian monsoon, regional and seasonal variation of weather, climatic division : Soil types . their characteristics, distribution and problems ; forest resources and their conservation.
- Unit-III : Mineral and power resources . reserves, production and problems of conservation of major minerals.
- Unit-IV : Water Resources . potential of water resources, their regional distribution and utilization. development and spatial pattern. Resource regions of India.
- Unit- V : Population . Number, distribution and growth with special reference to post-Independence period and its implication, Literacy and education . spatial patterns. Urbanization and characteristics of Indian cities.

**Suggested Readings:-**

1. Das P.K. : The Monsoon. The National book Trust of India, New Delhi.
2. Deshpande, C.D. : India . A Regional Interpretation, Northern Book Centre, New Delhi.
3. Mukerjee, A.B. & A. Azazuddin India. Culture, Society & Economy, Inter India New Delhi.
4. Singh Jagdish ;India, Gyanoday Gorakpur
5. Singh R.L., ed. India . A Regional Geography, N.G.S. India Varanasi. 1971



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6. Tiwari R.C. Geograhpy of India Allahabad : Prayag Pustak Bhawan, 2003
7. अग्रवाल पी.सी. भारत का भूगोल एणिया प्रकाणन कम्पनी रायपुर
8. तिवारी विजय कुमार : भारत का भूगोल, हिमालय पब्लिकेणन, मुम्बई 2000
9. बंसल सुरेण चन्द्र : भारत का वष्हद भूगोल, मीनाक्षी प्रकाणन, मेरठ
10. तिवारी, विण्वनाथ—भारत का भौगोलिक स्परूप राम प्रसाद एण्ड सन्स ।
11. प्रमिला कुमार, मध्यप्रदेण : एक भौगोलिक अध्ययन, मध्यप्रदेण हिन्दी ग्रंथ एकादमी, भोपाल।
12. सिंह जगदीण : भारत का भूगोल, ज्ञानोदय प्रकाणन, गोरखपुर।



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SEMESTER - I

**M.A. / M.Sc. SEMESTER - I**  
**PAPER - IV**  
**History of Geographical Thoughts**

GEC 104      -      Course 4 Credit 4.5 – MM 60 +40 (CCE) = 100
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Objective- To introduce the students to the Philosophical and Methodological foundations of the subject and its place in the world of Knowledge.  
To Familiarize them with the major land marks in development of geographic thought at different periods at different periods of time.

**Course contents:-**

- Unit-I : The field of geography; Definition, aim, scope and nature of geography. Its place in the classification of sciences. Geography as a social science and natural science. Selected concepts in the philosophy of geography; distribution, relationships, interactions, areal differentiation and spatial organisation.
- Unit-II : Development of geographical thought in ancient periods; Greek, Arab, Roman geographers. Geographical knowledge in Ancient India.
- Unit-III : Contribution of various schools of thought in modern Geography (Geographers of Nineteenth Century) The German School - Ritter, Humbolt, Ratzal, The French School - Blache, Brunche, The Americans School - Sample, Davis, Harbertson, the British School, School, Mackinder.
- Unit-IV : Environmental Determinism, Possibilism and Neo-Determinism.
- Unit-V : Dualism in Geography; Systematic and Regional Geography, Physical and Human Geography. The Myth and reality about dualism.

**Suggested Readings:-**

1. HartshomeR. : Perspectives on Nature of Geography Rand Me Nally & Co. 1959.
2. Husain M. : Evolution of Geographic Thought, Rawat Publication Jaipur 1984
3. Minshull R.: The Changing Nature of Geography Hutchinson University library London, 1970



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4. Dikshit R.D. (ed.) : The Art & Science of Geography, Readings, prentice Hall of India, New Delhi, 1994.
5. Taylor, G. (ed.) : Geography in Twentieth Century Methuen, London, 1951
6. Wooldridge S.W. : The Spirit & Purpose of Geography Hutchinson, London, 1955.
7. कौषिक, एस.डी. : भौगोलिक विचारधाराएँ एवं विधि तंत्र, मेरठ
8. जैन, एस.एस. : भौगोलिक चिंतन एवं विधि तंत्र, साहित्य भवन, आगरा, 1987
9. सिंह जगदीष : भौगोलिक चिंतन के मूल आधार, ज्ञानोदय, गोरखपुर
10. Mishra H.N. : Research Methodology & Paradigma



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SEMESTER - I

**M.A. / M.Sc. SEMESTER - I**  
**Geography Practical-I**

GEC 105 - Course 5  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Outcoms:** Geography is an amalgam of Physical as well as social science and as such it is necessary for student to go through laboratory exercises particularly the techniques of drawing cardiograms showing Physical climatic and socio economics attributes of a region.

**Course contents:-**

- Unit-I Map projection-Gall.s, Mercator.s, Equatorial and oblique cases of Gnomonic and Stereographic projections.
- Unit-II : Normal and Interrupted Sinusoidal and Mollweids projections by graphical and mathematical methods.
- Unit-III : Representation of data-Lorenz curve, Ergo graph, Band graph, Rainfall dispersion diagram, Trend line.
- Unit-IV : Geographical excursion.
- Unit-V : Tour report/village survey report.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।



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SEMESTER - I

**M.A. / M.Sc. SEMESTER - I**  
**Geography Practical-II**

GEC 106 - Course 6 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Course contents:-**

- Unit-I : Scale - Meaning, Definition, Importance, Classification, Conversion and Representative fraction (R.F).
- Unit-II : Principal of Plane table survey, instrument used in Plane table survey, Method of using the plane table survey.
- Unit-III : Prismatic Compass survey, instrument used in Prismatic Compass survey, Method of using the Prismatic Compass.
- Unit-IV : Field Work - Field survey by Plane Table.(Open traverse), Making field book and plotting of map.
- Unit-V : Field Work - Field Survey by Prismatic Compass.(Open traverse), Making field book and plotting of map.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetkar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayer.
- 4 Geological maps - Chiploolkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।



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SEMESTER - II

**M.A. / M.Sc. SEMESTER - II**  
**PAPER - I**  
**Climatology**

GEC 201 - Course 1  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective-** This Paper on Physical Geography is structured in to components of climatology and oceanography the aspects of climatology emphasize the constitution of the atmospheres the dynamic nature of the process associated with it and their contribution in making the earth habitable. The course content also heads to the identification of climatic differentiation on the each and the consequences of oceanography similarly deals with the coasral processes and describes thevest anddiversifird resource the oceans hold.

**Course contents:-**

- Unit-I : Nature and scope of climatology and its relationship with meteorology. Composition, mass and structure of the atmosphere.
- Unit-II : Insolation heat balance of the earth, green house effect; vertical and horizontal distribution of temperature.
- Unit-III : Atmospheric motion: Forces controlling motion of air vertical motion, local winds, jet stream. monsoon winds, El Nino , cyclones, General circulation in the atmosphere.
- Unit-IV : Atmospheric moisture: Humidity, evaporation, condensation, precipitation: formation, types ,acid rain, world pattern of precipitation.





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Unit-V : Climatic classification of Koppen, and Thornwaite, Major Climates of the world tropical , temperate, desert and mountain Climate.

**Suggested Readings:-**

1. Berry,B.J.L. and Chorley, P.J. Atmosphere weather and climate, routledge , London and new york, 1993
2. Critchfield , J.S. General climatology prentice Hall , India, 1993
3. Peterson, Introduction to meteorology McGraw Hill Book London, 1969
4. Lal, D.S. Climatology chaitanya publication, Allhabad, 1986



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SEMESTER - II

**M.A. / M.Sc. SEMESTER - II**  
**PAPER - II**  
**Resource Management**

GEC 202 - Course 2  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective-**

- to understand concept and approaches of resource management to examine use and misuse of various resources and to analyse future prospects to study various methods and approaches of conservation and management of resources.
- To Analyze resources scenario through different techniques especially remote sensing and GIS.

**Course contents:-**

Unit-I : Meaning, nature and classification of resources, culture and resources.

Unit-II : Resource appraisal . methods and techniques, land evaluation . concept and methods.

Unit-III : Resource allocation, concept, methods and techniques; Perspectives of resource development ; Conservation of resources : meaning, principles philosophy and approaches of resource conservation.

Unit-IV : Concept of resource management, theories of resource management; difference between resource development, conservation and management. Evaluation of social costs and benefits, status of common property resources : perception. Decision . making in resource management.

Unit-V : Use and misuse of resources : global and Indian scenario, resource development policies in India. Environmental perception in resource management, impact assessment; natural hazards and risk management; sustainable resource management.

**Suggested Readings:-**

1. Burton, I. And R.W. Kates : Readings in Resource Management and Conservation. Chicago Univ. Press. 1965
2. Chorley, R.J. ed. : Water, Earth and Man, Methuen, London, 1969
3. Cook, R.U. & J.C. Doornkamp : Geomorphology in Environmental Management. Oxford, 1973.
4. Dawson J.A. & J.C. Doornkamp, eds : Evaluating the Human Environment. Edward Arnold, London, 1965.
5. Firey, W.I. Man, Mind and Lan : A Theory of Resource Use. Free Press, Glencoe, 1960.
6. F.A.O. of U.N. : A Framework for Land Evaluation. Soil Bullet 32, Rome, 1979.



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7. Holechek, J.L. et al : Natural Resources : Ecology, Economics and Policy. Prentice Hall, New Jersey, 2000.
8. Kates, R.W. & I. Burton, eds : Geography Resources and Environment ; Vol. I & II. University of Chicago Press, Chicago 1986.
9. Maritino, R.L. : Resource Management. Mc Graw Hills, London 1969.
10. Mitchell, Bruce : Geography and Resource Analysis. Longman, London, 1979
11. Owen, S.& P.L. Owens : Environment Resource & Conservation. Cambridge University Press, New York 1991.
12. डॉ. ऋतुरानी एवं डॉ. लोकेष श्रीवास्तव : 'संसाधन प्रबंधन' आई.पी.डी., नई दिल्ली, 2016.

SEMESTER - II

**M.A. / M.Sc. SEMESTER - II**  
**PAPER - III**  
**Geography of India: Economy and Regions**

GEC 203 - Course 3  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective- Students will get an Introduction to the main regions of the India interims of both their uniqueness and similarities student will be exposed to historical, economic, cultural social and Physical Characteristics of India.**

**Course contents:-**

- Unit-I : Economy ; An overview of Indian economy and impact of globalization on it. Cultivated lands- land use patterns, major crops and problems of agriculture.
- Unit-II : Technological development in agriculture- Green revolution and its consequences; productivity of agriculture . determinents and pattern: agricultural regionalization of India.
- Unit-III : Industry- industrial development; and overview; locational factors and spatial pattern of major industries in India . iron and steel , engineering goods, textiles, chemicals , cement, sugar and paper; industrial regions of India.
- Unit-IV : Transport and trade : Development of transport network, different mode of transport and their significance, internal and international trade of India composition and change
- Unit-V : Regions of India . Basis of regional division ; macro and meso regional division of India by OHKSpate and R.L. singh ; detailed study of Narmada Basin ,Malwa plateau , Bundelkhand upland, Chhatisgarh Basin and Marusthali .

**Suggested Readings:-**

1. Das P.K. : The Monsoon. The National book Trust of India, New Delhi.



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2. Deshpande, C.D. : India . A Regional Interpretation, Northern Book Centre, New Delhi.
3. Mukerjee, A.B. & A. Azazuddin India . Culture, Society & Economy, Inter India New Delhi.
4. Singh Jagdish ;India, Gyanoday Gorakpur
5. Singh R.L., ed. India . A Regional Geography, N.G.S. India Varanasi. 1971
6. Tiwari R.C. Geograhpy of India Allahabad : Prayag Pustak Bhawan, 2003
7. अग्रवाल पी.सी. भारत का भूगोल एणिया प्रकाणन कम्पनी रायपुर
8. तिवारी विजय कुमार : भारत का भूगोल, हिमालय पब्लिकेणन, मुम्बई 2000
9. बंसल सुरेण चन्द्र : भारत का वष्टद भूगोल, मीनाक्षी प्रकाणन, मेरठ
10. तिवारी, विण्वनाथ—भारत का भौगोलिक स्परूप राम प्रसाद एण्ड सन्स ।
11. प्रमिला कुमार, मध्यप्रदेण : एक भौगोलिक अध्ययन, मध्यप्रदेण हिन्दी ग्रंथ एकादमी, भोपाल।
12. सिंह जगदीण : भारत का भूगोल, ज्ञानोदय प्रकाणन, गोरखपुर।



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SEMESTER - II

**M.A. / M.Sc. SEMESTER - II**  
**PAPER - IV**  
**Geography of Environment**

GEC 204 - Course 4  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective -- Students will get an Introduction to the main regions of the India interims of both their uniqueness and similarities student will be exposed to historical, economic, cultural social and Physical Characteristics of India.**

**Course contents:-**

- Unit-I : Environment : Meaning, definition, concepts and theories related to environment. Components of Environment: Classification and their interdependent relationship.
- Unit-II : Development of the environmental studies and their approaches. Development of Environmentalism in Geography. Environment and Development.
- Unit-III : Ecological concepts : Ecosystem : meaning, definition, concept and components. Main terrestrial ecosystems of the world . forests and agriculture. Geography as human ecology.
- Unit-IV : Environmental hazards . natural and man induced hazards.
- Unit-V : Environmental pollution: meaning, definition, nature and types . air, water, noise and others.

**Suggested Readings:-**

1. Agarwal, Anil and Sunita Narain, Dying Wisdom : The Fourth Citizen Report. Center for Science and Environment, New Delhi, 1998.
2. Burton, I. ; R.W. Kates & G.F. Whiley. The Environment as Hazards. O.U.P. New York, 1978.
3. Cartledge, Bryen, Population and the Environment., O.U.P. New York 1995.
4. Chandna, R.C. : Environmental Awareness. Kalyani Publishers, New Delhi, 1998.
5. Dawson, J. and J.C. Doornkamp, eds. : Evaluating the Human Environment. Edward Arnold, London 1975
6. अवस्थी एन एम एवं आर पी तिवारी पर्यावरण भूगोल मध्यप्रदेण हिन्दी ग्रन्थ अकादमी, भोपाल, नेगी, पी एस पारिस्थितिकीय विकास एवं पर्यावरण भूगोल रस्तोगी एन्ड कम्पनी, मेरठ, 1995
7. रघुबंणी अरुण और चन्द्रलेखा रघुबंणी पर्यावरण तथा प्रदूषण मध्यप्रदेण हिन्दी ग्रन्थ अकादमी, भोपाल 1989 |
8. सविन्द्र सिंह पर्यावरण भूगोल प्रयोग पुस्तक सदन इलाहाबाद
9. नेगी, पी.एस. पारिस्थितिकीय विकास एवं पर्यावरण भूगोल, रस्तोगी एण्ड कम्पनी, मेरठ
10. तिवारी विजय कुमार – पर्यावरण पारिस्थितिकी हिमालय पब्लिकेणन, दिल्ली – 1998



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SEMESTER - II

**M.A. / M.Sc. SEMESTER - II**  
**Geography Practical - I**

GEC 205            -            Course 5 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Outcome:** This course will Provide to students an advance knowledge on maps cartography topographical sheet reading ability and exhibit the skill in using prismatic compass

Course contents:-

- Unit-I : Cartography - Nature, Scope and History of Cartography, Techniques in the use of maps
- Unit-II : Topographical sheets : Classification and indexing of Inidan Topographical Sheets.
- Unit-III : Topographical Sheets : Interpretation of various topographical sheet of India.
- Unit-IV : Computer : Application of Computer in Geography.
- Unit-V : Prismatic Compass Survey : Correction of Bearing classing error and Calculation.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayyer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।



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SEMESTER - II

**M.A. / M.Sc. SEMESTER - II**  
**Geography Practical -II**

GEC 206 - Course 6  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Outcome:** Student will be able to understand the basics of data analysis and represented data statistical methods. understand various components and principles of components cartography. Exhibit the skill in using proper tools and surveying methods contents collection and processing of data This course will Provide to students an advance knowledge on maps cartography topographical sheet reading ability and exhibit the skill in using prismatic compass

**Course contents:-**

- Unit-I : Relief profile, methods of slope analysis.
- Unit-II : Block diagrams, Hypsographic curve.
- Unit-III : Computer cartography- mapping and diagrams techniques
- Unit-IV : Survey by Indian Tangent clinometer .
- Unit-V : Survey by Abney level and sextant.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayyer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।





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SEMESTER - III

**M.A. / M.Sc. SEMESTER - III**  
**PAPER - I**  
**Oceanography**

GEC 301 - Course 1  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective-** The objective of the course are to introduce students to many facts, such as evolution of the oceans, physical and chemical properties of sea water, atmospheric and oceanographic circulation, the fascinating world of marine life and characteristics of marine environment and the impact of man of the marine environment.

**Course contents:-**

- Unit-I : Nature and scope of oceanography, distribution of land and water, surface configuration of the ocean floor, submarine relief of the pacific, Altantic and Indian ocean.
- Unit-II : Composition of oceanic water, distribution of temperature and salinity. Horizontal and Vertical distribution.
- Unit-III : Circulatoin of oceanic water waves, tides and currents. Ocean deposits their Sources and types.
- Unit-IV : Corals and coral reefs: types and theories of their origin, ocean as a source of food and Minerals with special reference to Indian ocean.
- Unit-V : Chemistry of the sea Biological Environment of Sea and impact of humans on the marine environment.

**Suggested Readings:-**

1. Garrison, T.: Oceanography- An Introduction to Marine Science.
2. Books/Cole Pacific Grove, USA, 2001.
3. King, C.M.A.: Oceanography for Geographers. 1962.
4. Lal, D.S.: Oceanography. Sharda Pustak Bhawan, Allahabad, 2003.
5. Sharma R.C., & A. Perry, eds.: Applied Climatology: Principles and Practice. Routledge, London.
6. S. D. Lal, Oceanography.
7. जलवायु एवं समुद्र विज्ञान – त्रिपाठी



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SEMESTER - III

**M.A. / M.Sc. SEMESTER - III**  
**PAPER - II**  
**Urban Geography**

GEC 302       -       Course 2 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Objective- Understand the process of urbanization and origin and classification of urban settlement with relevant theories and models.**

- **Examine the changing Economic base and structure of the contemporary cities.**
- **Relate Urbanization process and evolution of urban system.**
- **Examine the contemporary urban issues and suggest new urban planning and urban policy perspectives.**

**Course contents:-**

- Unit-I : Nature and scope of Urban Geography, different approaches and recent trends in Urban Geography; origin and growth of urban settlements: functional classification.
- Unit-II : Urban systems: urban growth and theories. Urban hierarchy, Central Place theory of Christaller and Losch. Contributions of Indian scholars to the studies of urban settlements. Urban economic base: basic and non- basic functions, input-output models, concepts of dualism; colonial and post-colonial structure.
- Unit-III : Urban morphology-city core, commercial, industrial and residential areas; modern urban landscape. Morphology of Indian urban settlements and its comparison with Western urban settlements.
- Unit-IV : Land use models: concentric zone theory, sector model, multiple nuclei Model; city-regions, urban expansion, umland and periphery. Contemporary urban issues.
- Unit-V : Urban policy and planning: 'development of medium and small sized towns, planning for new wards, city planning, green belts, garden cities urban policy; contemporary issues in urban planning; globalization and urban planning in the Third World, urban landuse planning with special reference to India.

**Suggested Readings :-**

1. Alam, S. Manzoor: Hyderabad-Secunderabad: Twin Cities. Asia Publishing House, Bombay, 1964. Berry, B.J.L & F.F. Horton: Geographic Perspectives on Urban Systems. Prentice Hall, Englewood Cliffs, New Jersey, 1970.
2. Carter H.: The Study of Urban Geography: Edward Arnold Publishers, London, 1972.
3. Chorley, R.J.Op. & Haggett, eds: Models in Geography. Methuen, London, 1972.
4. Dickinson, R.E. City and Region. Routledge, London, 1964
5. Duncan, O.O.: Metropolis and Region. John Hopkins Press, Baltimore, 1960.



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6. Gibbs, J.P.: Urban Research Methods D. Von Nostrand Co. Inc. Princeto, New Jersey, 1961.
7. Hauser, Philip M. and Schnore Leo, eds.: The Study of Urbanization. Wiley, New York, 1965. Johnson, J.H.: Urban Geography Pergoman Press, London 1967.
8. Nagia, Sudesh: Delhi Metroplitan Region - A Study in Settlement Geograply. Rajesh puf~ation. 1976.
9. नगरीय भूगोल बंसल।
10. नगरीय भूगोल आर. बी. मण्डल।

SEMESTER - III

**M.A. / M.Sc. SEMESTER - III**  
**PAPER - III**  
**Geography of Tourism**

GEC 303 - Course 3  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective-** To familiarize the Students will Aspects of tourism which have a bearing on subject matter of geography.

- to orient the student to the logistics of tourism industry and the role of tourism in regional development. to understand the impact of tourism on physical and human environments .



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**Course contents:-**

- Unit-I : Basics of Tourism definition of tourism, factors affecting tourism, historical, natural Socio-cultural and economic, motivating factors for tourist: (leisure, recreation, elements of tourism as an industries.)
- Unit-II : Geography of tourism - its spatial affinity, areal and locational dimensions comprising physical, cultural, historical, and economic, tourism: cultural, eco-ethno-coastal and adventure tourism, national international tourisms, globalization and tourism.
- Unit-III : Indian tourism: regional dimension of tourist attraction: evolution of tourism, Promotion of tourism
- Unit-IV : Infrastructure and support system- short and longer destination – agencies and intermediaries accommodation and supplementary accommodation; other facilities, Tourism Circuits, Indian Hotel Industry.
- Unit-V : Impact of tourism; physical economic and social perceptions positive and negative impacts; Environment laws and tourism-current trends, spatial patterns and recent and changes; role of foreign capital.

**Suggested Readings :-**

- 1 Bhatia A.K. : Tourism Development : Principles and Practices. : Sterling Publishers, New Delhi 1996.
- 2 Bhatiya, A.K. International Tourism – Fundamentals and Practices, Sterling, New Delhi (1991) .
- 3 Chandra R.H. : Hill Tourism Planning and Development : A Sustainable Relationship Delhi , 1998.
- 4 Hunter C and Green H. : Tourism and the Environment : A Sustainable Relationship Routledge, London, 1995.
- 5 दास पपिया पर्यटन भूगोल मध्य प्रदेश हिन्दी ग्रन्थ अकादमी भोपाल ।
- 6 रैना ए.के. पर्यटन प्रबंध सिद्धान्त और व्यवहार अभिनव प्रकाशन अजमेर 2007 ।
- 7 सिंह सुमन्त, डॉ. वी.पी. सिंह मध्य प्रदेश में पर्यटन आदित्य पब्लिशर्स , बीना 2000 ।
- 8 व्यास राजेश कुमार भारत में पर्यटन विद्या विहार नई दिल्ली , 2008 ।



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SEMESTER - III

**M.A. / M.Sc. SEMESTER - III**  
**PAPER - IV**  
**Agricultural Geography**

GEC 304            -            Course 4 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Objective – To familiarize the Students will concept origin and development of agriculture: to Examine the role of agri determinants towards changing patterns, intensity productivity, diversification and specialization. The course further aims to familiarize the students with the application of various theories, Models and classification schemes of cropping patterns productivity.**

- **Its objectives is also discuss environmental, technological issues in agricultural sector with special reference to India, to introduce the nature, development and significance of manufacturing and Its links with the world economy**

**Course contents:-**

- Unit-I : Nature scope and Significance of Agricultural geography, approaches to the study of agricultural geography, commodity, systematic and regional; origin and dispersal of agriculture.
- Unit-II : Determinants of agricultural and use; physical economic, social institutional and technological. Theories of agricultural location based on several multi-dimensional factors, von Thunen's Theory of agricultural location and its recent modifications.
- Unit-III : Land use and land capability classification; concepts and measures of agricultural productivities, agricultural efficiency and crop combination, diversification and specialization.
- Unit-IV : Agricultural typology and regions; Kostrovickis scheme of agricultural typology critical review of whittlesey's classification agricultural regions, methods of agricultural regionalization.
- Unit-V : Agriculture in India- Land use and changing cropping pattern. Regional pattern of Productivity in India. Green revolution and its impact, white revolution; food deficit and food surplus regions; Specific Problems in India agriculture and their management, Agricultural policy in India.



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**Suggested Readings :-**

- 1 Noor Mohammad, ed. New Dimensions in Agricultural Geography.
- 2 Mazid H. : Agricultural Geography.
- 3 बी. एल. शर्मा : कृषि भूगोल , साहित्य प्रकाशन अकादमी।
- 4 प्रमिला कुमार : कृषि भूगोल , म. प्र. हिन्दी ग्रंथ अकादमी।



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SEMESTER - III

**M.A. / M.Sc. SEMESTER - III**  
**Geography Practical - I**

GEC 305 - Course 5  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Course contents:-**

- Unit-I : Preparation of Base Map with the use of survey Instruments.  
Unit-II : Resection by place table.  
Unit-III : Prismatic compass survey-Measurement of included angles and adjustment of closing error by Bowditch method.  
Unit-IV : Field Mapping of the features of land use .  
Unit-V : Interpretation of Geological Maps.

Survey	: 30
File	: 10
Viva	: 10

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayyer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।



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SEMESTER - III

**M.A. / M.Sc. SEMESTER - III**  
**Geography Practical - II**

GEC 306 - Course 6  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Course contents:-**

- Unit-I : Procure a topographical map of 1:50,000 scale to study the settlement selected.
- Unit-II : Collect demographic, social & economic data of the village from Census Reports to Study the temporal changes in the profile of such characteristics.
- Unit-III : Preparation of settlement site map through rapid survey to map the residential, commercial recreational, educational, religious and other prominent features.
- Unit-IV : Conduct Socioeconomic survey of the area personally with a structural questionnaire, personal observation and perception.
- Unit-V : Prepare a critical field survey reports with photograph and sketches in addition to maps and diagrams.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayyer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।





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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - I**  
**Research Methodology in Geography**

GEC 401 - Course 1 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Objective - To introduce some basic statistical procedures to the students to be applied to various themes in geography. To indicate the assumption, limitation and interpretation of these procedures and results, to train the students to handle these statistics towards analysing the geographic problem.**

**Course contents:-**

- Unit-I : Concept of research in social sciences, nature of geographical, research, Research approaches in geography -Traditional and behavioural, Experimental research, Selection of case studies, observation, Inductive and deductive reaserch, stages of research.
- Unit-II : Identification of research problems, Specification and Objectives of research. Making of hypothesis-Types of hypothesis and confidence levels, survey of Literature and preparation of bibliography and reference materials, methods of review of Literature.
- Unit-III : Nature of geographical data and information- Spatial and Non-spatial, Temporal, sources of primary and secondary data, topographical sheets, selection of indicators and variables, Questionnaire, schedule and interview.
- Unit-IV : Rearrangement of central tendencies and dispersion, Variance, Correlation & regression.
- Unit-V : Sampling design, sampling and types and procedure, standard error and testing, Tabulation of data, comparison of samples-parametric (T & F) and Non-parametric test (Chisquare test), Interpretation of data.

**Suggested Readings :-**

- 1 Kothari, C.R. Research Methodology.
- 2 Kothari, C.R. Quantitative Technique.
- 3 Mishra, H.N., "Research Methodogy in Geography.
- 4 मुखर्जी, राधारमन, सामाजिक अनुसंधान एवे सर्वेक्षण।



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- 5 Peter Hagget " Quantitative Techniques in Geography.
- 6 Peter Hagget "Models in Geography.
- 7 Cole and King "Statistical Analysis in Geography.
- 8 श्रीवास्तव, वी.के. "सांख्यिकी भूगोल।
- 9 मुकर्जी, रविंद्रनाथ – सामाजिक शोध व सांख्यिकी।
- 10 द्विवेदी आर.एन. – रिसर्च मेथडॉलाजी।
- 11 Deshprabhu- Suchitra- Sociological research.
- 12 यादव हीरालाल, "षोध प्रविधि एवं मात्रात्मक



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - II**  
**Remote Sensing Techniques**

GEC 402 - Course 2 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Course contents:-**

- Unit-I : Historical development of remote sensing. Relevance of remote sensing in geography, Remote sensing systems: Platforms, sensors, radiation records.
- Unit-II : Air photos and photogrammetry ; Types of Air photos, Scales and ground coverage of air photos, Air photogrammetry system- Films, Filters, aerial cameras, Film exposures.
- Unit-III : Elements of vertical photographs, relief displacement image parallax, stereoscopic air photo interpretation , shape , size, pattern, tone, texture, shadows, site.
- Unit-IV : Satellite remote sensing: Platforms of satellite remote sensing- LANDSAT, SPOT, RADARSAT, IRS, INSAT : Principles and geometry of scanners, orbital Characteristics of satellite remote sensing.
- Unit-V : GIS- (Geographical Information system)- GIS System- Definition of a Geographical information system, Scope of Geographical information system , Elements of Geographical Information. System Methodology of GIS procedure .

**Suggested Readings :-**

- 1 American Society of Photogrammetry : Manual of Remote Sensing ASP, Falls Church , V.A. 1983.
- 2 Barrett E.C. and L.F. Curtis : Fundamentals of Remote Sensing and Air Photo Interpretation , Mcmillan , Newyork 1992.
- 3 शर्मा जे.पी. प्रयोगात्मक भूगोल रस्तोगी पब्लिकेशन 2008-09 ।
- 4 तिवारी राम चन्द्र, त्रिपाठी सुधाकर प्रयोगात्मक भूगोल प्रयाग पुस्तक भवन इलाहाबाद ।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - III**  
**Geography of Madhya Pradesh**

GEC 403 - Course 3 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Course contents:-**

- Unit-I : Geographical structure of Madhya Pradesh – Location, relative position and Physical division, Climatic division, Drainage system. Distribution pattern of Soils and vegetation.
- Unit-II : Cultural structure of Madhya Pradesh- Population density, sex ratio, Literacy, Rural and Urban population. Tribal structure- Location and changes.
- Unit-III : Transport- Sources of Transport in Madhya Pradesh Road, Railway and Airways. Transport and major cities – Bhopal, Jabalpur, Indore, Gwalior.
- Unit-IV : Economy- Agriculture its type and regions, Distribution of main minerals and power Resources Importance of minerals and energy resources in economy.
- Unit-V : Industry and Trade - Types of Industries - small and cottage Industry, Large scale industries importance of changing world pattern of Industries. Trade structure of Madhya Pradesh.

**Suggested Readings :-**

- 1 Madhya Pradesh Human Resource development of Government of Madhya Pradesh Bhopal.
- 2 District Gazetteer of all Madhya Pradesh Government press Bhopal.
- 3 श्रीवास्तव डॉ. लोकेष, (2010), “मध्यप्रदेश का भूगोल” षारदा प्रकाशन पुस्तक भवन, इलाहाबाद।
- 4 कुमार प्रमीला, “मध्यप्रदेश का भूगोल” म. प्र. हिन्दी ग्रंथ अकादमी, भोपाल।
- 5 कुमार प्रमीला, “मध्यप्रदेश का प्रादेशिक भूगोल” म. प्र. हिन्दी ग्रंथ अकादमी, भोपाल।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - IV**  
**Geography of Population**

GEC 404 - Course 4 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Objective-** To understand the students to the compels dimension of population. To understand evaluate the association between demographic and socio-economic attributes of population and resultant levels of social well-being and economic development. To understand the role and relationship between population and environment in an ever changing space-time continuum.

**Course contents:-**

- Unit-I : Nature and scope of Population Geography. Development of population Geography as field of specialization. Its relation with the Demography. Sources of population data, their problems, mapping the population data.
- Unit-II : Population distribution and density: Growth of population theoretical issues, world pattern and their determinants.
- Unit-III : Population Composition- Age and Sex Composition: Literacy and education, occupational structure, Urbanization, Population Regions of the World.
- Unit-IV : Population Dynamics : Measurement of Fertility and Mortality; World patterns of fertility and mortality. Demographic Transition International Migration.
- Unit-V : Population and Resources Development : Concept of optimum population, under population and over population. Theories of population. Malthus, limits to growth. Population- Resource regions of the World.

**Suggested Readings :-**

- 1 Boserup, E. The Conditions of Agricultural Growth. George. Allen & Unwin, London, 1965.
- 2 Barclay, G.W. Techniques of Population Analysis. John Wiley, New York, 1959.
- 3 Bogue, D.J. : Principles of Demography. John Wiley, New York, 1969.
- 4 Bose, Ashish et.al. : Population in India's Development Vikas Publishing House, New Delhi.
- 5 Chandna R.C. : Geography of Population. Concept, Determinants and Patterns Kalyani.



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- 6 Clark, J.I. Geography. Pergamon Press, Oxford, 1973.
- 7 Crooch, Nigel: Principles of Population and Development. Pergamon, New York, 1997.
- 8 Daugherty, H.H., Kenneth C.W. Kammeyir ; An Introduction to Population. The Guiford Press, New York, London, 1998.
- 9 Garnier, B.J. ; Geography of Population. Longman London, 1970
- 10 चाँदना, आर.सी. :- जनसंख्या भूगोल, कल्याणी पब्लिशर्स नई दिल्ली, 2001।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - V**  
**Regional Planning & Development**

GEC 405                      -                      Course 5 Credit 4.5 – MM 60 +40 (CCE) = 100
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Objective--To understand and evaluate the concept of region in geography and its role and relevance in regional planning. To identify the issues relating to the development of the region through the process of Spatial organization of various attributes and their inter relationship. To identify the causes of regional disparities in development perspectives and policy imperatives.

**Course contents:-**

- Unit-I : Regional concept in geography, conceptual and theoretical framework, changing concept of regions, concept of space. Types of region: Formal and functional: Uniform and nodal single purpose and composite regions in the context of planning: regional hierarchy.
- Unit-II : Approaches to Delineation of different types of regions and their utility in planning. Physical regions, resource region, regional divisions according to variations in levels of socio-economic development: special purpose regions-river valley regions, metropolitan regions, problematic regions tribal regions drought and flood prone region.
- Unit-III : Planning process- temporal and spatial dimensions: short term and long term perspectives of planning. Planning for regional development and multi regional planning in a national context.
- Unit-IV : Regional development strategies-concentration vs dispersal, case studies for plans of developed and developing countries: evaluation of regional plans of India. Indicators of development and their data sources, Measuring levels of regional development and disparities case study of India.
- Unit-V : Concept of Multi-level planning: decentralized planning: peoples participation in the planning process: panchayat raj system role and relationship of panchayati raj institution



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(Village panchayat, panchayat simiti and Zila parasid) and administrative structure (Village, panchayat, block & district). Regional development in India-problems and prospects.

**Suggested Readings :-**

1. Abler, R. et al : Spatial Organization - The Geographer's view of the world. Prentice Hall. Bhat, L.S. regional planning in India Statistical. Pub. Society, Culcutta 1973.
2. Mishra, R.P. et.al. "Regional Planning in India.

SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - VI**  
**Biogeography**

GEC 406 - Course 6  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Objective-**To introduce to the students concept of Biogeography and its interrelation information and their application mention between living organism with climate and physical environment with special reference to India.

**Course contents:-**

- Unit-I : Scope and development of Biogeography Environment, Habitat and Plant animal association, biome types.
- Unit-II : Elements of plant geography world. Distribution of Forests and their major communities, Plant succession in newly formed landforms. Example from flood plains and glacial fore fields.
- Unit-III : Zoogeography and its environmental relationship with special reference to tropical, temperate, cold forests and tidal regions.
- Unit-IV : Palaeobotanical and Palaeoclimatologically changes in India and its impact on biosphere.





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Unit-V : National Forest Policy of India. Legal Provisions of Forest conservation and its implementation, conservation of Biotic resources.

**Suggested Readings :-**

- 1 Agrawal, D.P. Man and Environment in India Through Ages, Book & Books, 1992.
- 2 Bradshaw, M.J. : Earth and Living Planet, ELBS, London, 1979.
- 3 Cox, C.D. and Moore, P.D.: Biogeograph : An Ecological and Evolution Approach 5<sup>th</sup> Ed. Blackwell, 1993.
- 4 Gaur, R. : Environment and Ecology of Early Man in Northern India R.B. Publication Corporation, 1987.
- 5 Hoyt, J.B. : Man and the Earth, Prentice Hall, U.S.A. 1992.
- 6 Huggett. R. J. : Fundamentals of Biogeography, Routledge, U.S.A. 1998.
- 7 डॉ पचोली सरोजिनी एवं गदुने राजेश्वरी, जैव भूगोल, म. प्र. हिन्दी ग्रंथ अकादमी।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - VII**  
**Geography of Health**

GEC 407 - Course 7 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Course contents:-**

- Unit-I : Definition, Nature and Significance of Health Geography. Development of Health, Geography its distinction from Medical Sciences, relation with other allied sciences as well as social sciences
- Unit-II : Sources of disease incidence data and other related information- primary and secondary sources. Elementary human Anatomy with special reference to respiratory, and digestive systems of human body.
- Unit-III : Ecology of diseases and disease epidemiology. Pathological environmental social and cultural and economic factors responsible for causation of diseases and other ill-health conditions.
- Unit-IV : Pollution syndrome ; various types of pollution and their role in disease incidence, Air Pollution and disorders in respiratory system water pollution and water borne diseases.
- Unit-V : Classification of diseases. Bases of diseases classification. International classification of diseases. Role of WHO in classification of diseases in the world .

**Suggested Readings :-**

- 1 Banerji , B. & J. Hazra: Geo-Ecology of Cholera in West Bangal. University of Calcutta. 1980.
- 2 Cliff, A. & P. Haggett: Atlas of Disease Distribution. Basil Blackwell, Oxford, 1989.
- 3 Digby, A. & L. Stewart eds: Geflder, Health and Welfare. Routledge, New York, 1996.
- 4 Hazra, J., ed,: Health Care Planning in Developing Countries. University of Calcutta, 1997.
- 5 Howe, G.M.: A World Geography of Hunlan Diseases. Academic Press, London, 1977.
- 6 Learmonth, A.T.A.: Patterns of Disease and Hunger-A Study in Medical. Geography.
- 7 David and Charles, Victoria, 1978.
- 8 Learmonth, A.T.A.: Disease Ecology. Great Britain, 1988.
- 9 May, J.M.: Studies in Disease Ecology. Hafner Pub. New York, 1961.
- 10 May, J.M.: Ecology of Hunlan Diseases. M.D. Pub., New York, 1959.
- 11 May, J.~ Tlie./,:Orld Atlas of Diseases. Nat. Book Trust, New Delhi, 1970.
- 12 (IC1shal)r : Medical Geography. Methuen, London, 1972.
- 13 स्वास्थ्य भूगोल – कैलाष चौबे।
- 14 पोषण।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - VIII**  
**Geography of Manufacturing**

GEC 408 - Course 8  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Course contents:-**

- Unit-I : Nature, scope and recent developments, elements and factors of localization of manufacturing industries, centralization and decentralization of industrial enterprises.
- Unit-II : Theories and models of industrial location : Weber, Losch, Isard and Hoover. Modern refinements to least-cost-theory; Critical review and application of industrial location theories.
- Unit-III : Distribution and spatial pattern of manufacturing industries – Iron and Steel, textiles, chemicals, petro-chemicals, hardware and software Industries.
- Unit-IV : Major industrial regions of U.S.A., Asia and Europe. Methods of delineation of Manufacturing regions.
- Unit-V : Environmental degradation caused by manufacturing industries Industrial hazards and occupational health. Impact of manufacturing industries on economic development] impact of globalization on manufacturing sector, industries and its impact on the urban fringe, changing industrial policy.

**Suggested Readings :-**

1. डॉ. प्रमीला कुमार एवं औद्योगिक भूगोल, म. प्र. हिन्दी ग्रंथ, डॉ. श्रीकमल शर्मा, अकादमी।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - IX**  
**Political Geography**

GEC 409 - Course 9 Credit 4.5 – MM 60 +40 (CCE) = 100
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**Course contents:-**

- Unit-I : Nature, scope subject matter and recent development in political geography approaches to study.
- Unit-II : Geographic elements of the State; Physical elements, Human elements economic elements, relation of Political geography and environment.
- Unit-III : Themes in Political Geography : State, Nation, Nation – State and Nation building frontiers and boundaries. Colonisation, decolonization. Neocolonization Federalism and other forms of Governance Conflicts and Cooperation.
- Unit-IV : Geopolitical Significance of Indian Ocean. Political geography of SAARC Region. Impact of geography on Foreign Policy of India,
- Unit-V : Changing Political map of India, Interstate issues water disputes and riparian claims. New emerging issues and conflicts of Indian Politics.

**Suggested Readings :-**

- 1 प्रो. सुदीप्तो अधिकारी, राजनीतिक भूगोल, शारदा पुस्तक भवन, इलाहाबाद।
- 2 प्रो. पी. आर. चौहान, राजनीतिक भूगोल, वसुन्धरा प्रकाशन गोरखपुर।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - X**  
**Geography Practical - I**

GEC 410 - Course 10  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Outcoms:** To introduce to the students the basic Principles of Remote Sensing; To indicate the Methods of visual at digital interpretations of satellite imageries. To outline the application value of remote sensing.

**Course contents:-**

Unit-I : Preparation of Base Map with the use of survey Instruments.

Unit-II : Resection by place table.

Unit-III : Prismatic compass survey-Measurement of included angles and adjustment of closing error by Bowditch method.

Unit-IV : Field Mapping of the features of land use.

Unit-V : Interpretation of Geological Maps.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।



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SEMESTER - IV

**M.A. / M.Sc. SEMESTER - IV**  
**PAPER - XI**  
**Geography Practical - II**

GEC 411 - Course 11  
Credit 4.5 – MM 60 +40 (CCE) = 100

**Outcoms:** Acquire knowledge and clear concepts of the different survey instrument. Have an in depth Knowledge on plate table survey: Countering with Dumpy level.

**Course contents:-**

Unit-I : Dumpy level- Levelling and contouring.

Unit-II : Theodolite survey.

Unit-III : Traffic Survey.

Unit-IV : Tour Report- Village survey report.

Unit-V : Nearest neighbour technique.

**Suggested Readings:-**

- 1 Elements of Practical Geography – R.L. Singh
- 2 Surveying & Levelling – T.P. Kanetar & Kulkarni (Part – 1)
- 3 Surveying – N.P. Ayyer.
- 4 Geological maps - Chiploonkar.
- 5 Maps & Diagrams, F.J. Mohk house, London.
- 6 प्रयोगात्मक भूगोल – लक्ष्मी नारायण वर्मा, राजमल लोढ़ा, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर, 1991।
- 7 प्रायोगात्मक भूगोल के आधार – हीरालाल, राधा पब्लिकेशन्स नई दिल्ली, 2002.
- 8 प्रयोगात्मक भूगोल – जे.पी. शर्मा रस्तोगी प्रकाशन, मेरठ।

Head Dept. of Geography