M.A./M.Sc. (GEOGRAPHY)
SCHEME OF EXAMINATION - 2014

Each Theory Paper 3 Hrs. duration 100 marks

Dissertation / Thesis / Survey Report / Field work, if any 100 marks

1. The number of paper and the maximum marks for each paper, practical shall be shown in the syllabus for the subject concerned. It will be necessary for a candidate to pass in the theory part as well as in the practical part (wherever prescribed) of a subject/Paper separately.

2. A candidate for a pass at each of the Previous and the Final Examination shall be required to obtain (i) at least 36% marks in the aggregate of all the papers prescribed for the examination and (ii) at least 36% marks in practical(s) wherever prescribed at the examination, provided that if a candidate fails to secure at least 25% marks in each individual paper work, wherever prescribed. He shall be deemed to have failed at the examination not with standing his having obtained the minimum percentage of marks required in the aggregate for that examination. No division will be awarded at the Previous Examination; Division shall be awarded at the end of the Final Examination on the combined marks obtained at the Previous and the Final Examination taken together, as noted below :

   First Division 60% of the aggregate marks taken together of
   Second Division 48% the Previous and the Final Examination.

Rest will be declared to have passed the examinations.

3. If a candidate clears any paper(s), practical(s)/Dissertation prescribed at the Previous and/or Final Examination after a continuous period of three years, then for the purpose of working out his division the minimum pass marks only viz. 25% (36% in the case of practical) shall be taken into account in respect of such paper(s), practical(s), Dissertation are cleared after the expiry of the aforesaid period of three year, provided that in case where a candidate require more than 25% marks in order to reach the minimum aggregate as many marks out of those actually secured by him will be taken into account as would enable him to make the deficiency in the requisite minimum aggregate.

4. The Thesis/Dissertation/Survey Report : Field Work shall be typed & written and submitted in triplicate so as to reach the office of the Registrar at least 3 weeks before the commencement of the theory examination. Only, such candidates shall be permitted to offer dissertation/Field work/Survey report. Thesis (if provided in the scheme of examination) in lieu of a paper as have secured at least 55% marks in the aggregate of all scheme, irrespective of the number of papers in which a candidate actually appeared at the examination.

N.B.  
(i) Non-Collegiate candidates are not eligible to offer dissertation as per provision of 0.170-A.
(ii) A Candidate failing in previous examination may be provisionally admitted to the final class, provided that he pass in at least 50% papers, as per provisions of 0.235.
(iii) A candidate may allow grace marks in only one theory paper up to the extent of 1% of the total marks prescribed for the examination.
M.A./M.Sc. GEOGRAPHY - 2014

There will be four theory papers and a practical each in Previous and Final Examination. Each of the theory papers will be of 100 Marks. Each theory paper will be of three hours duration. Candidates will be required to pass both in Theory and Practical separately.

Note: A weekly seminar is to be arranged for M.A. Previous and Final Students.

M.A. / M.Sc. (Previous) Geography

Paper-I - Evolution of Geographical Thought
Paper-II - Advanced Physical Geography
Paper-III - Principles and Theory of Economic Geography
Paper-IV - (a) Geography of Environment, or (b) Quantitative Techniques in Geography

Practical:
Distribution of marks will be as follows:
1. Laboratory and Map work test (3 hours duration) 40 marks
2. Record Work 25 marks
3. Viva-Voce 10 marks
4. Project Report & Viva-Voce (20+05) 25 marks
Total 100 marks

N.B.: 12 hours of teaching practical be provided per batch of 10 students per week.

M.A. /M.Sc. Final Geography

Paper-V - Advanced Geography of India
Paper-VI - Any one of the following - (a) Agricultural Geography (b) Industrial Geography (c) Geography of Transport and Marketing
Paper-VII - Any one of the following - (a) Urban Geography (b) Population and Settlement Geography (c) Bio-Geography
Paper-VIII - Any one of the following - (a) Political Geography (b) Research Methodology (c) Regional Planning and Development (d) Remote Sensing and GIS

Dissertation in lieu of VI or VII or VIII papers.

Practical:

The distribution of marks in the Practical will be as follows:
1. Laboratory work of four hours duration 40 marks
2. Record work and Viva-Voce (10+10) 20 marks
3. Field Surveying and Viva-Voce (15+05) 20 marks
4. Survey Camp Report and Viva-Voce (15+05) 20 marks
Total 100 marks

N.B.: 12 hours of teaching practical be provided per batch of 10 students per week.
Instruction for Geography Practical Examination:

1. The record work should have 50 sheets ($\frac{1}{6}$th of 20"×30") and they should cover the total syllabus proportionately. The teacher should give fresh exercise every time so that the students may not undertake tracing of old exercise. The work must be done in the classroom and signed on the same date. This would discourage completing the whole work at the nick of the examination.

2. Viva-Voce Examination be held to judge the real knowledge of the students and to examine the authenticity of the record work. The marking on record work and its Viva-Voce be based on the original work of the candidate and not merely producing the record work get done by any other agency. Marks be deducted for the part of the syllabus not covered.

3. On an average about 20 students be examined in one day. In M.A. Previous as far as possible in one practical exercise be set to judge the practical skill.

4. The External Examiners, be provided syllabus and detailed instructions at the time of obtaining his consent. For M.A./M.Sc. Final a minimum of two days be fixed to conduct the examination.

Note: A copy of the instructions be sent to the examiners for their information.
M.A. / M.Sc. (Prev.)-2014  
Paper – I  Evolution of Geographical Thought

Duration : 3 hours  
Max. Marks – 100

Note : The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part.  
Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words.  
Total marks : 50

Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted.  
Total marks : 40

UNIT – I
Definitions, scope, nature and purpose of Geography (including concepts) and its relation with other social sciences. Post War trends, Inter-disciplinary Trends, Recent trends in Geography. Development of Geography in India.

UNIT – II
Pre-Scientific Geographical ideas in Ancient and Medieval times : Indian influences. Geography of the Vedic Age and Geography of the Purana’s (First four chapters of Geography of Purana’s by S.M. Ali).

UNIT – III
Contribution by Greek, Roman and Arab Geographers (Al-Baruni and Ibn-I Batuta) The Emergence of scientific Geography in the 18th and 19th centuries.

UNIT – IV
Founders of modern Geography-Humboldt, Ritter, Leaders of the first generation after Ratzel, Richthofen, Hettner, Contribution of Vidal-de-la-Blache and Brunhes.

UNIT – V
Dichotomies in Geography : Physical and Human Geography, Determinism and Possibilism, Regional and Systematic Geography, Qualitative and Quantitative Geography. Theoretical and Applied Geography, Analytical and Synthetical Geography, Positivism, Functionalism, Idealism and Realism in Geography.

Books Recommended :
10. हुसैन, माजिद : भौगोलिक विचारधाराओं का इतिहास, राजस्थान प्रकाशन, जयपुर।
11. कौशिक, एस.डी. : भौगोलिक विचारधाराओं एवं विधि तंत्र।
12. जैन, एस.एम. : भौगोलिक चिन्तन व विधि तंत्र, साहित्य भवन, आ गया।
Paper – II  Advanced Physical Geography

Duration : 3 hours Max. Marks – 100

Note : The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

UNIT – I

Geomorphology : Fundamental concepts. Factors controlling landform development; Endogenetic and Exogenetic forces; Denudation process: Weathering and Erosion. Geosynclines, Mountain Building, Continental Drift and Plate Tectonics

UNIT – II

Concept of Geomorphic Cycle ; Landforms associated with fluvial, glacial, arid, coastal and Karst topography. Slope-forms and processes; Environmental and Applied Geomorphology.

UNIT – III

Climatology : Composition and Structure of the Atmosphere; Insolation; Heat budget of the earth; Distribution of temperature; Atmospheric pressure and general circulation of winds; Monsoons and jet streams.

UNIT – IV

Stability and instability of the atmosphere; Air-masses; Fronts; Temperate and Tropical cyclones; Types and distribution of precipitation; Classification of world climates : Kopen’s and Thornthwaite’s schemes; Hydrological Cycle; Climate change and Global warming.

UNIT – V

Oceanography : Origin of ocean basins; Ocean Bottom relief of Indian, Atlantic and Pacific Oceans; Ocean deposits; Coral reefs; Temperature and Salinity of the Oceans; Density of sea water; Tides and ocean currents; Sea – level changes; Ocean’s Mineral wealth.

Books Recommended :
1. Ahmad, E.: Coastal Geomorphology of India, New Delhi.
16. सचिवंद्र सिंह : भू-आकृति विज्ञान, वसु-प्रकाश, गोरखपुर।
17. कौशिक, एस.डी. : भू- आकृति विज्ञान, रस्तोंगी प्रकाश, मेरठ।
Paper – III  Principles and Theory of Economic Geography

Duration : 3 hours        Max. Marks – 100

Note : The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

UNIT – I

UNIT – II
Types of Agriculture – Subsistence agriculture, Tropical plantation, Mediterranean agriculture, Mixed farming, Stock raising and its products.

Energy Resources of the world – Coal, Petroleum, Hydroelectricity and Atomic power. Energy Crisis, Non-conventional Sources of Energy.

UNIT - III
Locational analysis and spatial distribution of Iron and Steel, Cotton textile, Chemical, Paper and pulp industries. Development of marketing systems in the world and WTO.

UNIT – IV
Location and interaction in a simplified economic landscape. Spatial variation in transport cost. Spatial variation in production cost. Demand scale and agglomeration.

UNIT – V
Decision making process – a behavioural approach. Concept of economic region- formation and types. Economic regions of India.

Books Recommended :
1. Lloyd & Dicken : Location in Space : Theoretical Approach to Economic Geography.
Paper – IV(a) Geography of Environment

Duration : 3 hours  Max. Marks – 100

Note : The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

Section-C : 04 questions (question may have sub-division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

UNIT – I

UNIT – II

UNIT – III

UNIT – IV

UNIT – V
Sustainable development. Environmental policies and programmes (international and national). Environmental problems, planning and legislation in India.

Books Recommended :
Paper – IV(b) Quantitative Techniques in Geography

Duration : 3 hours Max. Marks – 100

Note: The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

UNIT – I


UNIT – II

Measures of spatial distribution point and line distribution. Nearest Neighbour Index and spatial randomness. Characteristics of samples. Methods of Sampling.

UNIT – III


UNIT – IV


UNIT – V


Books Recommended :
Distribution of marks will be as follows –
1. Laboratory and Map work test (4 hrs. duration)  40 marks
2. Record Work  25 marks
3. Viva – voce  10 marks
4. Project Report and viva – voce (20+5)  25 marks

Note : 12 hrs. of teaching practical be provided per batch of 10 students per week.

Laboratory and Map work –
2. Enlargement, Reduction and finding Area of Maps. Use of Planimeter.
3. Interpretation of Weather Maps and Weather Forecast.

Projection and their classification –
Construction and characteristics of projections (Mathematical constructions)
1. Conical Projections :
   (a) Equal Area with one Standard Parallel (Lambert’s Projection)
   (b) Equal Area with two Standard Parallel (Albert’s Projection)
   (c) Bonne’s
   (d) Polyconic
   (e) International
2. Cylindrical Projections :
   (a) Cylindrical Equal Area
   (b) Mercator’s
   (c) Gall’s stereographic
3. Zenithal Projection’s
   (a) Gnomonic  1. Polar Case  2. Eq-case
   (b) Stereographic  1. Polar Case  2. Eq-case
   (c) Orthographic  1. Polar Case  2. Eq-case
   (d) Equal Area  1. Polar Case  2. Eq-case
   (e) Equidistant  1. Polar Case  2. Eq-case
4. Conventional Projections :
   (a) Sinusoidal
   (b) Mollweide
(c) Interrupted Molleweide and Godde’s
(d) Interrupt Sanson Flamsteed (Homelosine)

Choice of Projections: Projections used for maps produced in India.

Geographical Maps/Diagrams:
Computation of data, preparation of frequency tables, representation of histograms and Ogives. Finding Skewness, computation of Mean, Median and Mode. Deviations: Standard Deviation and Mean Deviation. Correlation. Theoretical Basis of Nearest Neighbour Analysis-Practical exercise on nearest Neighbour Analysis. Network Analysis. Locational Analysis of urban centers. Coefficient of Variation. All these be computed from the Statistical Data, preferably based on District or Tehsil unit areas and the following types of maps and diagrams be prepared.

One exercise on each of the following and their interpretations-Isopleths, choropleth, chorochromatic, Isochrones and Population Potential Surface maps. Population Pyramid, Sten-de-Geers and Stilgen-Baurs-Method.

Three dimensional diagrams of economic and social data, Block Pile, Sphere, Pyramid, Graphs, Polygraph, Semilog and log-graphs, Trilinear chart, Circular graph, Climatograph, Hythergraph, Taylor’s/Foster’s Climograph, annual water deficiency and water surplus graph.

Project Report: Attendance in camps compulsory. Report should be prepared for a topic related to any regional problem. A group of eight students be constituted for each problem and a report should be prepared in typed form within 20 to 25 pages with the help of maps and diagrams.

Books Recommended:
9. जे.पी. शर्मा – प्रयागःल्मक भूगोल, रस्तोंगी, मंथल।
10. हनुमाणल एवं माधुर – मानचित्र प्रक्षेप, राज. हिन्दी ग्रन्थ अकादमी, जयपुर।
M.A. / M.Sc. (Final)- 2014
Paper V- Advanced Geography of India

Duration - 3 hours  Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A: One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks: 10

Section-B: 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks: 50

Section-C: 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks: 40

Unit - I
Physiographic and drainage systems. Soils, Vegetation, Origin and Mechanism of Indian Monsoon. Schemes of Natural Physiographic and climate classifications. Identification of drought and flood prone areas.

Unit - II
Tribal areas and their problems, Population growth, distribution, density, Sex Ratio and literacy, Population problems and policies. Urbanisation in India.

Unit - III

Unit - IV
Industry - factors of Localization, classification and detailed study of the following-Iron and steel, Cement, Fertilizer, paper and Pulp and Sugar industries. Study of the network of Road, railways, Airways and Water ways. Regional disparities in development in India.

Unit - V
Geographical study of Rajasthan under the following heads: Relief, Climate, Vegetation, Soils, Agricultural development, Irrigation, Mineral and Power resources, Industrial development, Detailed study of the following regions -

Books Recommended :
1. Govt. of India : Five Year Plans of India.
2. Sharma & Coutinho : Economic and Commercial Geography of India, Vikas, Delhi
3. निगम, एम. एन. : राजस्थान का भूगोल, राज. हिन्दी ग्रंथ अकादमी, जयपुर
4. भल्ला, ए. आर. : राजस्थान का भूगोल, कूलदीप प्रकाशन, जयपुर
5. सक्सेना : राजस्थान का भूगोल, राज. हिन्दी ग्रंथ अकादमी, जयपुर
11. Kumar, L.S.S. & : Agriculture in India, Vol. 1 & II, Asia Publishing Others House, Bombay
13. Chatterji, S.B. : Climatology of India, Calcutta University, Calcutta
14. Sharma, T.R. : Location of Industries of India, Hindi Kitab, Bombay
15. Gazetteers of India : Publication Division, New Delhi
16. S.P. Roy Choudhary : Land and Soil, National Book Trust, New Delhi

Paper VI(a) - Agricultural Geography

Duration - 3 hours        Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10
Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50
Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

Unit -I

Agriculture - Concept, origin, dispersal and Development of agriculture through the ages in important agricultural areas of the world.
Development of Agricultural Geography with special reference to India.
Factors affecting Agriculture : Physical - relief, climate, soil, water, storage etc.
Social - land ownership, land tenure and size of holdings.
Economic - Input of human and animal power, irrigation and fertilizers, Mechanization etc
Others - Financial management, Market system, Transport, Trade etc.

Unit -II

Water - Water resources, quality of water for irrigation, water quality criteria, various methods of irrigation and their comparative advantages. Soil and water balance.
Types of Agriculture - Shifting cultivation, Plantation agriculture, Mediterranean type, Collective and state farming, Extensive and Intensive agriculture, Dry farming etc. and their characteristics.

Unit -III

Agricultural land use: Concept, history, principles, objectives, policies and planning of land use surveys.
Land classification : need and basis of land classification - British pattern, American pattern, Indian pattern.
Land use data : Sources, types, mapping and problems.

Unit -IV

Models in agricultural land use : concept, need and principles. Von Thunen's Agricultural Location theory. Preparation and planning of detailed performa for land use surveys.
Measurements of the levels of agricultural development: Concept and methodology - Agricultural regionalization - Concept, methods of delimitation (Including statistical methods). Agricultural Regions of the World (Whittlsey).

Unit - V


Books Recommended:

1. I.C.A.R. - Soil and Water Conservation Research (1956-71)
2. I.C.A.R. - Soil Conservation in India.
4. Noor Mohammed - New Dimensions in Agriculture, Concept, New Delhi, 1991
6. Kostowicki - World Types of Agriculture, Polish Academy, Warsaw
12. Noor Mohammed - Agriculture Land Use in India, Inter-India Public, Delhi
13. Ali Mohammed - Situation of Agriculture, Food and Nutrition in Rural India, Concept Publishing, Delhi
14. Ali Mohammed - Dynamics of Agriculture Development in India, Concept Publication Co., Delhi
17. Kostrowickie - Agricultural Typology ; Polish Academy, Warsaw.
18. प्रभु भृगोल - कृषि भृगोल, मध्य प्रदेश हिन्दी ग्रंथ अकादमी।
19. ब्रज भूपण सिंह - कृषि भृगोल, गोरखपुर
Paper VI(b) - Industrial Geography

Duration - 3 hours        Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A: One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

Section-B: 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

Section-C: 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

Unit - I


Unit - II


Unit - III


Unit - IV

Study of the following regions.

1. The Hooghlyside Industrial Regions. 2. The Damodar Valley Industrial Region
3. The Ruhr Basin Industrial Region 4. The Great Lakes Industrial Region

Unit-V

Influence of power and Geographical Inertia in Manufacturing Industries.

Books Recommended:

1. Llyod and Dicken : Location in Space : A Theoretical Approach to Economic Geography.
2. M.C. Cart & Limberg Hodder & Lec : Economic Geography
Paper VI(c) - Geography of Transport and Marketing

Duration - 3 hours
Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A: One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks: 10

Section-B: 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks: 50

Section-C: 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks: 40

Unit - I


Unit - II

Nature and Scope of Marketing Geography, Growth of Market centres in various parts of the world including India.

Unit - III


Unit - IV

Market Morphology, Market Sphere of influence, Agricultural Marketing,

Unit - V

Behavioral Pattern of market place participants, Cartographic representation of Transport and marketing data.

Books Recommended:

2. Chorley, R.J. & Haggett, P.(ed.): Network Analysis in Geography, Arnold, 1969
5. Scott, P. : Geography and Retailing, Hutchinson, London
9. जगदीश सिंह - परिवहन भूगोल, उत्तरप्रदेश हिन्दी ग्रंथ अकादमी।
Paper VII(a) - Urban Geography

Duration - 3 hours  Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A: One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part.  Total marks : 10

Section-B: 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words.  Total marks : 50

Section-C: 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted.  Total marks : 40

Unit - I
Aims and scope of Urban Geography. Factors affecting the growth of towns during Neolithic period, Greek and Roman period, Dark Ages, Medieval period, Renaissance period, Industrial Revolution and Modern times. Chief characteristics of the towns of each period.

Unit - II
Trends of urbanization in the world. Urbanization in India since 1901 and its problems. Definitions of Urban centres. Chief characteristics of modern town, City Conurbation, Metropolis and Megalopolis.

Unit - III
Spatial pattern and distribution of urban centres. Classification of cities. Urban Rank - Size relationship. The Basic and Non-Basic concept of urban economic functions and its application.

Unit - IV

Unit - V
Centrifugal and centripetal forces in Urban Geography, Development of suburbs, Rural-urban fringe, Satellite town, ring towns, Sphere of urban influence (Umland) and its delimitation.
Principles of Town Planning - Preparation of a Master Plan with example of a Rajasthan town. Principles of regional Planning.

Books Recommended:

2. Geddes  :  Study in City - Development
10. N.V. Sovani : Urbanization and Urban India, Asia Publishing House, Bombay
11. Hudson, F.S. : Geography of Settlement
12. Johnson, R.H. : Urban Geography
18. जोशी, आर.एल. : नगरीय भूगोल, र. ह. ग्रन्थ अकादमी, जयपुर
19. ओमप्रकाश सिंह : नगरीय भूगोल
20. बंसल : नगरीय भूगोल

**Paper VII (b) - Geography of Population and Settlement**

**Duration** - 3 hours **Max. Marks** - 100

**Note:** The question paper will contain three sections as under –

**Section-A:** One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

**Section-B:** 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

**Section-C:** 04 questions (question may have sub-division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

**Unit - I**

**Unit - II**
Age and Sex Composition, Economic and religious Composition of Population with special reference to India, Rural and Urban Population and Urbanization, Internal and International Migration, Behavioral Migration Studies. The Population Policy of Govt. of India.

**Unit - III**

**Unit - IV**
Site and situation of Rural and Urban settlements, Settlement pattern, Size and spacing of Rural and Urban settlements, Morphological characteristics of Rural and Urban settlements with special reference to India Sector.

**Unit - V**
Concentric zone and multiple Nuclie Models of Urban growth. Problems of Urban housing and emergence of status.
Books Recommended:
1. Clarks : Population Geography
2. Jones : A Population Geography
3. Trewartha : A Geography of Population
4. Woods : Population Analysis in Geography
5. Woods : Theoretical Population in Geography
6. Beaujen Garnier : Geography of Population
7. Zelinsky : A Prologue to Population Geography
8. Wilson : Population Geography
9. Chandra : Population Geography
10. Hudson, E.S. : Geography of Settlement
11. Davis : The Population of India and Pakistan
14. Sharma, R.C. : Settlement Geography of Indian Desert
15. Chisholm : Rural Settlement and land Use.
17. जयसिंह, एल.एन. : अधिवास भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर

Paper VII(c) - Bio- Geography

Duration - 3 hours Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50

Section-C : 04 questions (question may have sub-division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

Unit – I
Meaning and scope of Bio- Geography, History of Zoo- Geography and Plant Geography, Ecology, Habitat, Habitat and Climatic factors, Plant response to environment.

Unit – II
Barriers to distribution and means of dispersal of plants. Types of Plant and plant Communities in general. Factors controlling forest distribution. Characteristics and distribution of Equatorial and temperate forests and grasslands.

Unit - III
Climate change and their effect on the plant cover, condition of existence for animals. Barriers to distribution and means of dispersal of animals. Types of Isolation, effect of geographic Isolation. Distribution of animals.

Unit - IV
Zoo Geographical regions. Aquatic environment and life, marine and fresh water Fauna. Vegetation and floral regions of India, economic importance.
Unit - V


Books Recommended:
1. Newbegin : Plant and Animal Geography
2. Cline : Foundation of Plant Geography
4. Darlington : Zoo- Geography
5. Schimper : Plant Geography
6. S. L. Hora : Fundamental Conception of Zoo- Geography, N.G.S.I. Banaras
7. S. L. Hora : Terrestrial Fishes and the Significance of their Distribution in Geographical Studies, N.G.S.I. Banaras
8. H.S. Mathur : Bio- Geography
9. अग्रवाल, एल.मी. : जैव भूगोल, रोहिणी बुक्स, जयपुर
10. शार्मा एवं शार्मा : पादप भूगोल, रोहिणी बुक्स, जयपुर

Paper VIII (a) - Political Geography

Duration - 3 hours        Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks : 10
Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks : 50
Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks : 40

Unit - I

Definition, Scope and Development of Political Geography:
1. Definition and scope of political geography : its relation with other social sciences.
2. Geopolitics and German School of Thought
4. Geopolitics and conflict zones of the world.

Unit - II

Methodology:
1. The functional approach and Unified Field Theory in Political Geography.
2. The Elements of the state : Territory, Population, Organisation and power.
3. The Heart of the State : Core Areas.
4. The focus : Capital City.

Unit - III

Frontiers, Boundaries: Concepts and Classification:
1. Frontiers, Boundaries and Buffer Zones.
2. Classification of Boundaries, changing concept.
3. The concept of Territorial Sea and Maritime Boundaries.
4. Landlocked States: Problems of access.

**Unit - IV**

Growth of Nations and Disintegration of Empires:

1. Unitary and Federal States.
2. The Dying Colonialism and Resurgent Nationalism.
3. Supranationalism: from State to Blocks

Strategy of International Politics:

1. Study of Federation of Independent states and U.S.A. as Power.
2. Emergence of Third World Block.
3. Politico-geographical study of India.

**Unit - V**

Extending Dimensions of Political Geography:

1. The Politics and transportation
2. The geography of foreign aid and economic development.
3. The politico-geographical implications of space research.

Books recommended:

10. एच.एस. सकसेना: राजनीतिक भौगोलिक, रस्तोगी पृष्ठभंग, मेरठ.
Paper VIII(b) - Research Methodology

Duration - 3 hours        Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A : One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part.  Total marks : 10

Section-B : 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words.  Total marks : 50

Section-C : 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted.  Total marks : 40

Unit-I

Unit- II
Preparation of Research project and report writing, Carotgraphic representation of agricultural, transport, marketing and industrial data.
Selected techniques of spatial analysis, Methods of measurement of concentration and dispersion of economic activities.

Unit - III
Nearest neighbour analysis with examples, Regional interaction analysis, Gravity potential, Methods of delimiting regions - Resource Regions, Economic, Industrial, Agricultural and Planning regions.

Unit- IV
Regional population analysis - Population projection, Population Migration Projection, Network analysis with examples. Delimiting urban and market spheres of influence.

Unit-V

Books Recommended :

4. Maruice Yeats : An Introduction to Quantitative Analysis in Human Geogra
Paper VIII(c) - Regional Planning and Development

Duration - 3 hours
Max. Marks - 100

Note: The question paper will contain three sections as under –

Section-A: One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks: 10

Section-B: 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks: 50

Section-C: 04 questions (question may have sub-division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks: 40

Unit - I
Regional concept in Geography, Conceptual and theoretical framework, merits and limitations for application to regional planning and development; changing concept of the region from an interdisciplinary view-point.

Unit- II
Concept of space, area and locational attributes. Approaches to delineation of different types of regions and their utility in planning. Planning process - sectoral, temporal and spatial dimensions;

Unit-III
Indicators of development and disparities - case study of India. Regional development strategies - concentration v/s dispersal, case studies for plans of developed and developing countries.

Unit- IV
Short-term and long term planning in a national context. Regional plans of India Regional development in India - problems and prospects.

Unit- V
Concept of Multi-level planning: Decentralised planning; Peoples participation in the planning process; Panchayati Raj system. Role and relationship of Panchayati Raj institutions (Village Panchaayat, Panchayat Samiti and Zila Parishad) and administrative structure (Village, Block and District).

Books Recommended:
10. Govt. of India, Planning Commission - Third Five Year Plan, Chapter on Regional Imbalances in Development, New Delhi, 1961
11. Indian Council of Social Science Research - Survey of Research in Geography, Popular Prakashan, Bombay, 1972
15. Losch, A.: The Economics of Location, University Press, Yale, New Haven, 1954
20. Nangia, Sudesh: Delhi Metrololitan Region, Rajesh Publication, Delhi, 1976
23. Tarlok Singh: India's Development Experience, McMillan, New Delhi, India, 1974

**Paper VIII(d) - Remote Sensing and GIS**

Duration - 3 hours  Max. Marks - 100

**Note:** The question paper will contain three sections as under –
Section-A: One compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. Total marks: 10

Section-B: 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. Total marks: 50

Section-C: 04 questions (question may have sub-division) covering all units but not more than one question from each unit, descriptive type, answer in about 500 words, 2 questions to be attempted. Total marks: 40

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

Unit-II
Air Photos and Photogrammetry: Elements of Photographic system: type, scales and ground coverage, resolution, radiometric characteristics, films, filters, aerial cameras, geometric fundamentals of photogrammetry, elements of vertical photographs, relief displacement, image parallax, stereoscopic, orthophotos. Airphoto interpretation: shape, size, pattern, tone, texture, shadows, site, advantage and limitation and remote sensing and its comparison with map, aerial photographs and satellite imagery.

Unit-III
Satellite Remote Sensing: History and development of various types of satellite and space programme with special reference to Indian Space Research programme. Types of imagery, techniques of visual interpretation, ground verification, transfer of interpreted thematic information of base maps.

Unit-IV
Digital image processing: rectification and resolution, Image enhancement, Contrast manipulation, Classification - supervised and unsupervised, Post classification analysis.

Unit-V
Application: Air photo and image interpretations and mapping, forest and wild life, mines and Geology. Land use and land cover, Soil, land evaluation, weather studies, water resources; Urban studies and hazard management and environmental management. GIS - Introduction, definition and scope, its application in various fields and planning. GPS.

Books Recommended:
6. Luder, D: Aerial Photography Interpretation: Principles and
Dissertation on Geographical Problem  
(In lieu of paper VI or VII or VIII)

N.B. : The candidates offering this paper will be require to submit dissertation as per University conditions. It will be examined by a board of two examiners. Three copies of dissertation must be submitted to the University. Out of which one copy will be returned to the Department/College and one of the Supervisor. The dissertation should exclusively be based on field work and statistical analysis as far as possible and be prepared under the guidance of a postgraduate teacher of five years standing. The volume of the dissertation should not exceed 100 pages.

Practicals
Surveying and laboratory Work (Total 10 hrs per batch of 10 candidates spread over two days).

1. Laboratory work (4 hrs duration)  
2. Record work & viva-voce (15+5) 2 hrs  
3. Field surveying & viva voce (15+5) 4 hrs  
4. Survey camp & viva - voce (15+5)  

Total 100 Marks

N.B. 12 hrs of teaching practical be provided per batch of 10 students per week.

The Art of surveying, History of surveying, scope, utility and problems. Classification of Surveying.

Methods and techniques of representation of relief:  
(a) Methods and techniques of depicting relief.  
(b) Profile, gradients and calculation of slopes.  
(c) Contours and intervisibility.  
(d) Block diagrams, field sketching, serial profile, hypsographic curves, altimetric frequency graphs.

Air photo Interpretation and exercise on the determination of height of plan, parallax, number of runs and number of photographs, knowledge of stereoscopic vision, mosaic, types of cameras, emulsions and stereoscopes, Interpretation and identification of cultural and physical features on serial photography. Importance of Remote Sensing and GIS in Geographical Studies.

Field Surveying and Camp Work:
Theodolite: its part and their functions, use of theodolite, theodolite traverse and traverse computation, independent coordinates.

Use and application of planetable and clinometer in small area survey, traverse, Resectioning: Two and Three -point problems, practical contouring by Clinometer.

Levelling: Terms, types and principles of levelling, Classification of levelling, Profiles and other levelling. Use of Dumpy level, practical counting, Cross sectioning, use and application of Abney level.

Survey Camp - A topographical survey of settlement will be done by organising a camp at least for a week duration and maps, reports of the camp will be prepared, students will stay at camp. The report shall be prepared separately and independently.

Books Recommended:

2. Deshpande, T.S. - A Text Book of Surveying and Levelling, United Book Corporation, Puna
3. James Glending - Principle and Use of Surveying, Blackie and Sons Ltd., Glasgo
9. Williamson - Surveying and Field Work, Constable