# SHRI JAGDISHPRASAD JHABARMAL TIBREWALA UNIVERSITY CHUDELA, JHUNJHUNU (RAJASTHAN)-333010



# SYLLABUS

M.A. / M.SC. GEOGRAPHY Two Year Full Time Program (2021-2023)

(Four-Semester Course)

# **COURSE CONTENTS**

I & II Semester Start From Year 2021-2022 III & IV Semester Start From Year 2021-2022 And Onwards

# EXAMINATION SCHEME AND DETAILED SYLLABUS

Geography is the study of landscape and the relationship between people and their environment. It explores the physical properties of Earth's surface and the human societies spread across it. M.A. Geography shall be of two years duration spread over four semesters. The duration of examination for theory and practical papers shall be three and four hours respectively.

# PROGRAMME SPECIFIC OUTCOMES

### The curriculum of Political Science will make the students able to:

- Understand not only their native place but also about the lives of people living in other areas of the interconnected world.
- Enhance their understanding of the relationship between the global and the local level and the results of these relationships.
- Understand the relationship between global processes and their local responsiveness.
- Have deep knowledge about places, regions and spatial relationship as result of series of inter-related factors of nature, culture and individual human actions.
- Make the social and cultural differences (race, ethnicity, gender, age, class) their geographical embeddedness.
- Sensitise the need of conservation of environment and natural resources in order to have a more sustainable earth.
- Have the theoretical knowledge with practical local realities by making field visits to different areas.
- Use and map the digital data in more rational way.

### Scheme of Examination

The entire course will be of four semesters. In Semester-I, there would be four Core Courses. In Semester-II, there would be five Core Courses. In semester III there would be four Core courses and in Semester-IV, there would be five Core courses.

- 1. The question paper shall contain ten (10) questions of 10 marks each. Student shall attempt any seven (7) questions.
- For Internal Assessment (IA) of the theory papers: One Mid-Term Test of 15 Marks carrying five (5) questions, students shall attempt any three (3) questions and One Assignment of 15 Marks.
- 3. Passing Rules for M.A. (2 Years Course)

The result of a candidate will be worked out at the end of each Semester Examination. For a Pass, candidate must obtain 40% marks for each theory paper and internal assessment.

(A)	Theory Paper	Passing%	<b>(B)</b>	Seminar/ Dissertation	Passing%
i	Internal Assessment	40%	i	Seminar	50%
ii	End Semester (M.A.)University Exam	40%	ii	Dissertation (External)	50%
iii	Total of (i) & (ii)	40%	iii	Total of (i) & (ii)	50%



# M.A. / M.SC. GEOGRAPHY Two year Semester Scheme outline (2021-onwards) I SEMESTER

S.No	Papers	Subject Code	Course Title	Course
				Category
1.	Paper - I	MGE 101	Geographical Thoughts	CCC
2.	Paper - II	MGE 102	Dynamic Geomorphology	CCC
3.	Paper - III	MGE 103	Economic Geography	CCC
4.	Paper - IV	MGE 104(A01)	Man and Natural Environmenty	ECC
		MGE 104(A02)	Cultural Geography	ECC
5.	Paper - V	MGE 105	Practical Geography	CCC

CCC- Compulsory Core Courses

**ECC-Elective Core Courses** 

### Subject Code : MGE 101 : Geographical Thoughts

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Definition, Scope, Nature and purpose of geography, The beginning of Geography in classical age, contribution of Greeks and Romans to Geography with special reference to the work of Herodotus, Eratosthenes, Poisonous, Strabo and Ptolemy.

#### Section-B

Geography in the middle ages, the geographical ideas of the Christian world. Contributions of Muslims to Medieval Geography, the work of A1-Biruni, Al-masudi, Al-Idrisi, Ibn-Battuta, Ibn-Khaldun, the Geography of ancient India.

#### Section-C

The revival of scientific Geography during 16th and 17th centuries, Varenius, the development of scientific geography during 18th and 19th centuries, the works of Kant.

Ancient Indian Geography and Scientific Outlook and Indian influences, Geography – The Vedic age and Purana's.

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 Publicalions, Jawahar Nagar, Jaipur	
Peet, Richard	:	Modern Geographical Thought : Rawat Publicalions, 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 चन्द	:	भौगोलिक चिन्तन का विकास एवं ऐतिहासिक समीक्षा, प्रिन्टीस हॉल इण्डिया।	

### Subject Code : MGE 102 : Dynamic Geomorphology

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Introduction to physical Geography, Definition, Recent Trends in Geomorphology. Zoning of the earth's interior, Thermal state of the interior, Endo genetic forces, Mountain Building Theories, (Kober, jeffreys, joly, Holms, Wegener and plate tectonics), Volcanic activity and Earthquakes, Isostasy.

#### Section-B

Denudation types or weathering: Physical and chemical weathering; factors affecting weathering processes.Glacial and peri-glacial landforms. Desert and tropical landforms, processof desertification. Concept of erosion – Normal cycle of erosion of Davi's and Penck. Rivers and Drainage Basins, Drainage pattern, Drainage basin and morphometry, baseline changes.

### Section-C

Work of Rivers Karst and lime stonetopography. Concepts in Geomorphology various school of landscape development Element of slope various models of slope development.

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

### Subject Code : MGE 103: Economic Geography

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Changing nature of economic geography as a field of study. Agricultural typology-with special reference to: subsistence agriculture, plantation agriculture, Mediterranean agriculture, Mixed farming, Commercial grain farming, Livestock rearing.

#### Section-B

Energy resources: Conventional and non-conventional spatial patterns and supply problems Industries-Iron & Steel, Aluminum Industry, paper and pulp, cotton textile, chemical Industries-Fertilizer. Decision making process: Location decision-behavioural view. Dynamics of world trade and investment: Trade and growth of international co-operation in trade,.

#### Section-C

Economic Region-Concept and methods of delineation, need of economic regionalization for area development and planning-economic regions of India. World transportation pattern trade routes, trade policies and their effect of world economic, globalization and economy and its impact on environment.

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
सिंह, जगदीश एवं सिंह काशीनाथ	:	आर्थिक भूगोल के मूल तत्व – ज्ञानोदय प्रकाशन, गोरखपुर
कौशिक, एस.डी.	:	मानव तथा आर्थिक भूगोल, रस्तोगी प्रकाशन, मेरठ

### Subject Code : MGE 104(A01) : Man and Natural Environment

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Perspective on man environment Relationship, symbiosis between man and Environment, the effect of environment on man: biophysical, perceptional and behavioural related to resource availability.

#### Section-B

The effect of man on Environment :a. direct and indirectb. man's capacity to modify the environment. The environmental crises, Nature and causes of environmental problems, somecase studies of India,

#### Section-C

Environmental pollution-Air, Water, Noise, Soil pollutions – Causes, effects, their impacts, reduction in bio-diversity and depletion of forest, global warming and acid rain.

Criteria for environmental quality. Evolution of balanced and healthyenvironment, sustainability of human ecosystem.

Saxna, K.K.	:	Environmental Studies, University Book House, Jaipur
Duffey, E.		Conservation of Nature Collins, London
Singh, R.B. Thakur, D.K.		
Chauhan, J.P.S.	:	Environmental Studies, RBD Jaipur
Edington, J.M.	:	Ecology Environmental Planning, Champan and 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

Subject Code : MGE 104(A02) : Cultural Geograp	ohy
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

The Nature of Cultural Geography. The evolutionary approach in cultural geography. The Framework of cultural Geography. The evolution of cultural Geography the contribution of otto schluter and carl sauer and others. Themes in cultural Geography the Cultural Region. Humanization of the Earth-Pleistocene inheritance, The environmental changes during the Pleistocene, The Impact of glaciations, Land Dirges and the pattern of land and sea.

### Section-B

Shifting life zone of pleistocene, Human encestores, Food gathering and Mans tropical origin, Discovery of fire and building of shelther. The beginning of plant domestication, the regions the agriculture origins, evolution of cropping system, origin of Animal Domestication, the Regions of Animal Domestication, The Consequences of Animal Domestication. The evolution of system of Animal Husbandry. The origin of Metal Extracting and the Diffusion of metal smelting technology.

### Section-C

The Geography of Language, the major linguistic families and their distribution in the world language and religion ,Language and Nationalism, Language and Environment. The Geography of Religion-The major religions of the world and their distribution. The Health of semetic and Hindu religion. Building Materials and House typesand fold Architecture. Origin and Diffusion of the City, especially the Grid pattern city,population density regions, Death rate, birth rate and population exploration, Quality of life.

- 1. Jordan and Rowntree-The Human Mosiac
- 2. Spencer and Thomas-The cultural Geography.
- 3. Ahmad, Aijazuddin-Social Geography. Rawat Publication, New Delhi.
- 4. Mitchell, D.-Cultural Geography A Critical Introduction, Blackwell Publishers, Inc. USA.
- 5. Wagner, P.L. And Mikesell, H.W.(eds) Readings in cultural Geography.

	Subject	Coue: MGE 105: Practical Geogr	apny
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1.	Written Test on LabWork.	Four hrs (5Qs.)	50 Marks
2.	Record Work & Viva-Voce.	(15+10)	25 Marks
3.	Project Report & Viva-Voce	e. (15+10)	25 Marks
Tot	tal-		100Marks
Int	ernal- (Record	Work-15+Project Report-15)	30Marks
Ex	ternal- (Written	Test-50+Viva-Voce-20)	70Marks

# Subject Code · MCE 105 · Practical Coography

### Laboratory and Map Work :

- The Art and Science of Cartography. History of Maps. Materials. Techniques an Preparation of Maps.
- Enlargement. Reduction and Finding of Area of Maps. Use of Planimeter.
- Study of geological maps and preparation of their section and interpretation.
- Interpretation of weather-Maps and Weather for cast.
- Elementary Trigonometry.
- Maps Projections.

### **Projections and their classification :**

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

### I. Conical Projections :

- Equal Area with the one standard parallel(Lambert's Projections)
- Equal Area with two standard parallels(Albert's Projections).
- Bonne's
- polyconic
- International

### **II.** Cylindrical Projections :

- Cylindrical Equal Area
- Mercator's
- Gall's Stereographic.

### **III.Zenithal Projections:**

- Geomonic.
  - (i). Polar Case

(ii). Eq. Case

#### • Stereographic

(i) Polar Case

### • Orthographic

- (i) Polar Case
- (ii) Eq. Case.

### • Equal Area

(i) Polar Case

(ii) Eq. Case

### • Equidistant

- (i) Polar Case
- (ii) Eq. Case
- Conventional projections:
  - (i) Sinusoidal
  - (ii) Mollweide
  - (iii) Interrupted Mollweide and Godde's
  - (iv) Interrupted Sanson Flemsteed (Homolosine),
  - (v) Aito's.Choice of Projections, Projections use

#### **Essential Readings :**

Sharma, J.P.	:	Practical Geography, Rastogi Publications, Meerut
Singh, L.R.	:	Fundamentals of Practical Geography, Sharda Pub. Allahabad
Sharma, S.R.	:	Practical Geography, College Book depot, Jaipur
Crampton, J.	:	Mapping, Black well, Publications
Singh, R. L.	:	Elements of Practical Geography, Students friends Allahabad
Mounck House, F.G. &	Ż	
Wilkinson, H.R.	:	Map & Diagram, B.I. Publications Pvt. Ltd., New Delhi.
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S.No	Papers	Subject Code	Course Title	Course
				Category
1.	Paper - I	MGE 201	Modern Geographical Thoughts	CCC
2.	Paper - II	MGE 202	Climatology& Oceanography	CCC
3.	Peper - III	MGE 303	Principal and Theory Economic Geography	CCC
4.	Paper - IV	MGE 104(B01)	Population Geography	ECC
		MGE 104(B02)	Quantitative Techniques in Geography	ECC
5.	Paper - V	MGE 205	Practical Geography	CCC

CCC- Compulsory Core Courses

**ECC- Elective Core Courses** 

### Subject Code : MGE 201: Modern Geographical Thoughts

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Founders of modern geography, Humboldt and Ritter, shifting view points of geography during the later half of 19th century-Geography as geophysics, geography as a science of planet earth, geography as a science of distribution and geography as science of relationship, the works of Richthofen and Ratzel. Geography as a chronological science, the contributions of Hettner and Hartshome.

#### Section-B

The development of geographical ideas during the 20th century, geography as a science of landscape morphology, the contribution of schelluter and saur, Geography as Human Ecology, the views of Huntington, Blache and Brunches. C. O. Sauer. The debate between environmental determinism and possibilism, thedualism of regional and systematic geography, the dichotomy of Human and Physical Geography,

### Section-C

Quantitative and conceptual revolution in geography, theinfluence of logical positivism on the development of analytical geography, the development of Behavioural geography, Radical geography.

Exceptionism in geography, scientific positivism, humanistic geography, idealism, phenomenalism, development in geography in India.d for maps produced in India.

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 Publicalions, Jawahar Nagar, Jaipur
Peet, Richard	:	Modern Geographical Thought : Rawat Publicalions, Jawahar Nagar, Jaipur
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Subject Code :	MGE 202:	<b>Climatology</b>	&	Oceanography
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

**Climatology**: The structure of Atmosphere, Atmospheric energy, airtemperature, Heat Balance, Layered structure of atmosphere and characteristicsof each layer. Moisture in the Atmosphere, humidity and its expression, Evaporation and condensation, adiabatic-non-adiabatic process, stability and instability, precipitation, Thunderstorms, World precipitation pattern.

#### Section-B

Air Motion, Pressure variations, Pressure belts, forces governing air movement, upper air motion. General circulation, the planetary wind system, themechanism of the circulation surface features and circulation. Fronts, airmassges and Types, Depression, cyclones (Intra Tropical and extratropical) and anticyclones. Climatic types: Koppen's, Thornthwaite's schemesof climatic classification

### Section-C

**Oceanography**: Oceanic water circulation, Ocean bottom relief, horizontal and vertical distribution of temperature, ocean deposits, origin and impact of ocean currents, Tides and tidal, Theories of coral reef formation, atolls and coralislands, marine resources-biotic, mineral and energy resources and theirutilization.

Crtchifield J.H.	:	General Climatology Prentic Hall India, New Delhi
Lal, D.S. Allahabad	:	Climatology & Oceanography, Sharda Pustak Bhawan,
Siddharth, K.	:	Atmosphere, Weather & Climate, Kitab Mahal, New Delhi
Siddharth, K.	:	Oceanography: A Brief Introduction, Kitab Mahal, New Delhi
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Subject Code :	MGE 203: Principles and	d Theory of Economic	Geography
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= <b>30</b> Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

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

### Section-B

Manufacturing-Factors of production: Theories of plant location: Weber's Least cost theory, Loscher's economics of location, Isard's space economy, Smith's spatial margins. Spatial variation in transport costs: Location and structure of transport costs. Transportation network analysis and models.

### Section-C

Spatial organisation of land use: Laws of return, concept of rent, Vonthunen's isolated state, Vonthunen's principles then and now, classical central placetheory; Range of good, threshold, central place system, central plachierarchy, Modification of christaller's model.

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

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### M.A. / M.SC. GEOGRAPHY Two year Semester Scheme outline (2020-21 to 2021-22) II SEMESTER Subject Code : MCE 204(B01): Pepulation Coography

Subject Code : MGE 204(B01): Population Geography	/
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Definition and scope of Population Geography, Theory in Population Geography-Malthusian Neo malthusian and optimum population theory and Biological population Theory. Types of Data and population census with special reference to the Indian censes. Density and Distribution of population in the world.

#### Section-B

Factors affecting population Distribution in the world. Measures of population density, Measures of Dispersal and concentration of population and populationpotential. The Growth of population, world patterns of Fertility and Mortality. Demographictransition. Age and Sex composition, Marital status, Families and Households, Language and Literacy, Religious composition of Population, Economic composition of population, primary occupations, Manufacturing Industry, Transport, Trade and services etc

### Section-C

Rural and Urban population and urbanisation. The Growth of India's population, The Death rate and birth rate in India, Density and Distribution of population in India. Age and sex composition inIndia's population, Urbanisation in India, Occupational composition and internal Migrations.

Adhikari Sudeepta	:	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 Politcal Geography, Thoms & Y Crowell Co., New York.
Wegert, A.W.	:	Principles of Political Geography, Appleton Century Draft, New Delhi.
Edward E.	:	Modern Politcal Geography, W.M.C. Brown Company.

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nhf{kr] JhdkUr	%	jktuhfrd Hkwxksy] Kkukns; izdk'ku] xksj[kiqjA

Subject Code : MGE 204(B02) : Quantitative Techniques in (	Geography
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

**Probability**: Theory of probabilites- law of addition and multiplication probabilites of distribution. Normal, bionomial, poisson-sampling: basic concepts, sample units and design, sampling frame and procedures, standard error and sample size, testing the adequancy of samples.

#### Section-B

Bivariate Analysis; Forms of relation and measuring the strength of association and relationconstruction and meanings of scatter diagram simple linear and regression analysis.

#### Section-C

Multivariate Analysis; Basics of multiple regression-partial correlation coefficient regression analysis and ANOVA-testing the overall significance of a regression auto correlation-multicolliniarity -basis principles and elements of factor Analysis and principal component analysis.

John P. Cole & Cuchlanie A	A.M. I	King : Quantitative Geography, Johri Witey, London 1968		
Nagar, K.N.	:	Elements of Statistics, Meenaxi Prakashan, Meerut.		
Gupta, S.P.	:	Statistical Methods, S.C. Chand & Co., New Delhi		
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### M.A. / M.SC. GEOGRAPHY Two year Semester Scheme outline (2020-21 to 2021-22) II SEMESTER Subject Code : MGE 205 : Practical Geography

Subject Code : MOE 205 : Tractical Geography	
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

### **Geographical Maps and Diagrams :**

Computations of data Preparation of frequencytables representation of data by Histograms and ogives. Finding skewness. Computationof Mean, Median and Modes. Deviations-Standard Deviations and Mean Deviations andfinding out of correlations. Theoritical basis of nearest neighbour analysis. Practicalexercises of nearest neighbour analysis. Locational analysis of urban centres. CofficientVariation. All these be computed from the statistical data, preferably based of state,District, Tehsil and Community Development Block as unit areas and the following types of maps and diagrams be prepared.One exercise on each of the following and their interpretations.Isopleth, Choropleth and chorochromatic map. Isochrone map population potentialsurface map, population Pyramids map. Three dimensionals diagrams and cargograms of economic and social data.

#### **Diagrams:**

Polygraph semi-log and loggraphs, Trilinear chart, circular gaph, Climatograph. Taylors/Fosters Climograph. Annual water deficiency and water surplusgraph.

#### **Project Report:**

A candidate is to prepare project report of a village area. The candidate is free to select any supervisor amongst the staff members of the project. Asupervisor can take only 5 candidates. The marking on the project report will be awarded by the external examiner in consultation with the supervisor concerned. The project should be based on primary data obtained by the candidate. The data should be represented by suitable cartographic methods.

Sharma, J.P.	:	Practical Geography, Rastogi Publications, Meerut
Singh, L.R.	:	Fundamentals of Practical Geography, Sharda Pub. Allahabad
Sharma, S.R.	:	Practical Geography, College Book depot, 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.
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S.No	Papers	Subject Code	Course Title	Course
				Category
1.	Paper - I	MGE 301	Advanced Geography of India	CCC
2.		MGE 302 (C01)	Research Methodology	ECC
	Paper - II	MGE 302(C02)	Disaster Perception and Management in	ECC
			India	
	<b>D W</b>	MGE 303(D01)	Remote Sensing and Geographical	ECC
3.	Paper - III		Informatiom System	
		MGE 303(D02)	Urban Geography	ECC
		MGE 304(E01)	Political Geography	ECC
4.	Paper - IV	MGE 304(E02)	Advanced Geomorphology	ECC
5.	Paper - V	MGE 305	Practical Geography	CCC

CCC- Compulsory Core Courses ECC- Elective Core Courses

# M.A. / M.SC. GEOGRAPHY Two year Semester Scheme outline (2020-21 to 2021-22) III SEMESTER Subject Code : MGE 301: Advanced Geography of India

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

#### **Geological :**

Structure and its relation with relief and distribution of minerals. physiographic divisions, climatic divisions, soil regions characteristics and distribution, Agro-Climatic regions, Natural regions of India. Resources potential a general appraisal.

#### Section-B

Land resources, Water resources, Vegetational resources, Animal resources, Mineral resources,

Human resources.

#### Section-C

**Resource development** :Power, Industries and transport, River basins of India, riverian problems of sharing water and their planning. Economic & Resource regions of India and Regional problems.

Indian Agriculture, Trade and Transportation in India, Urban and Rural Settlement in India, Urbanization, Regional Development and Planning in India, Environmental Issues in India.

Tritha, R	:	Geography of India, Rawat Publication, New Delhi
Gautam, Alka	:	Advanced Geography of India, Sharda Publication, Allahabad
Singh, R.L.	:	India-A Regional Geography, UBS Publication & Distributors Ltd, New Delhi
Singh Jagdish	:	India-A, Comprehensive Systematic Geography, Gayonodaya Prakasan, Gorkhpur,
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### Subject Code : MGE 302(C01) : Research Methodology

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Problems of geographical research. Identification of problems of regional and systematic Geography sources and natures of data to be used. Hypothesis and Preparation of research projects and writing of reports. Preparation of field reports, spatial data. Classification and sampling problems. Need for sampling, types of sampling, sample size and sampling area.

#### Section-B

Selected techniques of spatial analysis, methods of measuring concentration and dispersal of economic, activities. Nearest Neighbour analysis, Regional interaction analysis gravity potential, inter-regional flowanalysis, Methods of delimiting regions economic, industrial regions, planning regions, agricultural regions.

#### Section-C

Population projection, population migration projection; Network analysis and models. Techniques of urban analysis with reference to land use, population and hinterland relationship delimiting sphere of city influence. Determining of core and marginal areas. Techniques of Map Analysis, Morphometric analysis. Thalegaltimetric frequency graphs, Drainage basin analysis, Slope analysis Analysis of biogeochemical cycles, Integrated Area Development planning.

Barsil Gomes & John Paul Gomes	:	Research Method in Geography, Blackwell Pub.
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 inGeography Jawahar Pub. New Delhi
Worting ten & Gant	:	Techniques of Map Analysis, Methuen, London

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Subject Code : MGE 302(C02) : Disaster Perception and Management in I	ndia
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Concept of disaster management, its importance, need and scope Hazards, risks, vulnerability and disaster, types of hazards and disaster man made and natural, climate change.

#### Section-B

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

#### Section-C

Disaster perceptions: Concept relating to the pre disaster phase, emergency phase and post disaster management, disaster preparedness, mitigation and response. Disasters management mechanism in India: Public awareness, agencies, resources, early warning system, plans, policies, training in disaster management.

Singh Jasbir	:	Disaster Management – Future Challenges and Opportunities, I.K. International Publishing House Pvt. Ltd.	
Sain Neelam & Sharma Anu	:	Environment Engineering and Disaster Management.	
Goel S.L.	:	Disaster Administration and Management, Deep and Deep Publication Pvt. Ltd., New Delhi	
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Subject Code : MGE 303(D01) : Remote Sensing and Geographical Inform	ation
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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

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.

#### Section-B

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. Satellite Remote sensing: platforms LANDSAT, SPOT, NOAAAVHAR, RADARSAT, IRS, INSAT: Principles and geometry of scanners and CCD arrays, orbital characteristics and data products-MSS.TM.LISS I & II.SPOTPLA & MLA, SLAR.

#### Section-C

Applications: Air and Image interpretations and mapping landuse and land Cover. 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 :**

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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 Vegeted 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.

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### M.A. / M.SC. GEOGRAPHY Two year Semester Scheme outline (2020-21 to 2021-22) III SEMESTER Subject Code : MGE 303(D02) : Urban Geography

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Total marks of End of Semester (7Question x10Marks each)	= <b>70</b> Marks
C.I.A. (Internal Assessment)	= <b>30</b> Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Meaning, Nature, Aims and scope of Urban Geography, Factors affecting the growth of town during Neolithic period, Greek and Roman Period. Types of cities, Transport foci and center of specialized services.Urbanization in World & India and its problem.

### Section-B

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

### Section-C

Urban Problems (developing, developed and under develop countries), Problems of environmental, Urban poverty, slums, transportations, Housing, crimes. Principles of Town planning, Preparation of a Master plan, Study of Master plan of Jaipur, Study of Planned City–Chandigarh, Principles of Regional planning. Issues and Planning. National Urban Policy and Urban Land use.

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

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### Subject Code : MGE 304(E01) : Political Geography

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

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

#### Section-B

State Temporal and spatial Attributes, Resources: The Elements of the State: Territory, Population, Organization and Power, The Heart of The State: core Areas, The Focus: Capital City. Frontiers and Boundaries: Concepts and Classification Frontiers, Boundaries and Buffer Zones, Classification of Boundaries Changing Concept, The concept of Territorial sea and Maritime Boundaries, Landlocked States :

#### Section-C

Extending Dimensions of Political Geography The Politics and Transportation, Politico-Geographical Study of India, Political Geography of Administration. The Function and Methods of Electrol Geography: Electoral Studies in Political Geography, Conceptual Model of the Voting Decision.

Adhikari Sudeepta	:	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 Politcal Geography, Thoms & Y Crowell Co., New York.	
Wegert, A.W.	:	Principles of Political Geography, Appleton Century Draft, New Delhi.	
Edward E.	:	Modern Politcal Geography, W.M.C. Brown Company.	
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#### Subject Code : MGE 304(E02) : Advanced Geomorphology

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Nature and scope of Geomorphology, Fundamental concepts-Geological structures and landforms, uniformitarianism, multicyclic and polygenetic evolution of landcapes, concept of thershold, Environmental change-climatic change and geochronological methods-documentary evidence, artifacts, majorhorizons, dendrochronology, pollen, thermoluminescence.

#### Section-B

Earth movements-epeirogenic,orogenic and cymatogenic earth movements.Forces of crustal instability,isostasy,plate tetonics, seismicity, volcanicity, orogenic structures with reference to the evolution of Himalaya. Orogenic Processes: Concept of gradation, Agents and processes of gradation, causes, types and classification of weathering, mass movement erosional, and depositional processes and resultant landforms and soil formation.

#### Section-C

slope evolution: slope decline, parallel retreat and slope replacement and dynamic equillibrium models. Geomorphic processes, dynamics of fluvial, glacial, Aeolian, marine, and karst processes and resulting landforms complexities in geomorphological processes, Erosion surfacestechniques of indentification and correlation.

Applied geomorphology-application of geomorphic mapping, terrain evaluation. Digital Elevation Model (DEM) and Triangulated Irregular Network (TIN) unit, land capability and land suitability classification, hydro-geomorphology, urban geomorphology, environmental geomorphology, geomorphic hazards.

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,Longmens, Green and Com. London
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1.	Written Test on LabWork.	Four hrs (5Qs.)	50 Marks
2.	Record Work & Viva-Voce.	(30+20)	50 Marks
Tot	al-		100Marks
Int	ernal- (Record V	Vork-15+Project Report-15)	30Marks
Ex	ternal- (Written 7	Test-50+Viva-Voce-20)	70Marks

### Subject Code : MGE 305 : Practical Geography

### Methods and techniques of representation of relief:

Methods and techniques of depicting relief Profile, gradients and calculation of slope, Block diagrams, field sketching, serial profile, hypsographic curves. altimetric frequency graphs.

### 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. Scanning and digitization of maps.

Air photo interpretation and 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.

Sharma, J.P.	:	Practical Geography, Rastogi Publications, Meerut
Singh, L.R.	:	Fundamentals of Practical Geography, Sharda Pub. Allahabad
Sharma, S.R.	:	Practical Geography, College Book depot, Jaipur
Crampton, J.	:	Mapping, Black well, Publications
Singh, R. L.	:	Elements of Practical Geography, Students friends Allahabad
Mounck House, F.G. & Wilkins	on, H.R	. : Map & Diagram, B.I. Publications Pvt. Ltd., New Delhi.
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S.No	Papers	Subject Code	Course Title	Course
				Category
1.	Paper - I	MGE 401	Geography of Rajasthan	CCC
		MGE 402(F01)	Geography of Water Resource	ECC
2.	Paper - II	MGE 402(F02)	Applied Geography	ECC
3.	Paper - III	MGE 403(G01)	Regional Planning and Development in India	ECC
		MGE 403(G02)	Agricultural Geography	ECC
		MGE 404(H01)	Industrial Geography	ECC
4.	Paper - IV	MGE 404(H02)	Biogeography	ECC
5.	Paper - V	MGE 405	Practical Geography	CCC

CCC- Compulsory Core Courses

**ECC- Elective Core Courses** 

#### Subject Code : MGE 401 : Geography of Rajasthan

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Physical aspects of Rajasthan: Geological Structure, Relief, Climate, Drainage, Natural Vegetation, Soils. Environmental Pollution-Causes and types. Drought, Desertification, Soil erosion and conservation, Availability, Problems and Conservation of Water Resources.

#### Section-B

Economics Aspects: Irrigation, Sources, types, irrigation intensity, Quality of irrigational water problems. Irrigation Projects: Detailed study of Indira Gandhi Canal Project, Chambal Valley Project, Mahi Bajaj Sagar Projects on Physical and socio-economic aspects. Agriculture: General Land Use: Live-Stock and Dairy Development, Minerals. Industries: Textile, Sugar, Cement, Marble and Granite, Zinc and Copper smelting. Power & Energy:

#### Section-C

Hydro-electricity, Petroleum, Solar Energy. Bio-energy. Transport & Trade. Development of Tourism. Desert development programme. Trible Areas development programme, Aravali Hill Development programme. Population-number, growth, distribution and density, Rural and urban, Male and female population, Literacy status, Occupational structure, Schedule castes and schedule tribes. Study of Bhil, Meena and Garasia. Population Problems.

Bhalla, L.R.	:	Geography of Rajasthan, Kuldeep Publication, Jaipur.
Mishra, V.C.	:	Geography of Rajasthan, NBT, Delhi.
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#### Subject Code : MGE 402(F01) :Geography of Water Resource

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= <b>30</b> Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

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. Glaciers, river channels, lakes and reservoirs, soil moisture, ground water.

#### Section-B

The basic hydrologic cycle precipitation: potential evapotranspiration and interception losses; runoff. Water demand and use: methods of estimation agricultural industrial and municipal uses of water. Agricultural use of water: estimation of crop-water requirement:soil-watercrop relationships; water balance and drought; major and minor irrigation: methods of distribution of water to farms; water harvesting techniques, soil water conservation.

#### Section-C

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

Matter, J.R.	:	Water Resources and Distributors, Use and Management, John Wiley, Marylane.
Rao K.L.	:	India's Water Wealth, Orient Longman, New Delhi.
Jones, J.A.	:	Global Hydrology : Process Resources and Environmental Management, Orient Longman, New Delhi.
Athavale R.N.	:	Water harvesting and Sustainable Supply in India, Rawat Publication, Jaipur.
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Subject Code: MGE 402(F02) : Regional Planning and De	velopment
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Total marks of End of Semester (7Question x10Marks each)	= <b>70 Marks</b>
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

### Section-A

Regional planning: Term, Task, Scope and objective, Specific problems: task and scope of regional planning in developing countries, Principles and Determination of Regional planning, Importance of the density, distribution and development of population for regional planning.

# Section-B

Significance of the term 'Integration'(Political, Economic, social and spatial) for regional planning. Importance of the political system for regional planning, Significance of the factor, adaptation of developments of different social classes of the population for regional planning.

# Section-C

Methods of Regional planning: Factor Analysis, Comparative Cost-analysis, Industrial complex and analysis, Shift analysis. Types of Planning, Multilevels Plannings. Regional and Sectorial Policy in India, Five Year Plan, Problems and Planning of Tribal and hill areas. Drought prone areas, Command areas, Watershed and river basin. Regional Disparties in Development and Policy Measures for Correlations.

Chandra, R.C.	:	Regional Planning and Development, Kalyani
		Publications, Ludhiyana.
श्रीवास्तव, वी.के. एवं		
वर्मा नन्देश्वर	:	प्रादेशिक नियोजन एवं सन्तुलित विकास, वसुन्धरा प्रकाशन, गोरखपुर।
मिश्र, निरंजन	:	क्षेत्रीय नियोजन, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।

### Subject Code : MGE 403(G01) : Applied Geography

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.J.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

Principles and methods, Nature and scope. Application of geographical methods of survey and analysis to contemporary, Physical, Socio-economic and Political Problems with Special Reference to Problems of Agriculture, Population and Settlements.

#### Section-B

Geographical application of distinctive economic principles including the evolution of Geographical Mapping of Production. Need & Basis of Land Classification, Agricultural land use in India and other countries. (USA, UK).

#### Section-C

Principles of Urban land use Planning. Delimitation of Urban-fields. Functional zoning of Urban land problems of expansion of Urban Centres. Meaning of Communication and their relation to towns.

E.W. Zimmerman	:	World Resources and Industries.
Freeman, T.W.	:	Geography and Planning.
Grahman	:	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.

	$\mathbf{M}$	A. / M.SC. GEOGRAPHY	
	Two year Semest	ter Scheme outline (2020-21 to 2021-22)	
	<b>IV SEMESTER</b>		
	Subject Code :	MGE 403(G02) : Agricultural Geography	
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Total marks of E	nd of Semester (70	Question x10Marks each)	= 70 Marks
C.I.A. (Internal A	Assessment)		= 30 Marks
Maximum Marks	5		= 100 Marks
<b>Minimum Marks</b>	1		= 40 Marks

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#### Section-A

Concept, Nature, origin and dispersal of agriculture, Models in Agriculture Geography. Physical factors: Relief, slope, soils, water and irrigation, its availability and quality climate (rainfall, temperature, sun shine, humidity, winds).

#### Section-B

Economic factors: Land tenure, transport, marketing and trade, prices, level of mechanization, labour, capital fertilizers, irrigation, sources of energy in agriculture, size of holdings & agriculture. Types of agriculture shifting cultivation, plantation, agriculture, Mediterranean type, collective and state farming extensive and intensive agriculture and their characteristics.

### Section-C

Technological factors in the development of agriculture, Green Revolution, Nutrition and food Balance Sheet, Food Security and Agricultural Problems (Special Reference to India), drought, flood control and management.

Bansal, P.L.	:	Agricultural Problems in India – Vikash Publication, New Delhi.
Gregor, H.F. Delhi.	:	Geog. of Agricultural Themes in Research Prentice Hall, New
Grigg, D.B. Press.	:	The Agricultural Systems of the World, Cambridge University
Negi, B.S.	:	Agricultural Geography, Kedarnath Padamnath, Meerut.
Hussain Mazid	:	Agricultural Geography, Rawat Publication, Jaipur.

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Subject Code :	MGE- 404(H01) : Industrial Geogrsphy	
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Total marks of End of Semester (7Q	uestion x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)		= 30 Marks
Maximum Marks		= 100 Marks
Minimum Marks		= 40 Marks

#### Section-A

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

#### Section-B

New Trends in industrial Geography. Testing Location Theory, Empirical studies, Significance of Enterprise and Firm. Important Industrial Region of World. The Ruhr Basin Industrial Region, The Great Lakes Industrial Region. Important Industrial Regions of India. Formation of Industrial Regions, Industrial Regions in India. Study of the following regions: The Hooghly side Industrial Regions, The Damodar Valley Industrial Regions.

### Section-C

Influence of power and Geographical Inertia in Manufacturing Industries: The Textile Industry, Multi-locational industries, Iron and steel, Market Oriented Industries, The Pulp and Paper. Aluminum, Furniture, Foot loose Industries. Automobile, Building, Raw Material Oriented Industries, copper Industries.

#### **Essential Readings :**

Riley, R.C.	:	Industrial Geography, Chalto and Windees, London.
Hoover, E.M.	:	The location of Economic Activity, McGrawhill, New York.
Loknathan	:	Industrial Localisation in India, Chatto and Windees, London.

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Subject Code : MGE 404(H02) : Biogeography

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Total marks of End of Semester (7Question x10Marks each)	= 70 Marks
C.I.A. (Internal Assessment)	= 30 Marks
Maximum Marks	= 100 Marks
Minimum Marks	= 40 Marks

#### Section-A

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

### Section-B

Origin of Fauna and Flora, Taxonomic classification of animals, Animals classification according to general characteristics of Environment. Barriers to distribution and means of dispersal of terrestrial animals. The effect of environment selection on animal distribution of animal; graphical isolation distribution of Animals : The Zoo-Geographical region.

### Section-C

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). Environmental pollution, courses and control with special reference to air and water. Bio-Geochemical cycles.

Robinson, H.	:	Biogeography, Eles, Mc. Donald and Evans London, 1982.
Odum, E.P.	:	Fundamentals of Ecology, W.B. Sanders.
Mathur, H.S.	:	Essentials of Biogeography, Pointer Publishers, Jaipur, 1988.
Newbegin	:	Plant and Animal Geography.
Alar Schmid	:	Economical Animal Geography.
Cline	:	Foundation of Plant Geography.
G. Ponald	:	The Geography of flowering plants
Newbegin	:	Animal Geography
Darlington	:	Zoo Geography
Schimper	:	Plant Geography

### Subject Code : MGE 405 : Practical Geography

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1.	Written Test on LabWork.	Four hrs (5Qs.)	50 Marks
2.	Record Work & Viva-Voce.	(15+10)	25 Marks
3.	Project Report & Viva-Voce.	(15+10)	25 Marks
Tot	al-		100Marks
Int	ernal- (Record Work-	-15+Project Report-15)	<b>30Marks</b>
Ext	ernal- (Written Test-5	50+Viva-Voce-20)	70Marks

### Field Surveying and Camp Work.

Theodolite: Its parts and their function, use of theodolite, theodolite traverse and traverse computation, independent coordinates. Use of Total Station and GPS. Use and application of plane table and clinometer in small area surveys. Traverse, plane table, resectoning: Two and three point problems of leveling, Classification of leveling. Profile, precise and other types of leveling. Use of dumpy level. Practical contouring cross sectioning use and application of abeny level.

### **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 centre of the institution and maps and reports of the same will be prepared.(Students are expected to stay in the camp at night).

Sharma, J.P.	:	Practical Geography, Rastogi Publications, Meerut
Singh, L.R.	:	Fundamentals of Practical Geography, Sharda Pub. Allahabad
Sharma, S.R.	:	Practical Geography, College Book depot, 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.
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