S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
I SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 101: Geographical Thought-I (upto Medieval period) (Theory Paper – I)

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, Posidonius, 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.

Section-D

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

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 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।

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I SEMESTER

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Part-B :	**04 Question from each Unit with internal choice**	**4x15 Marks Each**	**=**	**60 Marks**
		Total marks of End of Semester	**=**	**70 Marks**
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		Maximum Marks	**=**	**100 Marks**
		Minimum Marks	**=**	**40 Marks**

Sub Code- MGEO 102: Dynamic Geomorphology
(Theory Paper – II)

Section-A

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

Section-B

Denudation types or weathering: Physical and chemical weathering; factors affecting weathering processes.

Section-C

Glacial and peri-glacial landforms. Desert and tropical landforms, process of 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. Work of Rivers Karst and limestone topography.

Section-D

Concepts in Geomorphology various school of landscape development Element of slope various models of slope development

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, 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

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
I SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 103: Economic Geography
(Theory Paper – III)

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.

Section-C

Decision making process: Location decision-behavioural view. Dynamics of world trade and investment: Trade and growth of international co-operation in trade,. Economic Region-Concept and methods of delineation, need of economic regionalization for area development and planning-economic regions of India.

Section-D

World transportation pattern trade routes, trade policies and their effect of world economic, globalization and economy and its impact on environment.

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
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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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
I SEMESTER

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)	**=**	**30 Marks**
		Maximum Marks	**=**	**100 Marks**
		Minimum Marks	**=**	**40 Marks**

Sub Code- MGEO 104(A) : Man and Natural Environment – I
(Theory Paper – IV-A)

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 indirect

b. man's capacity to modify the environment.

The environmental crises, Nature and causes of environmental problems, some case 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.

Section-D

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

Essential Readings :

Saxna, 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, 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

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
I SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- GEO 104(B) : Quantitative Techniques in Geography-I
(Theory Paper – IV-B)

Section-A

Probability: Theory of probabilites- law of addition and multiplication probabilites of distribution.

Section-B

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-C

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

Section-D

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.

Essential Readings :

Hammond R & P.S. Mccullagh	:	Quantitative Techniques in Geography : An Introduction Clearendan press, Oxford, U.K.
David Unwin	:	Introductory Spatial Analysis, Methuen, London 1981
Johnston, R.J.	:	Multivariate Statistical Analysis in Geography, Longman, London
John P. Cole & Cuchlanie A.M. King	:	Quantitative Geography, Johri Witey, London 1968
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, कैलाश नाथ	:	सांख्यिकी के मूल तत्व, मिनाक्षी प्रकाशन, मेरठ
रिज्वी, 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
(Two year Semester Scheme outline 2014-15)
I SEMESTER

Sub Code- GEO 105: PRACTICAL
(Practical Paper-I)
Max. Marks - 200 (140 ESE) + (60 CIA)

1. Written Test on LabWork.	Four hrs (4Qs.)	40 Marks
2. Record Work & Viva-Voce.	(25+15)	40 Marks
3. Field Survey & Viva-Voce.	(40+20)	60 Marks
	Total	**140 Marks**

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.

Projections and their classification:

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

I. Conical Projections:
   1. Equal Area with the one standard parallel(Lambert's Projections)
   2. Equal Area with two standard parallels(Albert's Projections).
   3. Bonne's
   4. polyconic
   5. International

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

III. Zenithal Projections:
   1. Gnomonic. a. Polar Case
   2. Stereographic a. Polar Case
   3. Orthographic a. Polar Case
   4. Equal Area a. Polar Case
   5. Equidistant a. Polar Case

IV. 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.

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. Prizmatic Campass : Open and closed traverse correction of bearings.

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. & Wilkinson, H.R.	:	Map & Diagram, B.I. Publications Pvt. Ltd., New Delhi.
इन्द्रपाल एवं माथुर हेमशंकर	:	मानचित्र एवं प्रक्षेप, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर
अय्यर, एन.पी.	:	सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल
राव, बी.पी.	:	प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर
भारद्वाज, दिनेश चन्द्र	:	स्थूल आरेख, राजस्थान हिन्दी ग्रंथ अकादमी, 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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RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
II SEMESTER

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	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 201: Geographical Thought-II (Modern)
(Theory Paper –V)

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

Section-C

The debate between environmental determinism and possibilism, the dualism of regional and systematic geography, the dichotomy of Human and Physical Geography, Quantitative and conceptual revolution in geography, the influence of logical positivism on the development of analytical geography, the development of Behavioural geography, Radical geography.

Section-D

Exceptionism in geography, scientific positivism, humanistic geography, idealism, phenomenalism, development in geography in India.

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 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।

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
II SEMESTER

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**
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	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 202: Climatology & Oceanography
(Theory Paper – VI)

Section-A

Climatology: The structure of Atmosphere, Atmospheric energy, air temperature, Heat Balance, Layered structure of atmosphere and characteristics of 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, the mechanism of the circulation surface features and circulation. Fronts, airmassges and Types, Depression, cyclones (Intra Tropical and extra tropical) and anticyclones. Climatic types: Koppen's, Thornthwaite's schemes of 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 coral islands, marine resources-biotic, mineral and energy resources and their utilization.

Section-D

Soil and Vegetation: Soil genesis, classification and distribution: biotic succession and major biotic regions of the world with special reference to ecological aspects of savannah and monsoon biomes.

Essential Readings :

Crtchifield J.H.	:	General Climatology Prentic Hall India, New Delhi
Lal, D.S.	:	Climatology & Oceanography, Sharda Pustak Bhawan, Allahabad
Siddharth, K.	:	Atmosphere, Weather & Climate, Kitab Mahal, New Delhi
Siddharth, K.	:	Oceanography : A Brief Introduction, Kitab Mahal, 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
गौत्तम, अल्का	:	जलवायु एवं समुद्र विज्ञान, रस्तोगी प्रकाशन, मेरठ

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2013-14)
II SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 203: Principles and Theory of Economic Geography (Theory Paper – VII)

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.

Section-C

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

Section-D

Spatial organisation of land use: Laws of return, concept of rent, Vonthunen's isolated state, Vonthunen's principles then and now, classical central place theory; Range of good, threshold, central place system, central place hierarchy, 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
सिंह, जगदीश एवं सिंह काशीनाथ	:	आर्थिक भूगोल के मूल तत्व – ज्ञानोदय प्रकाशन, गोरखपुर
कौशिक, एस.डी.	:	मानव तथा आर्थिक भूगोल, रस्तोगी प्रकाशन, मेरठ

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
II SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO-204(A) : Man & Natural Environment – II
(Theory Paper – VIII[A])

Section-A

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

Section-B

Environmental education, Monitoring and mapping. Environment awareness. Environmental policies and programmes (International and National).

Section-C

Ecological issues (in reference to India) – Environmental Hazards – Landslides, earthquakes, Tsunamis, Flood and Drought.

Section-D

Population explosion and food security. Environmental Degradation, Disaster Management – Types, components and role of peoples. Sustainable development and Environmental impact assessment. Climate change its causes, impact (National and International).

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, 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

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
II SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 204(B) : Quantitative Techniques in Geography-II (Theory Paper – VIII[B])

Section-A

Hypothesis Testing: Needs and types of hypothesis-goodness of fit and significance and confidence levels-parametric and non-parametric procedures; contingency tables, chi-square test, bionmial test, t-test, Mann-Whitney U test, Analysis of Variance (ANOVA)

Section-B

Spearman's Rank and product Moment Correlation Coefficients-the 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.

Section-C

Surface and Models: Gravity potential; model-spatial interpolation and trend surface analysis.

Section-D

Simulation models: random walk and diffusion models-markov chain model similarity indices and region building-construction of Thiessen polygons.

Essential Readings :

Hammond R & P.S. Mccullagh	:	Quantitative Techniques in Geography : An Introduction Clearendan press, Oxford, U.K.
David Unwin	:	Introductory Spatial Analysis, Methuen, London 1981
Johnston, R.J.	:	Multivariate Statistical Analysis in Geography, Longman, London
John P. Cole & Cuchlanie A.M. King	:	Quantitative Geography, Johri Witey, London 1968
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, कैलाश नाथ	:	सांख्यिकी के मूल तत्व, मिनाक्षी प्रकाशन, मेरठ
रिज्वी, एस.एम.	:	सांख्यिकीय भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर
श्रीवास्तव, वी.के.	:	भूगोल की सांख्यिकीय विधियां, वसुन्धरा प्रकाशन, गौरखपुर

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II SEMESTER

Sub Code- MGEO 205 : Practical
(Practical Paper-II)
Max. Marks - 200 (140 ESE) + (60 CIA)

1. Written Test on Lab Work.	Four hrs (4Qs.)	40 Marks
2. Record Work & Viva-Voce.	(25+15)	40 Marks
3. Village Survey & Report & Viva-Voce	(40+20)	60 Marks
	Total	**140 Marks**

Geographical Maps and Diagrams: Computations of data Preparation of frequency tables representation of data by Histograms and olgives. Finding skewness. Computation of Mean, Median and Modes. Deviations-Standard Deviations and Mean Deviations and finding out of correlations. Theoritical basis of nearest neighbour analysis. Practical exercises of nearest neighbour analysis. Locational analysis of urban centres. Cofficient Variation. 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 potential surface map, Population Pyramids map. Three dimensional diagrams and Cartograms of economic and social data.

Diagrams: Polygraph semi-log and loggraphs, Trilinear chart, circular graph, Climatograph. Taylors/Fosters Climograph. Annual water deficiency and water surplus graph.

Village Survey 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. A supervisor 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.

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
इन्द्रपाल एवं माथुर हेमशंकर	:	मानचित्र एवं प्रक्षेप, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर
अय्यर, एन.पी.	:	सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल
राव, बी.पी.	:	प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर
भारद्वाज, दिनेश चन्द्र	:	स्थूल आरेख, राजस्थान हिन्दी ग्रंथ अकादमी, 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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M.A. / M.SC. GEOGRAPHY
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III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 301: Advanced Geography of India
(Theory Paper – IX)

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

i. Land resources,
ii. Water resources,
iii. Vegetational resources,
iv. Animal resources
v. Mineral resources.
vi. 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.

Section-D

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

Essential Readings :

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,
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

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 302 (A) : AGRICULTURAL GEOGRAPHY-I
(Theory Paper – X[A])

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.

Section-C

Types of agriculture shifting cultivation, plantation, agriculture, Mediterranean type, collective and state farming extensive and intensive agriculture and their characteristics.

Section-D

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.

Essential Readings :

Bansal, P.L.	:	Agricultural Problems in India – Vikash Publication, New Delhi.
Gregor, H.F.	:	Geog. of Agricultural Themes in Research Prentice Hall, New Delhi.
Grigg, D.B.	:	The Agricultural Systems of the World, Cambridge University Press.
Negi, B.S.	:	Agricultural Geography, Kedarnath Padamnath, Meerut.
Hussain Mazid	:	Agricultural Geography, Rawat Publication, Jaipur.
कुमार प्रमिला, शर्मा श्रीकमल	:	कृषि भूगोल, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल।
कलवार, एस.सी.	:	कृषि भूगोल की रूपरेखा, आविष्कार पब्लिकेशन, चौड़ा 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।

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 302 (B) : Disaster Perception and Management
(Theory Paper – X[B])

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.

Section-D

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

Essential Readings :

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

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 303(A): Urban Geography
(Theory Paper – XI[A])

Section-A

Meaning, Nature, Aims and scope of Urban Geography, Factors affecting the growth of town during Neolithic period, Greek and Roman Period. Dark Ages, Medieval period. Urban Centres, Characteristics of town, cities, metropolis and megapolis. 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. Urban Morphology : Morphology of Indian cities. Functional structure of towns, Chief characteristics of CBD, Residential area, and other functional areas. Theories and Models of urban structure.

Section-C

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.

Section-D

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.

Essential Readings :

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.
बंसल, सुरेशचन्द	:	नगरीय भूगोल, मीनाक्षी प्रकाशन, मेरठ।
मौर्य, एस.डी.	:	नगरीय भूगोल, शारदा पुस्तक भवन, इलाहबाद।
जोशी, रतन	:	नगरीय भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 303(B): Regional Planning
(Theory Paper – XI[B])

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

Section-D

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.

Essential Readings :

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।

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 304 (A) : Political Geography
(Theory Paper – XII[A])

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.

Section-C

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-D

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.

Essential Readings :

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.
अधिकारी सुदीप्ता एवं रतनकुमार	:	राजनीति भूगोल, शारदा पुस्तक भवन, इलाहाबाद।
सक्सेना, एच.एम.	:	राजनीतिक भूगोल, रस्तोगी पब्लिकेशन, मेरठ।
दीक्षित, श्रीकान्त	:	राजनीतिक भूगोल, ज्ञानादेय प्रकाशन, गोरखपुर।

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 304 (B) : Water Resource and their Management-I (Theory Paper – XII[B])

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.

Section-C

Agricultural use of water: estimation of crop-water requirement:soil-water-crop relationships; water balance and drought; major and minor irrigation: methods of distribution of water to farms; water harvesting techniques, soil water conservation.

Section-D

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.

Essential Readings :

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.
गुर्जर रामकुमार एवं जाट बी.सी.	:	जल संसाधान भूगोल, रावत पब्लिकेशन्स, जयपुर
उपाध्याय डी.पी. एवं रामाश्रय	:	जलवायु एवं जल विज्ञान, वसुन्धरा प्रकाशन, गोरखपुर।

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
III SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 304(C) : Research Methodology
(Theory Paper – XII[C])

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 flow-analysis, 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.

Section-D

Techniques of Map Analysis, Morphometric analysis. Thalegaltimetric frequency graphs, Drainage basin analysis, Slope analysis Analysis of biogeochemical cycles, Integrated Area Development planning.

Essential Readings :

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
हुसैन, एम.	:	भौगोलिक मॉडल, टाटा मैग्राहिल, न्यू देहली
भारद्वाज, दिनेश चन्द्र	:	भौगोलिक प्रतिरूप निर्माण, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर
गुप्ता, एस.पी, गौतम, अल्का	:	सांख्यिकीय विधियां, शारदा पुस्तक भवन, इलाहाबाद

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III SEMESTER

Sub Code- MGEO 305 : Practical
(Practical Paper – II)
Max. Marks - 200 (120 ESE) + (80 CIA)

1. Written Test on Lab Work.	Four hrs (4Qs.)	60 Marks
2. Record Work & Viva-Voce.	(25+15)	20 Marks
3. Project work/ Report & Viva-Voce.	(40+20)	40 Marks
	Total	**120 Marks**

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.

PROJECT WORK : A Project work on any social, economic, agricultural, industrial or geographical problem done by maximum group of 4 candidates. Candidates is to prepared a project report minimum 25 to 30 pages. The marking on the project report will be awarded by the External Examiner.

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
इन्द्रपाल एवं माथुर हेमशंकर	:	मानचित्र एवं प्रक्षेप, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर
अय्यर, एन.पी.	:	सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल
राव, बी.पी.	:	प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर
भारद्वाज, दिनेश चन्द्र	:	स्थूल आरेख, राजस्थान हिन्दी ग्रंथ अकादमी, 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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(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 401 : GEOGRAPHY OF RAJASTHAN
(Theory Paper – XIII)

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.

Section-C

Agriculture: General Land Use: Live-Stock and Dairy Development, Minerals. Industries: Textile, Sugar, Cement, Marble and Granite, Zinc and Copper smelting. Power & Energy: Hydro-electricity, Petroleum, Solar Energy. Bio-energy. Transport & Trade. Development of Tourism. Desert development programme. Trible Areas development programme, Aravali Hill Development programme.

Section-D

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.

Essential Readings :

Bhalla, L.R.	:	Geography of Rajasthan, Kuldeep Publication, Jaipur.
Mishra, V.C.	:	Geography of Rajasthan, NBT, Delhi.
शर्मा, बी.एल.	:	राजस्थान का भूगोल, कॉलेज बुक डिपो, जयपुर।
शर्मा, एच, एस. एवं शर्मा, एम.एल. तथा मिश्रा, आर. एन.	:	राजस्थान का भूगोल, पंचशील प्रकाशन, जयपुर।
तिवारी, ए.के. एवं सक्सैना, एच.एम.	:	राजस्थान का भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर।

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 402 (A) : AGRICULTURE GEOGRAPHY – II
(Theory Paper – XIV[A])

Section-A

Agricultural land use: concept and history, land use surveys and proforma, land classification: need and basis of land classification, British pattern, American pattern, Indian pattern, land capability.

Section-B

Von Thunen's agricultural location theory. Diary development, Agro forestry: importance, status and scope in India. Agro-climatic & Agro-Ecological regions.

Section-C

Measurements of the levels of agricultural development-Concept and methodology. Agricultural regionalization-Concept, methods of delimitation Traditional and statistical methods.

Section-D

Crop-ranking, Crop-combination regions-meaning; need and methodology, (Detailed study of Kendal's Weaver's, Doi’s, Crop-Diversification, Concentration. Agricultural efficiency-concept, methods of measurement.

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Essential Readings :

Bansal, P.L.	:	Agricultural Problems in India – Vikash Publication, New Delhi.
Gregor, H.F.	:	Geog. of Agricultural Themes in Research Prentice Hall, New Delhi.
Grigg, D.B.	:	The Agricultural Systems of the World, Cambridge University Press.
Negi, B.S.	:	Agricultural Geography, Kedarnath Padamnath, Meerut.
Hussain Mazid	:	Agricultural Geography, Rawat Publication, Jaipur.
कुमार प्रमिला, शर्मा श्रीकमल	:	कृषि भूगोल, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल।
कलवार, एस.सी.	:	कृषि भूगोल की रूपरेखा, आविष्कार पब्लिकेशन, चौड़ा 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।

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(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO- 402(B) : CLIMATOLOGY
(Theory Paper-XIV[B])

Section-A

Nature and scope of climatology and its relationship with meteorology. Composition, mass and structure of the atmosphere. Insolation, heat balance of the earth, green house effect, 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, Atmospheric moisture : Humidity, evaporation, condensation, precipation : types, acid rain, world pattern of precipation.

Section-B

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

Section-C

Climatic Classification of Koppen, and Thorntwaite, Major climates of the world-tropical, temperate, desert and mountain climate. Climatic changes evidences, possible causes; global warming, environmental impacts and society's response.

Section-D

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.
Critchifield 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 Pustak Bhawan, Allahabad
Siddharth, K.	:	Atmosphere, Weather & Climate, Kitab Mahal, New Delhi
सिंह, सविन्द्र	:	जलवायु विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद
बंसल, एस.सी.	:	जलवायु एवं समुद्र विज्ञान, वसुन्धरा प्रकाशन, गोरखपुर
गौत्तम, अल्का	:	जलवायु एवं समुद्र विज्ञान, रस्तोगी प्रकाशन, मेरठ
सिंह, सविन्द्र	:	जलवायु विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO- 403(A) : INDUSTRIAL GEOGRAPHY
(Theory Paper-XV[A])

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.

Section-C

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-D

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.
लोढ़ा, राजमल एवं माहेश्वरी, दीपक	:	औद्योगिक भूगोल, राजस्थान, हिन्दी ग्रन्थ अकादमी, जयपुर।
कुमार, प्रमिला एवं शर्मा, श्रीकमल	:	औद्योगिक भूगोल, मध्यप्रदेश, हिन्दी ग्रंथ अकादमी, भोपाल

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 403 (B) : Fundamentals of Remote Sensing
(Theory Paper – XV[B])

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.

Section-C

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. 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.

Section-D

Applications: Air and Image interpretations and mapping landuse and land cover. Land evaluation, urban landuse, 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 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.
चौनियाल, देवीदत्त	:	सुदुर संवेदन एवं भौगोलिक सूचना प्रणाली, शारदा पुस्तक भवन, इलाहाबाद।

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M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)	**=**	**30 Marks**
		Maximum Marks	**=**	**100 Marks**
		Minimum Marks	**=**	**40 Marks**

Sub Code- MGEO 404(A) : BIOGEOGRAPHY
(Theory Paper – XVI[A])

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.

Section-B

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-C

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-D

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.
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

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(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)	**=**	**30 Marks**
		Maximum Marks	**=**	**100 Marks**
		Minimum Marks	**=**	**40 Marks**

Sub Code- MGEO 404 (B) : WATER RESOURCE AND THEIR MANAGEMENT-II

(Theory Paper-XVI[B])

Section-A

Industrial use of water: methods of estimation; demand for water in the industrial factor of India. Municipal use of water: general trends in water supply to the urban and rural communities in India, Internal navigation, hydro power and recreation.

Section-B

Problems of water resource management Floods-magnitude/ frequency, structural and non structural adjustment of flood hazards; embankments, reservoirs, channel improvement.

Section-C

Soil conservation, afforestation, flood forecasting. evacuation, floodplains; land use regulation and insurance. Case studies of major floods.

Section-D

Droughts- occurrence, major drought management with reference to Rajasthan. Conservation and planning for the development of water resources-social and institutional considerations; integrated basin planning conjunctive use of surface and ground water resources; watershed management; international and inter-state river water disputes and some case studies.

Essential Readings :

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.
गुर्जर रामकुमार एवं जाट बी.सी.	:	जल संसाधान भूगोल, रावत पब्लिकेशन्स, जयपुर
उपाध्याय डी.पी. एवं रामाश्रय	:	जलवायु एवं जल विज्ञान, वसुन्धरा प्रकाशन, गोरखपुर।

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
IV SEMESTER

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)		**=**	**30 Marks**
	Maximum Marks		**=**	**100 Marks**
	Minimum Marks		**=**	**40 Marks**

Sub Code- MGEO 404 (C) : APPLIED GEOGRAPHY
(Theory Paper-XVI[C])

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.

Section-C

Need & Basis of Land Classification, Agricultural land use in India and other countries. (USA, UK).

Section-D

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.

Essential Readings :

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.

S.S.JAIN SUBODH P.G. COLLEGE (AUTONOMOUS),
RAMBAGH CIRCLE, JAIPUR-302015

M.A. / M.SC. GEOGRAPHY
(Two year Semester Scheme outline 2014-15)
IV SEMESTER

Sub Code- MGEO- 405 : Practical
(Practical Paper-V)

Max. Marks - 200 (120 ESE) + (80 CIA)

1. Written Test on Lab Work.	Four hrs (4Qs.)	60 Marks
2. Record Work & Viva-Voce.	(10+05)	15 Marks
3. Field Survey & Viva-Voce.	(10+05)	15 Marks
4. Camp work & Viva-Voce (7 days)	(20+10)	30 Marks
	Total	**120 Marks**

The Art of surveying History of surveying, scope utility and problems classification of surveying. Study of Geological Maps, Interpretation of Whether Maps.

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. 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.

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 centre 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 :

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
इन्द्रपाल एवं माथुर हेमशंकर	:	मानचित्र एवं प्रक्षेप, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर
अय्यर, एन.पी.	:	सर्वेक्षण, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल
राव, बी.पी.	:	प्रायोगिक भूगोल, वसुन्धरा प्रकाशन, गोरखपुर
भारद्वाज, दिनेश चन्द्र	:	स्थूल आरेख, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर
खुल्लर, डी.आर.	:	प्रयोगात्मक भूगोल के तत्व, न्यू एकेडमिक पब्लिशिंग कम्पनी, जालन्धर।
जैन एवं मामोरिया	:	प्रयोगात्मक भूगोल एवं मानचित्रांकन, साहित्य भवन, आगरा।