

# Department of Geography

## SYLLABUS

(Course Curriculum & Marking Scheme)

M.A./M.Sc.Semester I – IV

Geography

Session 2023-24, 2024-25



ESTD 1954

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**Rambagh Circle, Jaipur – 302004**

[Affiliated to the University of Rajasthan, Jaipur]

**Rajasthan**

Re-accredited with A++ Grade (3.82 CGPA-Highest in the country) by NAAC-UGC

81<sup>st</sup> Rank in India Ranking 2021 by NIRF-MHRD

Only college of Rajasthan ranked by NIRF, Ministry of Education, Govt. of India, (2019, 2020, 2021 & 2022)

College with "Star Status" recognized by DBT, Govt. of India, New Delhi

Declared as Model College by the Government of Rajasthan.

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE,  
RAMBAGH CIRCLE, JAIPUR-302004  
M.A /M.Sc. Geography**

**Eligibility**

A candidate who has secured more than 55% or CGPA of 3.5 in the UGC Seven Point scale [36% or Pass marks for SC/ST/Non-creamy layer OBC/SBC] or equivalent in the Bachelor degree in Arts/ Science shall be eligible for admission to First Semester of a Master of Geography course. For candidates from outside the state of Rajasthan 60% or CGPA of 4.0 in the UGC Seven Point Scale will be applicable irrespective of the category.

**Scheme of Examination**

- a) Each Theory paper in End of Semester Examination (EoSE) will carry 70 marks. The EoSE will be of 3 hours duration.
- b) Part 'A' of the theory paper will comprise of 05 Short Answer Questions of 10 marks, based on knowledge, understanding and applications of the topics/texts covered in the syllabus. Each question will carry two (02) marks.
- c) Part 'B' of the theory paper will comprise of four (04) questions from each unit with internal choice. The candidate has to attempt four (04) questions. Each question will carry fifteen (15) marks.
- d) Each Laboratory EoSE will be of 90 marks and Four (4) hours duration and the continuous internal assessment of the practical will be of 60 marks.
- e) Each semester will have Continuous Internal Assessment (CIA) .Continuous Assessment will consist of two components, namely (1) Continuous Internal Assessment and (2) Assignment. The internal assessment component will comprise of assessment of students' performance in the test and on the basis of factors like attendance, classroom participation etc..

**Semester Structure**

**Course Structure:** M.A./M.Sc. Geography (Semester Scheme) course will comprise of Four (4) Semesters. The Credit Courses have been classified as:

- (a) Discipline Specific Core (DSC)
- (b) Discipline Specific Elective (DSE)
- (c) Discipline Specific Core Practical (DSCP)

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RAMBAGH CIRCLE, JAIPUR-302004  
M.A/M.Sc Geography  
Credits Detail**

SUBJECT CODE	COURSE TITLE/PAPER	COURSE TYPE	HRS/WEEK	CREDITS
<b><u>MA/M.Sc. Sem I</u></b>				
MGEO 101	Geographical Thought (upto 18 <sup>th</sup> Century)	DSC-1	4T	6
MGEO 102	Geomorphology	DSC-2	4T	6
MGEO 103	Advanced Economic Geography	DSC-3	4T	6
MGEO 104A /MGEO104B	Environmental Geography <b>OR</b> Quantitative Techniques in Geography	DSE-4A DSE-4B	4T	6
MGEO 105	Practical	DSCP-I	12P	6
<b><u>MA/M.Sc. Sem II</u></b>				
MGEO 201	Geographical Thought (Modern)	DSC-1	4T	6
MGEO 202	Advanced Climatology and Oceanography	DSC-2	4T	6
MGEO 203	Principles and Theory of Economic Geography	DSC-3	4T	6
MGEO 204(A)/MGEO 204(B)	Environment Management and Sustainable Development <b>OR</b> Transport Geography	DSE-4A DSE-4B	4T	6
MGEO 205	Practical	DSCP-II	12P	6
<b><u>MA/M.Sc. Sem III</u></b>				
MGEO 301	Advanced Geography of India	DSC-1	4T	6
MGEO 302A/ MGEO 302 B	Agriculture Geography <b>OR</b> Disaster Perception and Management	DSE-2A DSE-2B	4T	6
MGEO 303 A/ MGEO 303 B	Urban Geography <b>OR</b> Regional Planning and Development	DSE-3A DSE-3B	4T	6
MGEO 304 A/ MGEO 304B/ MGEO 304 C	Political Geography <b>OR</b> Water Resource and their Management <b>OR</b> Research Methodology	DSE-4A DSE-4B DSE-4C	4T	6
MGEO305	Practical	DSCP-III	12P	6
<b><u>MA/M.Sc. Sem IV</u></b>				
MGEO 401	Advanced Geography of Rajasthan	DSC-1	4T	6
MGEO 402A/ MGEO 402 B	Advanced Geomorphology <b>OR</b> Climatology	DSE-2A DSE-2B	4T	6
MGEO 403 A/ MGEO 403 B/ MGEO 403 C	Industrial Geography <b>OR</b> Fundamentals of Remote Sensing <b>OR</b> Swayam /Moocs Courses	DSE-3A DSE-3B DSE-3C	4T	6
MGEO 404 A/ MGEO 404 B/ MGEO 404C	Biogeography <b>OR</b> Dissertation <b>OR</b> Applied geography	DSE-4A DSE-4B DSE-4C	4T	6
MGEO 405	Practical	DSCP-IV	12	6
		<b>Grand Total</b>	<b>112</b>	<b>120</b>

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**PROGRAMME NAME: FOUR SEMESTERS M. A./M. SC.**

**PROGRAMME OUTCOMES**

- The Post - Graduate Programme instills confidence and develops a sense of identity in facing the real world.
- It further helps to develop critical thinking and skills that train students to analyze problems and validate real life solutions.
- Presentations, field work, dissertations, project work are aimed to foster cooperation among students which further enable them to connect and contribute towards teamwork activities.
- This Programme also develops effective communications skills that promote leadership qualities individually as well as within a group.
- The Programme is designed in such a way that it can inculcate a sense of environmental ethics that focus research and concerns on sustainability.
- This is an initiative towards making enlightened citizens with commitment and empathy to social concerns.

**COURSE OUTCOMES**

- This course establishes the position of Geography as a subject and its importance and interrelationships that reiterate and validate the Man.
- The comprehensive syllabus promotes and develops a thorough knowledge of concepts, methods and theory.
- Field surveys, as a main component of content of the syllabus helps the students acquire a greater understanding of the landforms, geomorphic process and associated hazards, socio-economic and cultural dimensions of the populations.
- The students will also learn to handle modern instruments to learn to interpret Aerial photographs, satellite imagery, Total Station, Meteorological instruments, Computer-based techniques (RS & GIS) etc., which prepares the students for further analytical studies.
- The syllabus is also competent to assist the students in preparing for various competitive exams like NET, SET, SSC etc.●

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**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – I**

**(Two year Semester Scheme outline 2023 -24)**

**Paper Code – MGEO101 – Geographical Thought (upto 18<sup>th</sup> Century)**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	:	05 Short Question (Comp.) 5x2 Marks Each	= 10 Marks
Part-B	:	04 Question from each Unit with internal choice 4x15 Marks Each	= 60 Marks
		Total marks of End of Semester	= 70 Marks
		C.I.A. (Internal Assessment) 2x15 Marks Each	= 30 Marks
		Maximum Marks	= 70 Marks
		Minimum Passing Marks	= 28 Marks

**Paper Outcomes**

The content of this paper deals with the study of the historical and philosophical development of Geography and geographical knowledge. With the historical geographical studies of various schools of thought, the students will learn the evolution and development of the subject and its relevance in present.

**Unit-I**

Definition, Scope, Nature and Philosophy of Geography, Ancient Indian Geography, Development of Geography in the Vedic age and Purana's, Scientific Outlook, contribution of Indian Geographers.

**Unit-II**

Beginning of Geography in classical age, Contribution of Greeks and Romans to Geography with special reference to the work of Herodotus, Eratosthenes, Strabo and Ptolemy.

**Unit-III**

Geography in the middle ages, Geographical ideas of the christian world, Contributions of Muslims to Medieval Geography with reference to the work of Al- Biruni, Al-masudi, Al-Idrisi, Ibn-Battuta.

**Unit-IV**

The revival of scientific Geography during 16<sup>th</sup> and 17<sup>th</sup> centuries, Contribution of Varenus, Development of scientific geography during 18<sup>th</sup> and 19<sup>th</sup> centuries with reference to the works of Kant.

**Essential Readings**

- Prof. Husain Majid : Evolution of Geographical Thought Rawat Publications, Jawahar Nagar, Jaipur
- Kathuria, C. D. : History of Geographical Thought : Centrum Press
- Prof. Husain Majid : Human Geography : Rawat Publications, JawaharNagar, Jaipur
- Peet, Richard : Modern Geographical Thought : Rawat Publications, Jawahar Nagar, Jaipur
- Adhikari, Sudeepta : Fundamentals of Geographical Thought Orient Blackswan Pvt. Himyanat Hyderabaad

- जैन, शेषमल : भौगोलिक चिन्तन एवं विधि तंत्र: साहित्य भवन, आगरा
- सिंह, जगदीश : भौगोलिक चिन्तन का क्रम विकास : ज्ञानोदय प्रकाशन, गोरखपुर
- कौशिक, एस.डी. : भौगोलिक चिन्तन एवं विधि तंत्र: साहित्य भवन, आगरा
- दीक्षित, रमेश चन्द्र : भौगोलिक चिन्तन का विकास एवं ऐतिहासिक समीक्षा, प्रिन्टीस हॉल इण्डिया।
- मौर्या, एस.डी. : भौगोलिक चिन्तन का इतिहास, प्रयाग पुस्तक भवन
- श्रीवास्तव, वी.के. : भौगोलिक चिन्तन के आधार, वसुन्धरा प्रकाशन, गौरखपुर।

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**M.A./M.SC GEOGRAPHY SEMESTER – I**  
**(Two year Semester Scheme outline 2023-24)**  
**Paper Code – MGEO102 – Geomorphology**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	:	05 Short Question (Comp.) 5x2 Marks Each	= 10 Marks
Part-B	:	04 Question from each Unit with internal choice 4x15 Marks Each	= 60 Marks
		Total marks of End of Semester	= 70 Marks
		C.I.A. (Internal Assessment) 2x15 Marks Each	= 30 Marks
		Maximum Marks	= 70 Marks
		Minimum Passing Marks	= 28 Marks

**Paper Outcomes**

This coursework is set out to explain the essential characteristics of the main types of relief and explains the processes that promote geomorphologic changes. Structural, lithological, Physical- Chemical, Geo-chemical and Climate factors will be addressed. Dynamic Geomorphology involves the use of quantitative geomorphology but is a considerably more fundamental method of approach.

**Unit-I**

Introduction to Geomorphology, definition, nature and scope, recent trends, Zoning of the earth's interior, Endogenetic forces, Isostasy, continental drift theory of Wegener, Mountain Building Theories of Kober and Holms, Plate Tectonics.

**Unit-II**

Volcanic activity, Earthquakes, Drainage pattern, Drainage basin and morphometry, baseline changes, element of slope, various models of slope development, Denudation types or weathering: Physical and chemical weathering; factors affecting weathering, Mass movement.

**Unit-III**

Concepts in Geomorphology various school of landscape development Concept of erosion – Normal cycle of erosion of Davis Penck and King.

**Unit-IV**

Geomorphic Process and landforms: Alluvial, Glacial, Karst, Arid and Coastal topography.

**Essential Readings**

- Singh, Savindra : Geomorphology, Prayag Pustak Bhawan, Prayagraj.  
Dayal, P. : A Text Book of Geomorphology, Rajesh Publication, New Delhi.  
Sharma, H.S. (ed.) : Perspective in Geomorphology Concept, Publications, New Delhi.  
Woldridge and Morgan : An Introduction to Geomorphology, Longmans, Green and Com. London.  
Bloom, A.L. : Geomorphology, Prentice Hall of India, New Delhi.  
Richard, J. Huggett : Fundamentals of Geomorphology, 4<sup>th</sup> Ed. T&F India.  
William, D. Thornbury : Principles of Geomorphology, 2<sup>nd</sup> Ed., CBS Publishers & Distributors Pvt. Ltd., New Delhi.  
सिंह, सविन्द्र : भूआकृति विज्ञान, प्रयाग पुस्तक भवन, प्रयागराज।  
गुप्ता, एस.एल. : भूआकृति विज्ञान, हिन्दी माध्यम कार्यान्वय निदेशालय, दिल्ली विश्वविद्यालय।  
प्रसाद, गायत्री : भूआकृति विज्ञान, शारदा पुस्तक भवन, प्रयागराज।

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**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – I**

**(Two year Semester Scheme outline 2023-24)**

**Paper Code – MGEO103 - Advanced Economic Geography**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA (Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	: 05 Short Question (Comp.)	5x2 Marks Each	= 10 Marks
Part-B	: 04 Question from each Unit with internal choice	4x15 Marks Each	= 60 Marks
Total marks of End of Semester		=	70 Marks
C.I.A. (Internal Assessment) 2x15 Marks Each		=	30 Marks
Maximum Marks		=	70 Marks
Minimum Passing Marks		=	28 Marks

**Paper Outcomes**

This paper has been structured into a conventional course contents well supplemented by current trends and advancements in the modern economic world thus make the students global knowledge architecture in the field of Economic Geography. The paper is intended to be used by graduates in Geography as well as aspirants of higher competitive examinations.

**Unit-I**

Changing nature of Economic Geography as a field of study, Agricultural typology-with special reference to Subsistence agriculture, Plantation agriculture, Mediterranean agriculture, Mixed farming and Commercial grain farming.

**Unit-II**

Energy resources: Conventional and non-conventional spatial patterns and supply problems Industries-Iron & Steel, Aluminum Industry, Paper and pulp, Cotton textile.

**Unit-III**

Decision making process: Location decision, behavioural view, Economic Region-Concept and methods of delineation, need of economic regionalization for area development and planning-Economic regions of India.

**Unit-IV**

World transportation pattern, trade routes, trade policies and their effect on the economy of the world, Globalization and liberalization.

**Essential Readings**

- Hartshorn & Alexander : : Economic Geography, Prentice Hall of India, New Delhi.  
Alexandra J.W. : : Economic Geography, Mc Graw Hill, New Delhi.  
Hodder & Lee : : Economic Geography, St. Martins Press, NewYork.  
Robson, H : : Economic Geography, Mac. Donald, London.  
Maurya,S.D : : Economic Geography,Pravalika Pubication, Prayagraj.  
Gautam,Alka : : Advanced Economic Geography, Sharda Pustak Bhawan, Prayagraj.  
Hussain, Ahmed : : Economic Geography, Viswabharti Publication, Delhi.  
सिंह, जगदीश एवं  
सिंह काशीनाथ : : आर्थिक भूगोल के मूल तत्व - ज्ञानोदय प्रकाशन, गोरखपुर।  
कौशिक, एस.डी. : : मानव तथा आर्थिक भूगोल, रस्तोगी प्रकाशन, मेरठ।  
जाट, बी.सी. : : आर्थिक भूगोल, पंचशील प्रकाशन, जयपुर।

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**M.A./M.SC GEOGRAPHY SEMESTER – I**  
**(Two year Semester Scheme outline 2023-24)**  
**Paper Code – MGEO104A – Environmental Geography**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	:	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			=
			<b>10 Marks</b>
<b>Part-B</b>	:	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			=
			<b>60 Marks</b>
		<b>Total marks of End of Semester</b>	=
			<b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	=
			<b>30 Marks</b>
		<b>Maximum Marks</b>	=
			<b>70 Marks</b>
		<b>Minimum Passing Marks</b>	=
			<b>28 Marks</b>

**Paper Outcomes**

This paper is aimed to describe the spatial aspects of interactions between humans and the natural world, effect of environment and it human processes and its implications.

**Unit-I**

Human Environment Relationship - Concept, Direct and indirect Relation between man and environment, the effect of environment on man: biophysical relation and perceptual related to resource availability.

**Unit-II**

Direct and indirect effect of human on environment, human capacity to modify the environment, Environment Pollution: Air, Water, Soil, Noise & Thermal-Causes & their Impact, some case studies of India.

**Unit-III**

The Environmental crises in Tropical, Temperate & Polar regions, Biodiversity: distribution & depletion, Concept of ecological footprint, reduction of forest, Global warming.

**Unit-IV**

Criteria for Environmental quality, Urbanization and pollution, Industrialization and pollution with reference to India, sustainable development goals.

**Essential Readings :**

- Saxna, K.K. : Environmental Studies, University Book House, Jaipur.  
Duffey, E. : Conservation of Nature Collins, London.  
Singh, R.B., Thakur, D.K. : Environmental Studies, RBD, Jaipur.  
Chauhan, J.P.S.  
Edington, J.M. : Ecology Environmental Planning, Champanand Hall, London.  
Singh Savindra : Environment Geography, Pravalika Publications, Allahabad.  
नेगी, पी.एस. : पारिस्थितिकीय विकास एवं पर्यावरण भूगोल, रस्तोगी प्रकाशन, मेरठ।  
सक्सेना, एच.एम. : पर्यावरण एवं पारिस्थितिकी भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर।  
सिंह, सविन्द्र : पर्यावरण भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद।  
सिंह, सविन्द्र : जैव भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद।

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**M.A./M.SC GEOGRAPHY SEMESTER – I**  
**(Two year Semester Scheme outline 2023-24)**

**Paper Code – MGEO104B – Quantitative Techniques in Geography**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	:	05 Short Question (Comp.) 5x2 Marks Each	= 10 Marks
Part-B	:	04 Question from each Unit with internal choice 4x15 Marks Each	= 60 Marks
		Total marks of End of Semester	= 70 Marks
		C.I.A. (Internal Assessment) 2x15 Marks Each	= 30 Marks
		Maximum Marks	= 70 Marks
		Minimum Passing Marks	= 28 Marks

### Paper Outcomes

This is an introduction to quantitative methods in Geography with a focus on, but not limited to, statistical techniques. Through this course, students will develop an understanding of basic concepts, reasoning and procedures in quantitative methods used in Geography. All the techniques are firmly based on empirical observations and are readily verifiable. They help in reducing a multitude of observations to a manageable number of factors. They allow the formulation of structured ideas and theories which can be tested under the assumed conditions.

#### Unit-I

Spearman's Rank and product Moment Correlation, Coefficients, ordinary least square method of fitting a regression line, construction of regression line: interpolation, prediction, explanation and residual, statistical tests of significance of the estimates, residuals and their mapping.

#### Unit-II

Bivariate Analysis, Forms of relation and measuring the strength of association and relation-construction and meanings of scatter diagram simple linear and regression analysis. Multivariate Analysis, significance of a regression, correlation- multicollinearity- basis principles and elements of factor Analysis and principal component analysis.

#### Unit-III

Probability: Theory of probabilities - Law of addition and multiplication, probabilities of distribution : normal, binomial, poisson.

#### Unit-IV

Surface and Models: Gravity potential, model-spatial interpolation and trendsurface analysis.

#### **Essential Readings :**

- Hammond R & P.S. : Quantitative Techniques in Geography : An Introduction Clearendan press, Oxford, U.K.  
Mccullagh  
David Unwin : Introductory Spatial Analysis, Methuen, London , 1981.  
Johnston, R.J. : Multivariate Statistical Analysis in Geography, Longman, London.  
John P. Cole & Cuchlanie : Quantitative Geography, Johri Witey, London, 1968  
A.M. King  
Mahmood, Aslam : Quantitative Techniques in Geography, Jawahar Pub. New Delhi.  
Nagar, K.N. : Elements of Statistics, Meenaxi Prakashan, Meerut.  
Gupta, S.P. : Statistical Methods, S.C. Chand & Co., New Delhi.  
गुप्ता एस.पी., गौतम अल्का : सांख्यिकीय विधियां, शारदा पुस्तक भवन, इलाहाबाद।  
नागर, कैलाष नाथ : सांख्यिकी के मूल तत्व, मिनाक्षी प्रकाशन, मेरठ।  
रिज्जी, एस.एम. : सांख्यिकीय भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।  
श्रीवास्तव, वी.के. : भूगोल की सांख्यिकीय विधियां, वसुन्धरा प्रकाशन, गौरखपुर।

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**M.A./M.SC GEOGRAPHY SEMESTER – I**  
**(Two year Semester Scheme outline 2023-24)**  
**Paper Code – MGEO105 – Practical**

Marks distribution		
ESE ( End Semester Exam)	=	90 Marks
CIA (Continuous Internal Assessment)	=	60 Marks
<b>Total</b>	=	<b>150 Marks</b>
<b>Minimum Passing Mark</b>	=	<b>60 Marks</b>
<b>ESE</b>		
(i)	Written Test on Lab Work Four hrs (4Qs.x 15 Marks) (Total 6 Ques.)	= 60 Marks
(ii)	Record Work & Viva-Voce.(10+5)	= 15 Marks
(iii)	Field Survey & Viva-Voce. (10+5)	= 15 Marks
	<b>Total</b>	= <b>90 Marks</b>
<b>CIA</b>		
(i)	Written Test on Lab Work Four hrs (2Qs.x 15 Marks) (Total 4 Ques.)	= 30 Marks
(ii)	Practice Record Work & Viva-Voce. (20+10)	= 30 Marks
	<b>Total</b>	= <b>60 Marks</b>

**Paper Outcomes**

Map projection is an important aspect of Geography. The cartographical work helps the students to inculcate the knowledge of map making, their characteristics and uses.

**Unit-I**

**Laboratory and Map Work**

- i. The Art and Science of Cartography. History of Maps. Materials. Techniques and preparation of Maps.
- ii. Enlargement. Reduction and Finding Area of Maps. Use of Planimeter.
- iii. Elementary Trigonometry.
- iv. Maps Projections and their classification.

**Unit-II**

**Construction and characteristics** of any three from each of the four classes (unit II and III) of projections (mathematical constructions).

**Conical Projections:**

1. Equal Area with the one standard Parallel (Lambert's Projections)
2. Equal Area with two standard Parallels (Alber's Projections).
3. Bonne's
4. Polyconic
5. International

**Cylindrical Projections:**

1. Cylindrical Equal Area,
2. Mercator's,
3. Gall's Stereographic.

**Unit-III**

**Zenithal Projections (Polar Case):**

1. Gnomonic
2. Stereographic
3. Orthographic
4. Equal Area
5. Equidistant

### Conventional projections:

- 1 Sinusoidal
  - 2 Mollweide
  - 3 Interrupted Mollweide and Godde's
  - 4 Interrupted Sanson Flemsteed (Homolosine),
  - 5 Aito's.
- Choice of Projections, Projections used for maps produced in India.

### Unit-IV

#### Field Surveying : Small Area Survey

1. Abeny Level : Use and application.
2. Indian clinometre : Its parts and use, finding out of heights in the field.
3. Prismatic Compass : Open and closed traverse correction of bearings.

#### Essential Readings

- Khullar, D.R. : Practical Geography, New Academic Publishing, Jhalandar
- Singh, L.R. : Fundamentals of Practical Geography, Sharda Pub.Allahabad
- Mishra, R.N., Sharma, P.K. : Practical Geography, Pareek Publications, Jaipur
- Crampton, J. : Mapping, Black well, Publications
- Singh, R. L. : Elements of Practical Geography, Students friendsAllahabad
- Mounck House, F.G. & Wilkinson,H.R. : Map & Diagram, B.I. Publications Pvt. Ltd., NewDelhi.
- Sarkar, Ashis : Practical Geography, Orient Black Swan Pvt.Ltd., Hyderabad
- शर्मा, जे.पी. : प्रायोगिक भूगोल, रस्तौगी पब्लिकेशन, मेरठ
- अय्यर, एन.पी. : सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल
- राव, बी.पी. : प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर
- मिश्रा, आर.एन., शर्मा, पी.के. : प्रायोगिक भूगोल, रावत प्रकाशन, जयपुर
- खुल्लर, डी.आर. : प्रयोगात्मक भूगोल के तत्व, न्यू एकेडमिक पब्लिशिंग कम्पनी, जालन्धर।
- जैन एवं मामोरिया : प्रयोगात्मक भूगोल एवं मानचित्रांकन, साहित्य भवन, आगरा।

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – II**

**(Two year Semester Scheme outline 2023-24)**

**Paper Code – MGEO201 –Geographical Thought (Modern)**

<b>Marks distribution</b>					
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>		
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>		
<b>Total</b>		=	<b>100 Marks</b>		
<b>ESE contains Part A and Part B</b>					
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>	=	<b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>	=	<b>60 Marks</b>
		<b>Total marks of End of Semester</b>		=	<b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>		=	<b>30 Marks</b>
		<b>Maximum Marks</b>		=	<b>70 Marks</b>
		<b>Minimum Passing Marks</b>		=	<b>28 Marks</b>

**Paper Outcomes**

The content of this paper deals with the study of the historical and philosophical development of modern Geography and Geographical knowledge. With the historical Geographical studies of various schools of thought, the students will learn the evolution and development of the subject and its relevance in present.

**Unit-I**

Founders of modern Geography - Humboldt and Ritter, contribution of Richthofen, Ratzel, Hettner and Hartshorne.

**Unit-II**

The development of Geographical ideas during the 20th century, Geography as a science of landscape morphology, Geography as Human Ecology, the views of Huntington, Blache and Brunches.

**Unit-III**

Concept of Dichotomy - Determinism versus Possibilism, Systematic versus Regional, Physical versus Human Geography, Quantitative revolution in Geography, Development of Behavioural and Radical geography.

**Unit-IV**

Exceptionalism in Geography, Scientific positivism, Humanistic Geography, Idealism, Phenomenalism, Development of Geography in India, Recent trends in Geography.

**Essential Readings :**

Prof. Husain Majid : Evolution of Geographical Thought, Rawat Publications, Jawahar Nagar, Jaipur.

Kathuria, C. D. : History of Geographical Thought : Centrum Press.

Prof. Husain Majid : Human Geography : Rawat Publications, JawaharNagar, Jaipur.

Peet, Richard : Modern Geographical Thought : Rawat Publications, Jawahar Nagar, Jaipur.

जैन, शेषमल : भौगोलिक चिन्तन एवं विधि तंत्र: साहित्य भवन, आगरा

सिंह, जगदीश : भौगोलिक चिन्तन का क्रम विकास : ज्ञानोदय प्रकाशन, गोरखपुर

कौशिक, एस.डी. : भौगोलिक चिन्तन एवं विधि तंत्र: साहित्य भवन, आगरा

दीक्षित, रमेश चन्द्र : भौगोलिक चिन्तन का विकास एवं ऐतिहासिक समीक्षा, प्रिन्टीस हॉल इण्डिया।

मौर्या, एस.डी. : भौगोलिक चिन्तन का इतिहास, प्रयाग पुस्तक भवन

श्रीवास्तव, वी.के. : भौगोलिक चिन्तन के आधार, वसुन्धरा प्रकाशन, गोरखपुर।

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – II**

**(Two year Semester Scheme outline 2023-24)**

**Paper Code – MGEO202 – Advanced Climatology and Oceanography**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	: 05 Short Question (Comp.)	5x2 Marks Each	= 10 Marks
Part-B	: 04 Question from each Unit with internal choice	4x15 Marks Each	= 60 Marks
Total marks of End of Semester		=	70 Marks
C.I.A. (Internal Assessment) 2x15 Marks Each		=	30 Marks
Maximum Marks		=	70 Marks
Minimum Passing Marks		=	28 Marks

**Paper Outcomes**

The students will be able to learn different elements and composition of weather and climate, oceanic current and its associated phenomenon. The course content will also give complete picture about the atmosphere and hydrosphere.

**Unit-I**

Climatology- Definition, nature and scope, Composition and structure of Atmosphere, Atmospheric Temperature – distribution and inversion of temperature, Heat Balance, Adiabatic and non-adiabatic process, stability and instability.

**Unit-II**

Air Motion, Pressure variations, Pressure belts, General air circulation, Planetary wind system, Fronts, air masses and types.

**Unit-III**

Cyclones and anticyclones, Climatic Classification: Koppen's, Thornthwaite's schemes of climatic classification, Polar Vortex, weather forecasting and Climate Change.

**Unit-IV**

Oceanography – Definition ,nature and scope, Ocean bottom relief, horizontal and vertical distribution of temperature, ocean deposits, origin and impact of ocean currents, tides, coral reef - types and theories, marine resources and their utilization.

**Essential Readings**

- Crtchifield J.H. : General Climatology Prentic Hall India, New Delhi;  
Lal, D.S. : Climatology & Oceanography, Sharda PustakBhawan, Allahabad.  
Siddharth, K. : Atmosphere, Weather & Climate, KitabMahal, New Delhi.  
Siddharth, K. : Oceanography : A Brief Introduction, KitabMahal, New Delhi.  
सिंह, सविन्द्र : जलवायु विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद।  
बंसल, एस.सी. : जलवायु एवं समुद्र विज्ञान, वसुन्धरा प्रकाशन, गोरखपुर।  
लाल, डी. एस. : जलवायु एवं समुद्र विज्ञान, केदारनाथ-रामनाथ, मेरठ।  
गौतम, अल्का : जलवायु एवं समुद्र विज्ञान, रस्तोगी प्रकाशन, मेरठ।  
मामोरिया, चतुर्भज, : जलवायु विज्ञान, साहित्य भवन पब्लिकेशन, आगरा।  
जोशी, रतन

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE  
RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – II  
(Two year Semester Scheme outline 2023-24)**

**Paper Code – MGEO203 – Principles and Theory of Economic Geography**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>=</b>
			<b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>=</b>
			<b>60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>=</b>
			<b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>=</b>
			<b>30 Marks</b>
		<b>Maximum Marks</b>	<b>=</b>
			<b>70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>=</b>
			<b>28 Marks</b>

**Paper Outcomes**

This paper deals with the study of five economic sectors, grouped together by type of economic activity: primary, secondary, tertiary, quaternary, and quinary and their spatial locational analysis.

**Unit-I**

Simple model of economy, environmental relations of the economy, Spatial structure of economy, Geographical basis of economic activities: systematic approach and spatial approach.

**Unit-II**

Manufacturing-Factors of production, Theories of plant location: Weber's Least cost theory, Losch's economics of location, Isard's space economy, Smith's spatial margins.

**Unit-III**

Spatial variation in transport costs: Location and structure of transport costs. Transportation network analysis and models.

**Unit-IV**

Spatial organisation of land use: Laws of return, concept of rent, Vonthunen's isolated state, Vonthunen's principles in context of past and present, classical central place theory, Modification of Christaller's model.

**Essential Readings :**

- Hartshorn & Alexander : Economic Geography, Prentice Hall of India, New Delhi.
- Alexandra J.W. : Economic Geography, Mc Graw Hill, New Delhi.
- Hodder & Lee : Economic Geography, St. Martins Press, New York.
- Robson, H : Economic Geography, Mac. Donald, London.
- Husain, Ahmad : Economic Geography, Vishwa Bharti Publication, Delhi.
- Mourya, S.D. : Economic Geography, Pravalika Publication, Allahabad.
- Gautam, Alka : Advanced Economic Geography, Sharda Pustak Bhawan, Allahabad.
- Saxena, H.M. : Economic Geography, Rawat Publications, New Delhi.
- Gautam, Alka : Elements of Economic Geography, Sharda Pustak Bhawan.
- सिंह, जगदीश एवं सिंह काशीनाथ : आर्थिक भूगोल के मूल तत्व - ज्ञानोदय प्रकाशन, गोरखपुर।
- कौशिक, एस.डी. : मानव तथा आर्थिक भूगोल, रस्तोगी प्रकाशन, मेरठ।

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – II**  
**(Two year Semester Scheme outline 2023-24)**

**Paper Code – MGEO204A –Environment Management and Sustainable Development**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA (Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	:	05 Short Question (Comp.)	5x2 Marks Each
			= 10 Marks
Part-B	:	04 Question from each Unit with internal choice	4x15 Marks Each
			= 60 Marks
		Total marks of End of Semester	
			= 70 Marks
		C.I.A. (Internal Assessment) 2x15 Marks Each	
			= 30 Marks
		Maximum Marks	
			= 70 Marks
		Minimum Passing Marks	
			= 28 Marks

**Paper Outcomes**

This is a learning method to know the surrounding physical environment with all its components and elements and also to understand how all those work like - life processes, adaptation and biodiversity.

**Unit-I**

Environmental Management – Management of Forest, Soil, Wildlife, Energy and Mineral Resource, Conservation of Natural Resources.

**Unit-II**

Environmental education, monitoring and mapping, Environment awareness. International and National environmental policies and programmes.

**Unit-III**

Ecological issues with reference to India, Environmental Hazards, Landslides, earthquakes, Tsunamis, Flood and Drought, Population explosion and food security

**Unit-IV**

Sustainable development – concept and goals, Sustainable development and environmental impact assessment, Environmental Degradation, Disaster Management – Types, components, Climate change and its impact.

**Essential Readings**

- Saxena, K.K. : Environmental Studies, University Book House, Jaipur.  
Duffey, E. : Conservation of Nature Collins, London.  
Singh, R.B. : Environmental Studies, RBD, Jaipur.  
Thakur, D.K.  
Chauhan, J.P.S.  
Edington, J.M. : Ecology Environmental Planning, Champanand Hall, London.  
नेगी, पी.एस. : पारिस्थितिकीय विकास एवं पर्यावरण भूगोल, रस्तोगी प्रकाशन, मेरठ।  
सक्सेना, एच.एम. : पर्यावरण एवं पारिस्थितिकी भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर।  
सिंह, सविन्द्र : पर्यावरण भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद।  
सिंह, सविन्द्र : जैव भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद।

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – II**  
**(Two year Semester Scheme outline 2023-24)**  
**Paper Code – MGEO204B – Transport Geography**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>= 10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>= 60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>= 70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>= 30 Marks</b>
		<b>Maximum Marks</b>	<b>= 70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>= 28 Marks</b>

### Paper Outcomes

This paper deals with the study of various modes of transportation and their interrelationships with other aspects of Geography, including land use, economic development, social and cultural factors and environmental sustainability.

#### Unit-I

Meaning, Nature and Scope of Transport Geography, Network growth models, Nature of interregional flows basis for interaction.

#### Unit-II

Models of spatial interaction, distance decay theory, gravity models, and potential surface models.

#### Unit-III

Accessibility, Transport network structure, connectivity linkages.

#### Unit-IV

Development of transport system in India. Role of transportation in regional development, Transport problems in India.

#### Essential Readings :

- Saxena, H.M. : Transport Geography, Rawat Publication.  
 Eliot, H. and E. Michael : Transportation Geography Comments and Readings, M.C. Growth M.S. 1974.  
 वैष्णव, अखिलेश : परिवहन भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।  
 सिंह, जगदीश : परिवहन भूगोल, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी।  
 गर्ग, एच.एस. एवं सिंह, : परिवहन एवं व्यापार भूगोल, एस.बी.पी.डी. पब्लिकेशन्स।  
 अविनाश कुमार

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – II**  
**(Two year Semester Scheme outline 2023-24)**  
**Paper Code – MGEO205 – Practical**

Marks distribution		
ESE ( End Semester Exam)	=	90 Marks
CIA ( Continuous Internal Assessment)	=	60 Marks
<b>Total</b>	=	<b>150 Marks</b>
<b>Minimum Passing Marks</b>	=	<b>60 Marks</b>
<b>ESE</b>		
(i)	Written Test on Lab Work Four hrs (4Qs.x 15 Marks) (Total 6 Ques.)	= 60 Marks
(ii)	Record Work & Viva-Voce. (10+5)	= 15 Marks
(iii)	Village Survey & Viva-Voce. (10+5)	= 15 Marks
	<b>Total</b>	= <b>90 Marks</b>
<b>CIA</b>		
(i)	Written Test on Lab Work Four hrs (2Qs.x 15 Marks) (Total 4 Ques.)	= 30 Marks
(ii)	Practice Record Work & Viva-Voce. (20+10)	= 30 Marks
	<b>Total</b>	= <b>60 Marks</b>

**Paper Outcomes**

The paper dealt with the computation, representation and analysis of data. The student will learn the tabulation and representation of data using graphs, charts, diagrams and maps. The village survey reports imbibe the knowledge of research and report writing.

**Unit – I**

**Representation of data**

- Computations of data Preparation in frequency tables
- Representation of data by Histograms and Ogives
- Computation of Mean, Median and Modes
- Deviations-Standard Deviations and Mean Deviations, skewness and finding out of correlations
- Coefficient Variation

Note- All of these should be computed from the statistical data preferably based of State, District, Tehsil and Community Development Block as unit areas.

**Unit – II**

- Theoretical basis of Nearest Neighbour Analysis, Practical exercises of Nearest Neighbour Analysis
- Locational analysis of urban centres.

**Unit – III**

**Maps :** Qualitative and Quantitative Maps, Population potential surface map, Population Pyramids map and Cartograms of economic and social data.

**Unit – IV**

**Diagrams:** Three dimensional diagrams, Polygraph, semi-log and loggraphs, Trilinear chart, circular graph, Climatograph. Taylors/Fosters Climograph, Annual water deficiency and water surplus graph. One exercise from maps and Diagrams will be given in the examination

**Village Survey Report:** A candidate has to prepare a project report of a village area under the supervision of a faculty. A supervisor can take only 5 candidates. The marking on the project report will be done by the external examiner. The project should be based on primary data obtained by the candidate. The assessment of the report will be based on the content, data compilation and representation by using Maps, diagrams and any other cartographic methods.

**Essential Readings :**

- |                               |  |
|-------------------------------|--|
| Mishra, R.N., Sharma, P.K.    | : Practical Geography, Pareek Publications, Jaipur.                  |
| Singh, L.R.                   | : Fundamentals of Practical Geography, ShardaPub. Allahabad.         |
| Khullar, D.R.                 | : Practical Geography, New Academic Publishing, Jhalandar.           |
| Crampton, J.                  | : Mapping, Black well Publications.                                  |
| Singh, R. L.                  | : Elements of Practical Geography, Studentsfriends Allahabad.        |
| Sarkar, Ashish                | : Practical Geography, Orient Black Swan, Hyderabad.                 |
| शर्मा, जे.पी.                 | : प्रायोगिक भूगोल, रस्तौगी प्रकाशन, मेरठ।                            |
| अय्यर, एन.पी.                 | : सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल।                  |
| राव, बी.पी.                   | : प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर।                        |
| मिश्रा, आर.एन., शर्मा, वी.के. | : प्रयोगात्मक भूगोल रावत प्रकाशन, जयपुर।                             |
| खुल्लर, डी.आर.                | : प्रयोगात्मक भूगोल के तत्व, न्यू एकेडमिक पब्लिशिंग कम्पनी, जालन्धर। |

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – III**

**(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO301 – Advanced Geography of India**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	: 05 Short Question (Comp.)	5x2 Marks Each	= 10 Marks
Part-B	: 04 Question from each Unit with internal choice	4x15 Marks Each	= 60 Marks
Total marks of End of Semester		=	70 Marks
C.I.A. (Internal Assessment) 2x15 Marks Each		=	30 Marks
Maximum Marks		=	70 Marks
Minimum Passing Marks		=	28 Marks

**Paper Outcomes**

This paper deals with the study of diverse physiographic division of India with its landscape characteristics and significance along with drainage, vegetation and other natural physical resources. This will enhance the learning aptitude and knowledge.

**Unit-I**

Geological structure and its relation with relief physiographic divisions, climatic divisions, Drainage, soil regions- characteristics and distribution, Agro-Climatic regions, Natural regions of India.

**Unit-II**

Distribution of resources- Land resources, Water resources, Forest resources, Animal resources, Mineral resources, Agriculture resources, Human resources.

**Unit-III**

Resource development: Power, Industries and transport, Economic & Resource regions of India and Regional problems.

**Unit-IV**

Urban and Rural Settlement, Urbanization, Trade and Transportation, Regional Development and Planning, Environmental Issues.

**Essential Readings :**

- Tripathi, R : Geography of India, Rawat Publication, New Delhi
- Gautam, Alka : Advanced Geography of India, Sharda Pustak Bhawan, Prayagraj.
- Singh, R.L. : India-A Regional Geography, UBS Publication & Distributors Ltd, New Delhi.
- Singh Jagdish : India-A, Comprehensive Systematic Geography, Gayonodaya Prakasan, Gorkhpur,
- Tiwari, R.C. : Geography of India, Pravalika Publications, Allahabad.
- Husain, Majid : Geography of India, M.C. Education.
- Khullar, D.R. : India : A Comprehensive Geography, Kalyani Publishers, New Delhi.
- सिंह, गोपाल : भारत का भूगोल, आत्माराम एण्ड सन्स, नई दिल्ली।
- तिवाड़ी, आर.सी. : भारत का भूगोल, वसुन्धरा प्रकाशन, गोरखपुर।
- बंसल, सुरेश चन्द्र : भारत का वृहद् भूगोल, मिनाक्षी प्रकाशन, मेरठ।
- हुसैन, माजिद : भारत का भूगोल, टाटा मैग्राहिल्स पब्लिशिंग कम्पनी लि. नई दिल्ली।
- मामोरिया, चतुर्भुज : आधुनिक भारत का वृहद् भूगोल, प्रतियोगिता साहित्य सीरिज, आगरा।

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – III**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO302A – Agriculture Geography**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	:	05 Short Question (Comp.)	5x2 Marks Each
Part-B	:	04 Question from each Unit with internal choice	4x15 Marks Each
		Total marks of End of Semester	= 70 Marks
		C.I.A. (Internal Assessment) 2x15 Marks Each	= 30 Marks
		Maximum Marks	= 70 Marks
		Minimum Passing Marks	= 28 Marks

### Paper Outcomes

Agricultural geography is a sub-discipline of Human Geography concerned with the spatial relationships found between agriculture and humans. The relevance of studying this paper is to examine the spatial distribution of crops, livestock and other agricultural activities. The cropping patterns and crop and livestock combinations vary in space and time.

#### Unit-I

Nature, Scope, Significance and Development of Agriculture Geography, Origin & dispersal of agriculture, factors affecting agriculture - Physical, Economic, Social & Technological.

#### Unit-II

Land use survey & Classification, Land use Pattern- India & Britain, Land Capability classification (U. S. & Britain), Models in agricultural land use- Von Thunen's model & recent modification, World Agricultural Types, Agricultural Regions.

#### Unit-III

Crop ranking, Crop combination region- meaning and methodology- Detail Study of Kendal's, Weaver's, Doi's & Rafiullah's methods of Cropping intensity, Crop Diversification Methods & Deductions, Agricultural Efficiency- Concept and methods of measurement.

#### Unit-IV

Sustainable development of agriculture, Specific Problems in Indian agriculture & their solutions, recent agricultural Policy of India, New Perspectives in agriculture, contract farming, Agri-business.

#### Essential Readings

- |                                  |   |   |
|----------------------------------|---|---|
| Bansal, P.L.                     | : | Agricultural Problems in India – Vikash Publication, New Delhi.   |
| Gregor, H.F.                     | : | Geog. of Agricultural Themes in Research PrenticeHall, New Delhi. |
| Grigg, D.B.                      | : | The Agricultural Systems of the World, CambridgeUniversity Press. |
| Negi, B.S.                       | : | Agricultural Geography, Kedarnath Padamnath, Meerut.              |
| Hussain Mazid                    | : | Agricultural Geography, Rawat Publication, Jaipur.                |
| Gautam, Alka                     | : | Agricultural Geography, Sharda Pustak Bhawan, Allahabad.          |
| कुमार प्रमिला, शर्मा श्रीकमल     | : | कृषि भूगोल, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल।               |
| कलवार, एस.सी.                    | : | कृषि भूगोल की रूपरेखा, आविष्कार पब्लिकेशन, चैड़ा रास्ता, जयपुर।   |
| तिवाड़ी, आर.सी. एवं सिंह, बी.एस. | : | कृषि भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद।                          |
| गौतम, अलका                       | : | कृषि भूगोल, शारदा पुस्तक भवन, इलाहाबाद।                           |
| शर्मा, पलक एवं भारद्वाज बी.एल.   | : | कृषि भूगोल, रस्तौगी प्रकाशन, मेरठ।                                |
| यादव, चन्द्रशेखर                 | : | कृषि भूगोल, विश्व भारती पब्लिकेशन, नई दिल्ली                      |

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – III**  
**(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO302B – Disaster Perception and Management**

Marks distribution			
ESE ( End Semester Exam)	=		70 Marks
CIA ( Continuous Internal Assessment)	=		30 Marks
<b>Total</b>	=		<b>100 Marks</b>
ESE contains Part A and Part B			
<b>Part-A</b>	:	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
<b>Part-B</b>	:	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
		<b>Total marks of End of Semester</b>	= <b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	= <b>30 Marks</b>
		<b>Maximum Marks</b>	= <b>70 Marks</b>
		<b>Minimum Passing Marks</b>	= <b>28 Marks</b>

### **Paper Outcomes**

This paper is aimed to provide the students with the types of various disaster and their management techniques along with the frameworks to mitigate the consequences. The contents of this course included the various dimensions of disaster management, causes of disaster-both man- made and natural. The course will help the students to develop a perception to assess the characteristics of a phenomenon.

#### **Unit-I**

Concept of disaster management, its importance, need and scope, Hazards, risks, vulnerability and disaster, types of hazards and disaster, manmade and natural disaster.

#### **Unit-II**

Disaster perceptions: Concept relating to the pre disaster phase, emergency phase and post disaster management, disaster preparedness, mitigation and response.

#### **Unit-III**

Disaster Management mechanism in India, Public awareness, agencies, resources, early warning system, plans, policies, training in disaster management.

#### **Unit-IV**

Floods, drought, earthquakes, landslides, cyclones, Tsunamis, forest fire, forest degradation, construction of dams, diversion of river channels, mining and quarrying, haphazard urban growth and industrial location.

#### **Essential Readings**

- Singh Jasbir : Disaster Management – Future Challenges and Opportunities, I.K. International Publishing House Pvt. Ltd.
- Sain Neelam & Sharma : Environment Engineering and Disaster Management.  
Anu
- Goel S.L. : Disaster Administration and Management, Deepand Deep Publication Pvt. Ltd., New Delhi.
- Vaidyanathan, S. : Disaster management, CBS Publisher & Distributors Pvt. Ltd., New Delhi.
- Chauhan , T.S : Disaster Perception and Management, Scientific Publishers, Jodhpur

- त्रिवेदी एवं सिंह : आपदा प्रबंधन - परिचय, जनन्दा प्रकाशन, नई दिल्ली।
- सिंह, निशांत : आपदा प्रबंधन - रिसर्च पब्लिकेशन, जयपुर।

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**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – III**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO303A – Urban Geography**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>= 10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>= 60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>= 70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>= 30 Marks</b>
		<b>Maximum Marks</b>	<b>= 70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>= 28 Marks</b>

### Paper Outcomes

The study of Urban Geography will help the students to have a better appreciation of the economics of what goes on within cities and recognize the inter dependencies involved in local national and international economic development in an increasingly globalized world . The students learn how to understand, analyses and influences a variety of forces, among other social, economic cultural, legal, political, ecological and aesthetic that shape and built environment.

#### **Unit-I**

Meaning, Nature, Aims and scope of Urban Geography, Factors affecting the growth of town during Neolithic period, Greek and Roman Period, Urban centres, Characteristics of town, cities, metropolis and megapolis, Urbanization in World & India and its problem.

#### **Unit-II**

Classification of cities based on functions, Urban Rank-Size relationship, The Basic and Non-Basic concept of Urban economic functions, Urban hierarchy based on functions, Urban Morphology with reference to Indian cities, Functional structure of towns, Chief characteristics of CBD, Residential area, other functional areas, Theories and Models of urban structure.

#### **Unit-III**

Centrifugal and Centripetal forces in Urban Geography, Development of suburbs, rural, urban fringe, satellite towns, ring towns, sphere of urban influence (Umland) and its delimitation, Urban Problems (developing, developed and under develop countries), Problems of environmental, Urban poverty, slums, transportations, Housing, crimes.

#### **Unit-IV**

Principles of Town planning, Preparation of a Master plan, Study of Master plan of Jaipur, Principles of Regional planning, Issues and Planning, National Urban Policy and Urban Land use.

#### **Essential Readings**

- Taylor G. : Urban Geography, Muthyen and Co., London.  
Dickinson, R.E. : City, Region and Regionalism, Routledge and Kegan Paul, London.  
A.E. Smailes : The Geography of Towns, Hutchinson, University Library, London.

- बंसल, सुरेशचन्द्र : नगरीय भूगोल, मीनाक्षी प्रकाशन, मेरठ।  
मौर्य, एस.डी. : नगरीय भूगोल, शारदा पुस्तक भवन, इलाहाबाद।  
जोशी, रतन : नगरीय भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।  
मण्डल, रायबहादुर : नगरीय भूगोल की रूपरेखा, काँनसेट प्रकाशन कम्पनी लि०, न्यू देहली।

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**M.A./M.SC GEOGRAPHY SEMESTER – III**  
**(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO303B – Regional Planning and Development**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			= <b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			= <b>60 Marks</b>
		<b>Total marks of End of Semester</b>	= <b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	= <b>30 Marks</b>
		<b>Maximum Marks</b>	= <b>70 Marks</b>
		<b>Minimum Passing Marks</b>	= <b>28 Marks</b>

**Paper Outcomes**

Regional planning deals with the efficient orientation of land use activities, infrastructure and settlement growth across a larger area of land than an individual city or town. the objective of this paper is to provide knowledge to the students about the growth of an area and how it get accelerate through the processes of social advancement of the community through the techniques of economic and social planning and also through the sphere of influence of a regional plan is restricted to the given area or region of the country.

**Unit-I**

Regional planning: Scope and objective, Principles and Determination of Regional planning, Importance of the density, distribution and development of population in regional planning.

**Unit-II**

Significance of the term Political, Economic, social and spatial Integration in regional planning, factor affecting regional planning, adaptation of policies for developments of different sectors of society and population for regional planning.

**Unit-III**

Methods of Regional planning, Factor Analysis, Comparative Cost-analysis, Industrial complex and analysis, Shift analysis, Types of Planning, Multi-levels Planning.

**Unit-IV**

Regional and Sectoral Policy in India, recent policies, Problems and Planning of Tribal and hill areas, Drought prone areas, Command areas, Watershed and river basin, Regional Disparities, problems and measures.

**Essential Readings :**

Chandra, R.C. : Regional Planning and Development, Kalyani Publications, Ludhiyana.

श्रीवास्तव, वी.के. एवं वर्मा : प्रादेशिक नियोजन एवं सन्तुलित विकास, वसुन्धरा प्रकाशन, गोरखपुर।  
नन्देश्वर

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**M.A./M.SC GEOGRAPHY SEMESTER – III**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO304A – Political Geography**

Marks distribution			
ESE ( End Semester Exam)		=	70 Marks
CIA ( Continuous Internal Assessment)		=	30 Marks
Total		=	100 Marks
ESE contains Part A and Part B			
Part-A	:	05 Short Question (Comp.)	5x2 Marks Each = 10 Marks
Part-B	:	04 Question from each Unit with internal choice	4x15 Marks Each = 60 Marks
		Total marks of End of Semester	= 70 Marks
		C.I.A. (Internal Assessment) 2x15 Marks Each	= 30 Marks
		Maximum Marks	= 70 Marks
		Minimum Passing Marks	= 28 Marks

**Paper Outcomes**

This course intended to reveal the unity of political activity and of Geographical factors of social development.

**Unit-I**

Definition, Scope and Development of Political Geography, Geopolitics and German School of Thought - Mackinder, Spykman, Meining, Hooson, De Seversky, World's geostrategic regions, Functional Approach by Hartshorne, Unified field Theory by B.S. Jones.

**Unit-II**

State: Definition, importance and parts, Elements of the State: territory, core areas, Population, Organization and Power, The heart of The State: core areas, The Focus: Capital City.

**Unit-III**

Frontiers and Boundaries: Concepts and Classification, Frontiers, Boundaries and Buffer Zones, Classification of Boundaries, Changing Concept, concept of Territorial sea and Maritime Boundaries, Landlocked States.

**Unit-IV**

Extending dimensions of Political Geography, Political Geography of Administration, The Politics and Transportation, Function and Methods of Electoral Geography, Conceptual Model of the Voting Decision with reference to India.

**Essential Readings**

- Adhikari Sudepta : Political Geography of India – A Contemporary Perspective, Sharda Publication, Allahabad.
- Dikshit, R.D. : Political Geography – A Contemporary Prospective, Tata McGraw Hill Publications Co. Ltd., New Delhi.
- Pearcy, C.E. : World Political Geography, Thoms & YCrowell Co., New York.
- Wegert, A.W. : Principles of Political Geography, AppletonCentury Draft, New Delhi.
- Edward E. : Modern Political Geography, W.M.C. Brown Company.
- Husain, Ahmed : Political Geography, Vishwa Bharti Publications, Daryaganj.
- अधिकारी सुदीप्ता एवं रतनकुमार : राजनीतिक भूगोल, शारदा पुस्तक भवन, इलाहाबाद।
- सक्सेना, एच.एम. : राजनीतिक भूगोल, रस्तोगी पब्लिकेशन, मेरठ।
- दीक्षित, श्रीकान्त : राजनीतिक भूगोल, ज्ञानादेय प्रकाशन, गोरखपुर।

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**M.A./M.SC GEOGRAPHY SEMESTER – III  
(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO304B – Water Resource and their Management**

<b>Marks distribution</b>			
<b>ESE( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>= 10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>= 60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>= 70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>= 30 Marks</b>
		<b>Maximum Marks</b>	<b>= 70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>= 28 Marks</b>

**Paper Outcomes**

Considering the utility of water resource in various fields it is important to make the students aware about the water resource availability and its sustainable use. This course is design to make the students aware about the distribution and causes of scarcity distinguish between potential and actual water resource. It also includes the contents regarding need for water conservation and management. Besides evaluating the role of multipurpose river valley project and various methods of rainwater harvesting it also designed different strategies for conserving water.

**Unit-I**

Water as a focus of geographical interest, inventory and distribution of world's water resources: surface and subsurface, world hydrologic cycle: quantitative estimates; water storages.

**Unit-II**

Precipitation: potential evapo-transpiration and interception losses from different land use and land cover, runoff, Water demand and use.

**Unit-III**

Agricultural use of water: estimation of crop-water requirement, soil-water-crop relationships, major and minor irrigation projects, water harvesting techniques, soil water conservation.

**Unit-IV**

Irrigation-water logging, salinity and alkalinity of soil, over exploitation of ground water, land subsidence, saline water intrusion, Water quality parameters,surface and ground water pollution.

**Essential Readings**

- Matter, J.R. : Water Resources and Distributors, Use and Management, John Wiley, Marylane.
- Rao K.L. : India's Water Wealth, Orient Longman, NewDelhi.
- Jones, J.A. : Global Hydrology: Process Resources and Environmental Management, Orient Longman,New Delhi.
- Athavale R.N. : Water harvesting and Sustainable Supply inIndia, Rawat Publication, Jaipur.
- गुर्जर रामकुमार एवं जाट बी.सी. : जल संसाधन भूगोल, रावत पब्लिकेशन्स, जयपुर।
- उपाध्याय डी.पी. एवं रामाश्रय : जलवायु एवं जल विज्ञान, वसुन्धरा प्रकाशन, गोरखपुर।
- कलवार, सुगनचन्द्र, कलवार, सीमा : जलग्रहण एवं पर्यावरण संरक्षण, आविष्कार पब्लिकेशन, जयपुर।

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**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO304C – Research Methodology**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			= <b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			= <b>60 Marks</b>
		<b>Total marks of End of Semester</b>	= <b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	= <b>30 Marks</b>
		<b>Maximum Marks</b>	= <b>70 Marks</b>
		<b>Minimum Passing Marks</b>	= <b>28 Marks</b>

### **Paper Outcomes**

This paper provide the students an insight in writing research paper, dissertation, academic journal article or other formal pieces of research. The study of this paper helps the students to develop the research approach with appropriate research methods and techniques available to them.

#### **Unit-I**

Statement of Problems in Geographical research, Identification of problems of regional and systematic Geography, sources and natures of data to be used, Hypothesis, types and testing, need for sampling, types of sampling, testing of sample, standard error.

#### **Unit-II**

Selected techniques of spatial analysis, methods of measuring concentration and dispersal of economic activities, Regional interaction analysis, gravity potential, Methods of delimiting regions - Industrial regions, Agricultural regions.

#### **Unit-III**

Population projection, Network analysis and models, Techniques of urban analysis with reference to land use, delimiting sphere of city influence.

#### **Unit-IV**

Techniques of Map Analysis, Morphometric analysis, Drainage basin analysis, Slope analysis.

#### **Essential Readings**

- Barsil Gomes & John Paul : Research Method in Geography, Blackwell Pub.  
 Gomes
- Hagget & Chorely : Models in Geography, TMH, New Delhi.
- Hagget Peter : Geography, A Modern Synthesis, TMH, New Delhi.
- King, C.A.M. : Techniques in Geomorphology, Prentice Hall.
- Mahmood, A. : Quantitative Techniques in Geography Jawahar Pub. New Delhi.
- Worthing ten & Gant : Techniques of Map Analysis, Methuen, London.
- हुसैन, एम. : भौगोलिक मॉडल, टाटा मैग्राहिल, न्यू देहली।  
 भारद्वाज, दिनेश चन्द्र : भौगोलिक प्रतिरूप निर्माण, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।  
 गुप्ता, एस.पी.

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**M.A./M.SC GEOGRAPHY SEMESTER – III**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO305 – Practical**

Marks distribution		
ESE ( End Semester Exam)	=	90 Marks
CIA ( Continuous Internal Assessment)	=	60 Marks
<b>Total</b>	=	<b>150 Marks</b>
<b>Minimum Passing Mark</b>	=	<b>60 Marks</b>
<b>ESE</b>		
(i)	Written Test on Lab Work Four hrs (4Qs.x 15 Marks) (Total 6 Ques.)	= 60 Marks
(ii)	Record Work & Viva-Voce. (10+5)	= 15 Marks
(iii)	Field Survey & Viva-Voce. (10+5)	= 15 Marks
	<b>Total</b>	= <b>90 Marks</b>
<b>CIA</b>		
(i)	Written Test on Lab Work Four hrs (2Qs.x 15 Marks) (Total 4 Ques.)	= 30 Marks
(ii)	Practice Record Work & Viva-Voce. (20+10)	= 30 Marks
	<b>Total</b>	= <b>60 Marks</b>

### Paper Outcomes

This paper is aimed to develop training skills and practical knowledge of the subject. The interpretation of topographical sheets and air-photo interpretation gives the insight view of topography and landscape.

#### Unit- I

##### Methods and techniques of representation of relief:

Methods and techniques of depicting relief Profile – serial profile, superimposed, projected and composite profile, gradients and calculation of slope.

#### Unit- II

Block diagrams, Field sketching, Hypsographic curves, Altimetric frequency graphs.

#### Unit- III

##### Interpretation of topographical maps:

A brief history of topographical maps of the world with special reference to India and their interpretation. Detailed study of such topographical sheets which depict typical geomorphological and cultural landscapes. Interpretation of weather maps, Scanning and digitization of maps.

#### Unit- IV

##### Air photo interpretation

Exercise on the determination of height of plan, parallax, number of runs and number of photographs, knowledge of stereoscopic vision, mosaics; types of cameras, emulsions and stereoscope, Interpretation and identification of cultural and physical features on serial photographs, Photo interpretation of land use and settlements in the field. Sky observation.

##### Essential Readings

- Khullar, D.R. : Practical Geography, New Academic Publishing, Jhalandar;
- Singh, L.R. : Fundamentals of Practical Geography, Sharda Pub. Allahabad.
- Mishra, R.N., Sharma, P.K. : Practical Geography, Pareek Publications, Jaipur.
- Crampton, J. : Mapping, Black well, Publications.
- Singh, R. L. : Elements of Practical Geography, Students Friends, Allahabad.
- Mounck House, F.G. & Wilkinson, H.R. : Map & Diagram, B.I. Publications Pvt. Ltd., New Delhi.
- Sarkar, Ashis : Practical Geography, Orient Black Swan Pvt.Ltd., Hyderabad.
- शर्मा, जे.पी. : प्रायोगिक भूगोल, रस्तौगी पब्लिकेशन, मेरठ।
- अय्यर, एन.पी. : सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल।
- राव, बी.पी. : प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर।
- मिश्रा, आर.एन., शर्मा, पी.के. : प्रायोगिक भूगोल, रावत प्रकाशन, जयपुर।
- खुल्लर, डी.आर. : प्रयोगात्मक भूगोल के तत्व, न्यू एकेडमिक पब्लिशिंग कम्पनी, जालन्धर।
- जैन एवं मामोरिया : प्रयोगात्मक भूगोल एवं मानचित्रांकन, साहित्य भवन, आगरा।

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – IV**

**(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO401 – Advanced Geography of Rajasthan**

<b>Marks distribution</b>					
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>		
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>		
<b>Total</b>		=	<b>100 Marks</b>		
<b>ESE contains Part A and Part B</b>					
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>	=	<b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>	=	<b>60 Marks</b>
		<b>Total marks of End of Semester</b>		=	<b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>		=	<b>30 Marks</b>
		<b>Maximum Marks</b>		=	<b>70 Marks</b>
		<b>Minimum Passing Marks</b>		=	<b>28 Marks</b>

**Paper Outcomes**

The introduction of Rajasthan which comprises of geological and geographical features, climate, livestock, geographical diversity, geographic regions and other important aspects are introduced in this paper. An overview with details will be helpful for the students of the state and outside the state to know this arid and semi -arid region of the country. The students studying this paper will get acquainted with fundamental information about the state which in turn helps in RPSC and other competitive exams.

**Unit-I**

Physical aspects of Rajasthan: Geological Structure, Relief, Climate, Drainage, Natural Vegetation, Soils, Drought, Desertification, Soil erosion and conservation, Conservation of Water Resources.

**Unit-II**

Agriculture: General Land Use: Live-Stock and Dairy Development, Minerals: Marbles, Zinc, Lead, Iron, Copper, Tungsten, Mica; Industries: Textile, Sugar, Cement; Power & Energy: Coal, Petroleum and Natural gas, Solar Energy, Bio-energy, Transport & Trade.

**Unit-III**

Economics Aspects: Irrigation, Sources, types. Irrigation Projects : Detailed study of Indira Gandhi Canal Project, Chambal Valley Project, Mahi Bajaj Sagar Projects and their Physical and socio-economic aspects.

**Unit-IV**

Population-number, growth, distribution and density, Qualitative and Quantitative aspects, Population Problems, Rural development planning and Programmes in Rajasthan ,

**Essential Readings**

Bhalla, L.R. : Geography of Rajasthan, Kuldeep Publication, Jaipur.

Mishra, V.C. : Geography of Rajasthan, NBT, Delhi.

Saxena, H.M. : Geography of Rajasthan, Rawat Publication, Jaipur.

Sharma, P.K., Mishra, Preeti : Geography of Rajasthan, Pareek Publication, Jaipur.

Chauhan, T.S : Geography of Rajasthan, Scientific Publishers, Jodhpur.

शर्मा, बी.एल. : राजस्थान का भूगोल, कालेज बुक डिपो, जयपुर।

शर्मा, एच. एस. एवं शर्मा, एम.एल.

तथा मिश्रा, आर. एन. : राजस्थान का भूगोल, पंचशील प्रकाशन, जयपुर।

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – IV**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO402A – Advanced Geomorphology**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>= 10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>= 60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>= 70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>= 30 Marks</b>
		<b>Maximum Marks</b>	<b>= 70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>= 28 Marks</b>

**Paper Outcomes**

This coursework is set out the essential characteristics of the determining frameworks of the main types of relief and explain the processes that promote geomorphological changes. Structural, lithological, Physical-Chemical, Geo-chemical and Climate factors will be addressed. Dynamic geomorphology involves the use of quantitative geomorphology but is a considerably more fundamental method of approach.

**Unit-I**

Definition, Nature and scope of Geomorphology, Basics of Geological time scale, Fundamental concepts - Uniformitarianism and dynamic equilibrium, relief features and differential rates of geomorphic process.

**Unit-II**

Interior of earth, Continental drift theory, Concepts of Isostasy, sea –floor spreading, Plate tectonics. Theories of mountain building, slope evaluation, Folds and faults and associated topography.

**Unit-III**

River valley development and drainage patterns, Concepts of graded streams, Concepts and applications of regional geomorphology with special reference to India.

**Unit-IV**

Weathering and Erosion- Definition and types, cycle of erosion, Contribution of Davis, Penck and King, Different geomorphic agents and processes- Fluvial, Aeolian, Glacial, Coastal and Karst.

**Essential Readings**

- Singh, S. : Geomorphology, Prayag Pustak Bhawan, Allahabad, 2010.  
Dayal, P. : Geomorphology, Rajesh Publication, New Delhi.  
Sharma, H.S. (ed.) : Perspective in Geomorphology Concept Publications, New Delhi, 1980.
- Woldridge and Morgan : An Introduction to Geomorphology, Longmans, Green and Com. London.  
Gautam, Alka : Geomorphology, Sharda Pustak Bhawan, Allahabad.  
सिंह, सविन्द्र : भू आकृति विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद।  
गुप्ता, एस.एल. : भू आकृति विज्ञान, हिन्दी माध्यम कार्यान्वय निदेशालय, दिल्ली विश्वविद्यालय।  
प्रसाद, गायत्री : भू आकृति विज्ञान, षारदा पुस्तक भवन, इलाहाबाद।

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – IV**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO402B – Climatology**

<b>Marks distribution</b>			
ESE ( End Semester Exam)	=	70 Marks	
CIA ( Continuous Internal Assessment)	=	30 Marks	
<b>Total</b>	=	<b>100 Marks</b>	
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	:	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			= <b>10 Marks</b>
<b>Part-B</b>	:	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			= <b>60 Marks</b>
		<b>Total marks of End of Semester</b>	= <b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	= <b>30 Marks</b>
		<b>Maximum Marks</b>	= <b>70 Marks</b>
		<b>Minimum Passing Marks</b>	= <b>28 Marks</b>

**Paper Outcomes**

This paper is design to explain the reasons of differential weather patterns, factors responsible for bringing about the temporal and spatial variations in heat exchange, moisture exchange, air movement, temporal changing phenomenon and microclimatic change. The students will gain insight in the surrounding weather phenomenon and its impact on the human environment.

**Unit-I**

Nature and scope of Climatology and its relationship with meteorology, Composition, and structure of the atmosphere, Insolation and heat budget, vertical and horizontal distribution of temperature, Atmospheric motion : forces controlling motion of air vertical motion and vorticity, local wind, jet stream, general circulation in the atmosphere.

**Unit-II**

Tropical, temperature and high latitude weather systems –concept of air masses and atmospheric disturbances, ocean atmospheric interaction-EL Nino, southern oscillation (ENSO) and La Nina. Monsoon winds, norwesters and Airmass, Front and cyclones tropical and temperate phenomena, Anticyclone, Climate of India and its controls; Western disturbances

**Unit-III**

Climatic Classification of Koppen, and Thorntwaite, Major climates of the world-tropical, temperate, desert and mountain climate, Climatic changes evidences, possible causes, Global warming.

**Unit-IV**

Applied Climatology - Data collection, archiving, accessing, interpretation and generation of climatic information specially for water balance studies, soils, agriculture activities, house types and health.

**Essential Readings**

- Barry, R.G. and Chorley P.J. : Atmosphere, Weather and Climate, Routledge, London and New York.
- Critchfield J.H. : General Climatology. Prentice Hall, India, New Delhi.
- Lydolph, P.E. : The Climate of the Earth, Rowman.
- Fein, J.S. and Stephens : P.N. Monsoons. Wiley Interscience.
- India Met. Deptt. : Climatological Tables of Observatories in India, Govt. of India.
- Lal, D.S. : Climatology & Oceanography, Sharda PustakBhawan, Allahabad.
- Siddharth, K. : Atmosphere, Weather & Climate, KitabMahal, New Delhi.
- सिंह, सविन्द्र : जलवायु विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद।
- बंसल, एस.सी. : जलवायु एवं समुद्र विज्ञान, वसुन्धरा प्रकाशन, गोरखपुर।
- गौतम, अल्का : जलवायु एवं समुद्र विज्ञान, रस्तोगी प्रकाशन, मेरठ।
- सिंह, सविन्द्र : जलवायु विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद।
- मामोरिया, चतुर्भज, जोषी, रतन : जलवायु विज्ञान, साहित्य भवन पब्लिकेशन, आगरा।

**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – IV**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO403A – Industrial Geography**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>= 10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>= 60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>= 70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>= 30 Marks</b>
		<b>Maximum Marks</b>	<b>= 70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>= 28 Marks</b>

### Paper Outcomes

The Industrial Geography deals with the spatial arrangement of industrial activities that is the geographical circulation of industry. The objectives of studying Industrial Geography are the description and interpretation of the location dynamics of manufacturing activities on various scales, from the local to the worldwide or global.

#### **Unit-I**

Locational factors in manufacturing, Concept of optimum location, Significance of cost and price, Least Cost School and the Transport cost school, Market Areas school, Marginal Location school, Behavioural School.

#### **Unit-II**

New Trends in industrial Geography, Empirical studies, Significance of Enterprise and Firm, Important Industrial Region of World.

#### **Unit-III**

Delineation of Industrial regions in India, Study of the following regions: The Hooghly side Industrial Regions, The Damodar Valley Industrial Regions.

#### **Unit-IV**

Industries - Textile Industry, Multi-locational Industries – Petrochemical, Market Oriented Industries-Furniture, Foot loose - Automobile, Raw Material Oriented- Paper and Pulp.

#### **Essential Readings**

- Riley, R.C. : Industrial Geography, Chalton and Windees, London.  
Hoover, E.M. : The location of Economic Activity, McGrawhill, New York.  
Loknathan : Industrial Localisation in India, Chatto and Windees, London.  
लेढा, राजमल एवं माहेष्वरी, दीपक : औद्योगिक भूगोल, राजस्थान, हिन्दी ग्रन्थ अकादमी, जयपुर।  
कुमार, प्रमिला एवं शर्मा, श्रीकमल : औद्योगिक भूगोल, मध्यप्रदेश, हिन्दी ग्रन्थ अकादमी, भोपाल।

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – IV**

**(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO403B – Fundamentals of Remote Sensing**

<b>Marks distribution</b>					
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>		
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>		
<b>Total</b>		=	<b>100 Marks</b>		
<b>ESE contains Part A and Part B</b>					
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>	=	<b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>	=	<b>60 Marks</b>
		<b>Total marks of End of Semester</b>		=	<b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>		=	<b>30 Marks</b>
		<b>Maximum Marks</b>		=	<b>70 Marks</b>
		<b>Minimum Passing Marks</b>		=	<b>28 Marks</b>

**Paper Outcomes**

The process of getting information about an object without making any physical contact with the object by using different technologies is known as remote sensing and thus preventing the on-site inspection. It refers to the use of satellite or aircraft-based sensor technologies to detect and classify objects on Earth.

**Learning objectives of this paper are:**

As we are getting information using satellites, areas which are inaccessible due to difficult terrain can be analyzed and information can be gathered about them in less time and also it can be used during floods, forest fires, landslides, earthquakes in order to get alternate routes so that disaster management teams can be helped to reach the places of disaster and help the people in need. As the information is gathered from a lab and analyzed over there it saves time and minimizes the work that needs to be done on the field and relatively cheap.

**Unit-I**

Historical development of remote sensing as a technology, Relevance of remote sensing in Geography-Concepts and basics. Energy source, energy and radiation principles, energy interactions in the atmosphere and earth surface features, remote sensing systems - platforms, sensors and radiation records.

**Unit-II**

Air photos and photogrammetry - Elements of photographic system: types, scales and ground coverage, resolution, radiometric characteristics, films, filters, aerial cameras. Parallax, stereoscopic, orthophotos, airphoto interpretation: shape, size, pattern, tone, texture, shadows, site.

**Unit-III**

Satellite Remote sensing: platforms LANDSAT, SPOT, NOAAVHAR, RADARSAT, IRS, INSAT: Principles and geometry of scanners and CCD arrays, orbital characteristics and data products-MSS.TM.LISS I & II.SPOTPLA & MLA, SLAR. Image processing: types of imagery, techniques of visual interpretation, ground verification, transfer of interpreted thematic information to base maps-digital processing: rectification and restoration, image enhancement,-contrast manipulation. Classification supervised and unsupervised, post-classification analysis and accuracy assessment, microwave sensing: interpretation of SLAR imageries, elements of passive microwave sensing.

**Unit-IV**

Applications: Air and Image interpretations and mapping land use and land cover. Land evaluation, urban land use, landform and its processes, Weather studies and studies of water resources; integration of Remote sensing and GIS.- remote sensing and hazard management, remote sensing and environmental management. Introduction to GPS Application of Remote Sensing in land use and land cover and its classification system.

## Essential Readings

- Kiefer, R.W. and Lillisand T.M. : Remote Sensing and Image Interpretation, John Velley Sons, ILC, New York.
- Doi, R.D. : Remote Sensing and its Application – A Monograph Monitoring Vegetated and Land Cover Desertification – 2002, University Book House Ltd., Jaipur.
- Sabins Floyd F. : Remote Sensing Principal and Interpretation W.H.Freeman and Company, New York.
- Jonnen, John R. : Remote Sensing of the Environment – An Earth Resource Perspective, Pearson Education(Singapore) Pvt. Ltd., India Branch, New Delhi.
- Shab, Fazal : Remote Sensing Basics, Kalyani Publications.
- James, B. Campbell : Introduction to Remote Sensing, Guiford Press, New York.
- Jensen : Remote Sensing of the Environment, Pearson Education India.
- Chauhan,T.S : Remote Sensing and Photogrammetry, Principles and Applications, Vol-I and II, Vigyan Prakashan, Jodhpur
- Chauhan,T.S : Geospatial Technology, Fundamentals and Applications, Scientific Publishers, Jodhpur
- चैनियाल, देवीदत्त : सुदुर संवेदन एवं भौगोलिक सूचना प्रणाली, षारदा पुस्तक भवन, इलाहाबाद।

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – IV**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO403C – SWAYAM/MOOCs COURSE**

The students of P.G. Semester-IV, subject Geography have to opt an online course in the subject and allied programme offered by the Swayam/ Moocs course. This course is self-financial and taken up by the students of their own and informed the Department Head during the session. Once they will complete the course work and its related examinations, they have to submit a copy of completion certificate with mark sheet to the Head, Department of Geography.

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE  
RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – IV  
(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO404A – Biogeography**

<b>Marks distribution</b>			
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>
<b>CIA ( Continuous Internal Assessment)</b>		=	<b>30 Marks</b>
<b>Total</b>		=	<b>100 Marks</b>
<b>ESE contains Part A and Part B</b>			
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>
			<b>= 10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>
			<b>= 60 Marks</b>
		<b>Total marks of End of Semester</b>	<b>= 70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>	<b>= 30 Marks</b>
		<b>Maximum Marks</b>	<b>= 70 Marks</b>
		<b>Minimum Passing Marks</b>	<b>= 28 Marks</b>

**Paper Outcomes**

This paper helps the students to study the Geographic distribution of plants, animals, and other forms of life, their habitation patterns along with the factors responsible for variations in distribution. Students will learn the advance classification of vegetation and the preparation of maps of vegetation. Biogeographic studies make them aware of present-day distribution patterns of plant and animal forms, as reflected in biogeographic regions and many historical geographical and current causes affecting the pattern.

**Unit-I**

Meaning and scope of Bio-geography, History of Zoo-geography and plant geography, Plant and Animal Ecology, Ecosystems-with special reference to mountain and desert, Energy flow in ecosystem.

**Unit-II**

Plant response to environment, the habitat and climatic factors, Ecological succession, Concept of Biome, Ecotone and community, Factors controlling forest distribution, Characteristics and distribution of tropical forest and grassland.

**Unit-III**

Origin of Fauna and Flora, Animals classification according to general characteristics of Environment, Barriers to distribution and means of dispersal of terrestrial animals, The Zoo-Geographical region.

**Unit-IV**

Aquatic environment and life, Marine and fresh water fauna, Distribution of world fisheries in India, Conservation of natural resources : Forests and wild life and their management and conservation with reference to India, Process of desertification, its consequences and management principles, Environmental pollution, courses and control with special reference to air and water, Bio-Geo- chemical cycles.

**Essential Readings**

- Robinson, H. : Biogeography, Eles, Mc. Donald and Evans London, 1982.  
 Chauhan, T.S : Biogeography: Theoretical and Applied, Vol- I and II, Shruti Publications, Jaipur  
 Odum, E.P. : Fundamentals of Ecology, W.B. Sanders.  
 Mathur, H.S. : Essentials of Biogeography, PointerPublishers, Jaipur, 1988.

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**  
**RAMBAGH CIRCLE, JAIPUR-302004**  
**M.A./M.SC GEOGRAPHY SEMESTER – IV**  
**(Two year Semester Scheme outline 2024-25)**  
**Paper Code – MGEO404B – DISSERTATION**

<b>Marks distribution</b>		
<b>Maximum Marks</b>	=	<b>100 Marks</b>
<b>INTERNAL</b>	=	<b>30 Marks</b>
<b>Spiral Report</b>	=	<b>25 Marks</b>
<b>Viva Voce</b>	=	<b>05 Marks</b>
<b>EXTERNAL</b>	=	<b>70 Marks</b>

**Paper Outcomes**

Geography is a field of study that is focused on exploring different places and environments from around the world. Different aspects of Geography include countries, habitats, distribution of populations, the Earth's atmosphere, the environment, and more. Dissertation helps the students to demonstrate their creativity and innovation. This will help to develop the aptitude of research in the subject by using modern tools and techniques. Further it enhances knowledge of the research methodology and can ignite the interest in the changing phenomenon of the dynamic earth.

The paper has two assessment components. One is external evaluation of 70 Marks and internal assessment of 30 Marks. Internal assessment is made on the Power point presentation and viva - voce make by the individual student and further for the external evaluation will be made by external examiner. For external examination assessment student have prepare a complete report with binding cover page.

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – IV  
(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO404C – Applied Geography**

<b>Marks distribution</b>					
<b>ESE ( End Semester Exam)</b>		=	<b>70 Marks</b>		
<b>CIA (Continuous Internal Assessment)</b>		=	<b>30 Marks</b>		
<b>Total</b>		=	<b>100 Marks</b>		
<b>ESE contains Part A and Part B</b>					
<b>Part-A</b>	<b>:</b>	<b>05 Short Question (Comp.)</b>	<b>5x2 Marks Each</b>	=	<b>10 Marks</b>
<b>Part-B</b>	<b>:</b>	<b>04 Question from each Unit with internal choice</b>	<b>4x15 Marks Each</b>	=	<b>60 Marks</b>
		<b>Total marks of End of Semester</b>		=	<b>70 Marks</b>
		<b>C.I.A. (Internal Assessment) 2x15 Marks Each</b>		=	<b>30 Marks</b>
		<b>Maximum Marks</b>		=	<b>70 Marks</b>
		<b>Minimum Passing Marks</b>		=	<b>28 Marks</b>

**Paper Outcomes**

Applied geography is based on the philosophy of relevance or social usefulness that focuses on the application of Geographical knowledge and skills to advance resolution of real-world social, economic, and environmental problems.

**Unit-I**

Principles and Methods, Nature and scope, Application of Geographical methods of survey, Physical, Socio-economic and Political Problems with Special Reference to Population and Settlements.

**Unit-II**

Geographical application of distinctive economic principles including the evaluation of Geographical Mapping of Production.

**Unit-III**

Issues related to Human resource- quality and numbers, Social and demographic issues, diversity and disparity, Human resource development and man power planning.

**Unit-IV**

Principles of Urban land use Planning, Delimitation of Urban-fields, Functional zoning of Urban land problems of expansion of urban centres.

**Essential Readings :**

- E.W. Zimmerman : World Resources and Industries.  
Freeman, T.W. : Geography and Planning.  
Graham : Natural Principles of Land Use.  
Stamp, L.D. : History of Land Use in Arid Regions.  
Stamp, L.D. : The Land of Britain. Its Use and Misuse.  
Stamp, L.D. : Applied Geography.  
Stapledon, R.G. : The Land of Tomorrow.

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**S.S.JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE**

**RAMBAGH CIRCLE, JAIPUR-302004**

**M.A./M.SC GEOGRAPHY SEMESTER – IV**

**(Two year Semester Scheme outline 2024-25)**

**Paper Code – MGEO405 – Practical**

Marks distribution		
ESE ( End Semester Exam)	=	90 Marks
CIA ( Continuous Internal Assessment)	=	60 Marks
<b>Total</b>	=	<b>150 Marks</b>
<b>Minimum Passing Marks</b>	=	<b>60 Marks</b>
<b>ESE</b>		
(i)	Written Test on Lab Work Four hours (4Qs.x 7.5 Marks) (Total 6 Ques.)	= 30 Marks
(ii)	Record Work & Viva-Voce.(7+3)	= 10 Marks
(iii)	Field Survey & Viva-Voce. (15+5)	= 20 Marks
(iv)	Camp work	= 30 Marks
	<b>Total</b>	= <b>90 Marks</b>
<b>CIA</b>		
(i)	Written Test on Lab Work Four hrs (2Qs.x 15 Marks) (Total 4 Ques.)	= 30 Marks
(ii)	Practice Record Work & Viva-Voce. (20+10)	= 30 Marks
	<b>Total</b>	= <b>60 Marks</b>

**Paper Outcomes**

Survey and Surveying are the important component of Geographical studies. GPS survey and other surveying instruments help the students to learn about the ground truth analysis and interpretation.

**Unit- I**

**Surveying:** The Art of surveying, History of surveying, scope, utility, problems and classification of surveying, Methods of surveying: traverse – open and close.

**Unit- II**

**Surveying instruments:** Use and application of Plane table Survey: Intersection and resectioning methods, Open and close traverse, closing error – Bowditch method Classification of leveling – Dumpy Level and Abney level and surveying - its parts and their function.

**Unit- III**

Theodolite: Its parts and their function, use of theodolite, theodolite traverse and traverse computation, independent coordinates.

**Unit- IV**

Use of Total Station and GPS. Practical contouring, cross sectioning

Note : **Camp Work:** A topographical survey of a settlement of about 500 acres of land will be done by organizing a camp at least for a week away from the center of the institution and maps and reports of the same will be prepared.(Students are expected to stay in the camp at night).

**Essential Readings**

- Khullar, D.R. : Practical Geography, New Academic Publishing, Jhalandar.  
Singh, L.R. : Fundamentals of Practical Geography, Sharda Pub.Allahabad.  
Mishra, R.N., Sharma, P.K. : Practical Geography, Pareek Publications, Jaipur.  
Crampton, J. : Mapping, Black well, Publications.

- 373Singh, R. L. : Elements of Practical Geography, Students Friends, Allahabad.  
Mounck House, F.G. & Wilkinson, H.R. : Map & Diagram, B.I. Publications Pvt. Ltd., New Delhi.  
Sarkar, Ashis : Practical Geography, Orient Black Swan Pvt.Ltd., Hyderabad.  
शर्मा, जे.पी. : प्रायोगिक भूगोल, रस्तौगी पब्लिकेशन, मेरठ।  
अय्यर, एन.पी. : सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल।  
राव, बी.पी. : प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर।  
मिश्रा, आर.एन., शर्मा, पी.के. : प्रायोगिक भूगोल, रावत प्रकाशन, जयपुर।  
खुल्लर, डी.आर. : प्रयोगात्मक भूगोल के तत्व, न्यू एकेडमिक पब्लिशिंग कम्पनी, जालन्धर।  
जैन एवं मामोरिया : प्रयोगात्मक भूगोल एवं मानचित्रांकन, साहित्य भवन, आगरा।

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