MAHARSHI DAYANAND SARASWATI UNIVERSITY, AJMER

CHOICE BASED CREDIT SYSTEM

(Semester Scheme with Multiple Entry and Exit Option for Under Graduate Honours Course)

SYLLABUS OF GEOGRAPHY

B.A. HONOURS

(Semester I – Semester VIII)

Syllabus prepared according to University Guidelines via Letters dated 13-02-2024, 21-02-2024, 23-02-2024 and 11-03-2025.

TO BE IMPLEMENTED FROM ACADEMIC SESSION 2024-25

Members of BOS in Geography:

S. No.	Name of Members	
1.	Prof. Shiv Dayal Singh Head, Dept. of Economics, M.D.S. University Ajmer.	Dean
2.	Prof. Milan Kumar Yadav Principal Govt College, Pushkar	Convenor
3.	Prof. Kirti Choudhary Professor in Geography, SPC Government College, Ajmer	Member
4.	Prof. K. L. Gurjar	Member
5.	Prof. Vinay Kumar, Professor in Geography, SPC, Govt Colleges. Ajmer	Member
6.	Prof. Gopal Lal Gupta, Govt College Malpura, Tonk.	Member
7.	Prof. Arjun Lal Meena, Jodhpur	External Member
8.	Prof. SP Asthana, DAV College, Kanpur	External Member

Signature

Member

Prof. Kirti Choudhary

Professor in Geography,

SPC Govt. College, Ajmer

Signature

Convenor

Prof. Milan Kumar Yadav

Principal

Govt. College, Pushkar

GEOGRAPHY SEMESTER – 1 CORE COURSE – DSC-A

CORE COURSE –DSC-A: (Credits: Theory-04, Practical-02)

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PHYSICAL GEOGRAPHY Theory: 60 Lectures

Unit - I

Definition of Physical Geography, Solar System, Origin of the earth, Motions of the Earth and its Satellite, Solar and Lunar eclipse, Zones of the interior of the Earth and Geological time scale. Wagener's theory of continental drift, Plate Tectonics; Isostasy.

Unit - II

Theories of Mountain Building — Joly, Kober and Holmes; Diastrophic Forces — Faults and folds, Earthquakes and Volcano, Concept Of cycle of Erosion- Davis and Penck; Landforms associated with Fluvial, Glacier, Aeolian, Karst and Coastal landscapes.

Unit - III

Composition and layers of Atmosphere; Insolation and Heat Budget of the Earth: Temperature and Pressure; Atmospheric circulations- Planetary and Local winds; Relief features of the Ocean, Distribution of temperature and salinity in oceans; Ocean currents and Tides.

Suggested Books:

1. Strahler, A.H.: Elements of Physical Geography.
2. Wooldridge, S.W.: The Physical Basis of Geography, Longman's Green & Co. London 1959.
3. Mathur. I.R.: Climatology, Mc. Graw Hill, New York.
4. Banerjee, H.C. & D.S.: Mosam Vigyan, Rajasthan Hindi Granth Academy Jaipur.
5. Gerald, S.: General Oceanography – An Introduction, John Willey & Sons, New York.
6. Finch &Trewartha: Elements of Physical Geography.
7. Sharma. R.C.: Oceanography for Geographers, Chaitanya Publishers, Allahabad.

8. सविन्द्र सिंह : भौतिक भूगोल – वसुन्धरा प्रकाशन, गोरखपुर (उ.प्र.)।
9. मामोरिया एवं रतन जोशी : भौतिक भूगोल–साहित्य भवन पब्लिकेशन, आगरा।
10. वी.एस. चौहान एवं अलका गौतम : भौतिक भूगोल–रस्तोगी प्रकाशन,
11. भौतिक भूगोल: डी. आर. खुल्लर, कल्याणी पब्लिकेशन ।

GEOGRAPHY PRACTICAL DSC-A – SEMESTER 1 (60 Lectures)

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 Marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 Marks

Viva-voce = 5 Marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

Course Contents:

1. The nature and scope of cartography.
2. Scales - Plain. Diagonal and Comparative.
3. Enlargement, reduction and combination of maps – Square & Ray Method.
4. Methods of Representation of Relief - Hachures, Spot Height, Bench Mark, Hill Shading, Layer tint, Contours. Relief features, Types of Slopes, Valleys, Waterfall, Gorge, Plateau, Conical Hill, Ridge, Saddle & Pass.

Books Recommended:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल- डॉ पी आर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर
9. प्रायोगिक भूगोल- आर एन मिश्रा; पी के शर्मा ,रावत पब्लिकेशन सेक्टर 3, जवाहर नगर, जयपुर
10. प्रायोगिक भूगोल- डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली

GEOGRAPHY SEMESTER – 2 CORE COURSE – DSC-A

CORE COURSE –DSC-A: (Credits: Theory-04, Practical-02)

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

GEOGRAPHY OF RAJASTHAN Theory: 60 Lectures

Unit - I

Rajasthan: Location; Physiographic Regions; Geological structure; Climate and Climatic regions; Drainage system and lakes; Soil types and regions, erosion and conservation: Vegetation – types and Distribution. Land utilization in Rajasthan.

Unit - II

Agriculture — types and characteristics, production and distribution of Bajra, Wheat, Maize, Cotton, Mustard, Sugarcane. Major irrigation projects- Chambal, Mahi and Indira Gandhi Canal Project (I.GC.P.); Distribution and production of minerals — Metallic and Non-metallic; Power Resources — Coal, Petroleum and Natural Gas; Hydel and non-conventional energy resources, distribution and production of Cotton Textile, Sugar and Cement Industries.

Unit - III

Population: Distribution and density; Population structure — age and sex ratio, urban and rural, literacy, population growth causes, problems and solutions. Social and cultural status of major tribes — Bhil, Grassia, Meena, Saharia, Status of Women in Rajasthan.

Suggested Books:

1. Mishra, V.C.: Geography of Rajasthan, N.B. T. Delhi.
2. Chauhan, T. C. Geography of Rajasthan, Scientific Publication, jodhpur.
3. Bhalla, L. R.: Geography of Rajasthan, Kuldeep Publication, Ajmer.
4. चौहान, टी.एस., राजस्थान का भूगोल, विज्ञान, प्रकाशन, जोधपुर।
5. भल्ला, एल.आर. राजस्थान का भूगोल,, कुलदीप प्रकाशन, अजमेर।
6. एच.एम. सक्सेना, राजस्थान का भूगोल, राजस्थान हिन्दी ग्रन्थ एकादमी,
7. एच.एस. शर्मा, राजस्थान का भूगोल, पंचशील प्रकाशन, जयपुर।

GEOGRAPHY PRACTICAL DSC-A - SEMESTER - 2 60 Lectures

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

Course Contents:

- Study of Topographical sheets - Scheme of Indian Topo-sheets. Interpretation of a hilly and a plain area of India in respects of relief, drainage, Human settlement, Transport & Communication Pattern, Profile Drawing.
- Representation Of Geographical Data by Diagrams-One- Dimensional Diagram- Line-Polyline, Bar-Simple, Compound Multiple, Pyramid- Simple, Superimposed, Compound, Two-Dimensional Diagram - Square, Rectangle, Ring, Divided Circle, Three-Dimensional Diagram Sphere, Block pile.

Books Recommended:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल- डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर
9. प्रायोगिक भूगोल- आर एन मिश्रा; पी के शर्मा ,रावत पब्लिकेशन सेक्टर 3, जवाहर नगर, जयपुर
10. प्रायोगिक भूगोल- डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली

GEOGRAPHY SEMESTER – 3

CORE COURSE –DSC-A: (Credits: Theory-04, Practical -02)

CORE COURSE –DSC-B: (Credits: Theory-04, Project-02)

SEC (Credits: 02)

GEOGRAPHY SEMESTER – 3 CORE COURSE – DSC-A

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PAPER – 1: HUMAN GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Definition, nature, scope, development and history of Human Geography; Principles of Human Geography; Elements of Human Geography - according to Vidal de-la-Blanche, Brunhes, Huntington; Branches of Human geography; Concepts of man environment relationship. Concept of dualism in geography.

UNIT - II

Division of races of Mankind: spatial distribution, physical and social profile of racial groups. Early economic activities of mankind: food gathering, hunting, fishing and shifting cultivation. Human adaptation to environment (i) Cold Region - Eskimo; (ii) Hot, Region- Bushman, Pigmy, Bedouins (iii) Plateau - Khirghiz, Masai, Gonds (iv) Mountain - Gujjars, Naga (v) Plain- Bhil and Santhal.

UNIT - III

Distribution of population, world distribution pattern - physical, economic and social factors influencing spatial distribution; concepts of over population, under population and optimum population; demographic transition theory. Migration - types, Raven stein laws of migration, Concept of Human Development Index.

Suggested Books:

1. Bergwan, Hall, New Edward Jersey, 1995. E: Human Geography; Culture, Connection and Land Scape, Prentice
2. Carr, M : Patterns, Process and change in Human Geography, Me Millan Education London, 1987.
3. Fellman, J.L. : Human Geography- Landscapes of Human Activities. Brown and Benchmark Pub., U.S.A. 1997.

4. De Blij H.J. : Human Geography, Culture, Society and Space, John Wiley, New York, 1996.
5. Maurya, S.D. Human Geography, Pranav Cia Publication, Allahabad.
6. कौशिक : मानव भूगोल के सरल सिद्धान्त, रस्तोगी एण्ड कम्पनी, मेरठ।
7. विश्व नाथ द्विवेदी एण्ड कनोजिया : मानव भूगोल के सिद्धान्त, किताब महल, इलाहाबाद।
8. जोशी रतन : मानव एवं पर्यावरण, साहित्य भवन पब्लिकेशन, आगरा।
9. कास्वा : मानव एवं पर्यावारण, मलिक प्रकाशन, जयपुर।
10. गुर्जर आर.के. एवं जाट बी.सी. : मानव भूगोल, पंचशील प्रकाशन, जयपुर।

GEOGRAPHY PRACTICAL DSC-A – (SEM.-3) **Practical: 60 Lectures**

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

COURSE CONTENTS:

- Types and uses of cartographic symbols - point, line and area symbols.
- Classification of distribution maps- Qualitative Maps (Choro Schematic & Choro Chromatic), Quantitative Maps (Choropleth, Isopleth, Dot, Dot & Circle, Dot & Sphere Maps)
- Traffic-flow diagram. Simple and Compound Windrose, Climograph, Hythergraph and Climatograph.

Suggested Books:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।

8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्राय पी के शर्मा ,रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।

GEOGRAPHY SEMESTER – 3 CORE COURSE – DSC-B

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PAPER – 2: ECONOMIC GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Definition, Scope, concepts and recent trends in economic geography, Location of economic activities and spatial organization of economy, sectors of economy – Primary, Secondary, Tertiary, Quaternary and Quinary; Factors of location of economic activities: physical, social, economic and cultural. Case studies of selected industries Iron and Steel, Aluminium, Coal and Petrochemical industries.

UNIT - II

Concept and techniques of delimitation of agricultural regions, crop combination and diversification; Von Thunen's model and its modifications. Classification of industries; Resource based and footloose industries, Theories of industrial location – Weber, Losch and D.H. Smith.

UNIT - III

Modes of transportation and transport cost; accessibility and connectivity: international, inter and intraregional; Typology of markets, market network in rural & urban societies, role of market in the development of trade and commerce, Economic development of India, Impact of green revolution on Indian economy, Globalization and Indian economy and its impact on environment.

Suggested Books:

1. McCart and Lindberg: A Preface to Economic Geography.
2. Smith, D.E: Industrial Location – An Economic Geographical Analysis.
3. Miller, E.W.: A Geography of Manufacturing.
4. Alexander, J.W. Economic Geography, Prentice Hall, New York.
5. Guha & Chatterjee: A New Approach to Economic Geography.
6. Robson, H.: Economic Geography, M.Sc. Donald, London.
7. Thoman, R.S.: The Geography of Economic Activity, McGraw Hill, New York.
8. Zimmeciman, E.W.: World Resources and Industries, Harper and Co., New York.
9. Robertson D. (ed): Globalisation and Environment, E. Elgan Co., U.K. 2001.
10. Wheeler J.O.: Economic Geography, John Willey, New York, 1995.
11. काशीनाथ सिंह : आर्थिक भूगोल के मूल तत्व, वसुन्धरा प्रकाशन गोरखपुर।
12. पुरूषोतम जैन : आर्थिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
13. जैन. एस.सी. : सैद्धान्तिक आर्थिक भूगोल

GEOGRAPHY PROJECT DSC-B –ECONOMIC GEOGRAPHY (SEM.-3)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Case study of a market, agricultural field, industry, observations of its various characteristics- structure, form, type, functions, characteristics, transport, etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 3 – SEC **(Credits: 02)**

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

SEC - TOURISM GEOGRAPHY

Theory: 30 Lectures

UNIT - I

Nature and Scope of Geography of Tourism, Factors affecting tourism development, Importance of geography in Tourism, Latitude-Longitude-International Date Line-Time zone-Time differences; types of tourism (Inbound, outbound Inter–regional and intra–regional tourism, domestic, international tourism, adventure, sports, religious, special interest tourism like culture or nature oriented, ethnic or 'roots' tourism, Medical tourism, Rural Tourism; Sustainable Development of Tourism.

UNIT - II

General Tourism Trends in Rajasthan (Domestic & Foreign), Major Tourist Attractions of Rajasthan (Forts & Palaces, Major Lakes, Major Wildlife Sanctuaries & National Parks of Rajasthan, UN Heritage Sites). Major Festivals & Fairs of Rajasthan, Eco- Tourism in Rajasthan.

UNIT - III

Tourist Circuits of Rajasthan with special reference to Merwara -Marwar Circuit. Future possibilities. Challenges and Opportunities, Problems facing by domestic and foreign tourists; Role of Ministry of Tourism in developing and promoting tourism in Rajasthan; Study of State Tourism Policy 2020.

Suggested Books:

1. A.K. Bhatia-Tourism Principles
2. L.K. Singh – Fundamentals of Tourism and Travel.
3. Sumitra Raday Archana Biwal – Tourism operations and Management Vandana Joshi
4. S.K. Bhaseen – Forts and palaces of Rajasthan
5. सुरेष चन्द्र बंसलः पर्यटन भूगोल
6. राजेष कुमार व्यास – पर्यटन उद्भव एवं विकास
7. H.M. Saxena: राजस्थान का भूगोल
8. कल्याण सिंह षेखावत – राजस्थानी संस्कृति
9. मोहनलाल गुप्ता – राजस्थान में पर्यटन स्थलों का प्रबन्धन लोक कलाओं का संरक्षण
10. राघवेन्द्र मनोहर – राजस्थान के प्रमुख दुर्ग

GEOGRAPHY PROJECT- SEC – TOURISM GEOGRAPHY (SEM.-3)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: A case study of any Tourist Place, lakes, wild life sanctuary, fair and festival visited or attended, its nature, importance, factors affecting tourism development, problem and prospects, etc.

The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 4 CORE COURSE – DSC-A & B

CORE COURSE –DSC-A: (Credits: Theory-04, Practicals-02)

CORE COURSE –DSC-B: (Credits: Theory-04, Project -02)

SEC (Credits: 02)

GEOGRAPHY SEMESTER – 4 CORE COURSE – DSC-A

CORE COURSE – DSC-A: (Credits: Theory-04, Practical-02)

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PAPER – 1: GEOGRAPHY OF INDIA

Theory: 60 Lectures

UNIT - I

Geographical Location of India; Physiography of India; Drainage systems; Climate of India, Monsoon; Koeppen's climatic regions of India. Soil types - distribution and characteristics, Natural Vegetation types, distribution and conservation.

UNIT - II

Spatial distribution of population and density: Socio Economic implications of population explosion: urbanization, Gender discrimination. Types of Agriculture, Green revolution vis-vis traditional farming; Agricultural regions and its relevance in agricultural development planning. Major crops of India viz. wheat. rice, sugarcane, cotton jute, coffee, tea; Dairy Farming;

UNIT - III

Minerals Resources: - iron-ore, copper, manganese and Sources of Power Coal. Petroleum, hydropower, atomic energy. Resources Regions of India: Industries - Iron and steel, textile, cement, aluminium, industrial regions of India. Transportation – railways, road, air and water. Planning regions of India.

Suggested Books:

1. Deshpande C.D.: India -A Regional Interpretation. Northern Book Centre. New Delhi, 1992.
2. Singh R.L. (ed): India - A Regional Geography, National Geographical Society, India. Varanasi, 1971.
3. Singh: O.H.K. and Leammonth, A.T.A.: India and Pakistan - land people and Economy, Methuen & Co., London. 1967.
4. Wadia, D.N.: Geography of India, McMillan & Co., London 1967,
5. Khullar DR: India (A Comprehensive Geography) Kalyani Publication, New Delhi.
6. Negi, Geography of India.
7. Indian Year Book of (Latest India. Edition) : Publication Division, Delhi.
8. Chatterji, S.B.: Climatology of India (Calcutta University, Calcutta)
9. Gazetteers of India: Publication Division, New Delhi.
10. वी.के. तिवारी : भारत का वृहत भूगोल, हिमालय पब्लिकेशन।
11. मामोरिया एवं जैन : भारत का वृहत भूगोल, साहित्य भवन, आगरा।
12. सुरेश चन्द्र बंसल, भारत का वृहत भूगोल

GEOGRAPHY PRACTICAL - DSC-A – (SEM.-4) **Practical: 60 Lectures**

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

COURSE CONTENT:

- **Statistical methods** - computation of Data, Preparation of frequency tables, Graphical presentation of frequencies distribution. Histogram. Frequency polygon. Frequency curve and ogive. Mean, Median and Mode.
- **Plane Table Survey**- Methods of Plane Table Survey – Radiation, Intersection, Open and Close Traverse, Re-Sectioning (Two and Three-Point Problems). Mechanical Method, Llano's, Bassel's and Trial and error.
- **Indian Clinometer** – Its parts, methods and determining the height of distant points.

Suggested Books:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्राय पी के शर्मा ,रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।

GEOGRAPHY SEMESTER – 4 CORE COURSE – DSC-B

CORE COURSE – DSC-B: (Credits: Theory-04, Project-02)
Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PAPER – 2: BIOGEOGRAPHY

Theory: 60 Lectures

UNIT - I

Definition, scope and significance of Bio-Geography; its relation to other sciences; Basic ecological principles; Bio-energy cycle in the terrestrial eco-system; energy budget of the earth; Trophic levels, food chain and food webs; Darwin's Theory of Evolution; concepts of Biome; Ecotone and community. Biodiversity-definition, types, value, various levels, Hotspots, threats & conservation of biodiversity.

UNIT - II

Origin and extinction of Fauna and Flora: Geographical distribution, major gene centre, domestication of plants and animals; Migration and dispersal, distribution of plant life (Floristic realms) on the earth and its relation to soil types, climates and human practices. Geographical distribution of animal life (zoo geographical realms) on the earth and its relation of vegetation types, climate and human practices.

UNIT - III

Problem of pollution - types of pollution, water pollution in river Ganga, Environmental degradation and consequences, its effects on major plants and animal life; study of Mangrove, tropical rainforest and mountain, Bio-geographical regions of India in relation to their plant and animal life, problems, conservation and management.

Suggested Books:

1. Robinson M.H. : Bio Geography, E.L.B.S. McDonal Evans, London.
2. Symmons, l.G. : Bio-geographical Processes, George Allen and Unwi, London.
3. Berry, C. : Biogeography – An ecological and Evolutionary Approach, Cox Blackwell, Oxford, 1977.
4. Joy, T. : Biogeography – A Study of Plants in 1971 the Ecosphere, Oliver and Boyd. Edinburgh.
5. Mathur, H.S. : Essentials of Bio Geography, Jaipur.
6. Seddon, B : Biogeography, Duckworth, London, 1971.
7. Martin, C. : Plant Geography, Mathuen, 1975.
8. Philip,J. : Zoo Geography- The Geographical Distribution of Animals, John Willey, New Yourk, 1957.
9. कुलश्रेष्ठ, के.पी. जैव भूगोल, किताब घर, कानुपर।
10. जोशी रतन : जैव भूगोल एवं जैव विविधता, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।

GEOGRAPHY PROJECT DSC-B – BIOGEOGRAPHY (SEM.-4)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Case study of a Region's Biogeography, Pollution, Environment Degradation; observations of its various characteristics – Issues, Challenges, Strategies, future prospects, etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 4 – SEC

(Credits: 02)

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PRINCIPLES OF REMOTE SENSING & GIS **(30 Lectures)**

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: platform sensors and radiation records. Microwave sensing interpretation of SLAR imageries, thermal imageries.

UNIT - II

Remote Sensing Satellite: platforms LANDSAT, SPOT, NOAA, 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.

UNIT - III

Classification: Supervised and Unsupervised, post-classification analysis and accuracy assessment. Applications: Air photo and image interpretations, arid mapping land use and land cover, land evaluation, urban land use, landform and its processes, weather studies and studies of water resources: integration of Remote Sensing and GIS. Remote sensing and hazard management, remote sensing and environmental management.

Suggested Books:

1. American Society of Photogrammetry: Manual of Remote Sensing. ASP, Falls Church V.A., 1983.
2. Barrett E.C. and L.F. Curtis: Fundamentals of Remote Sensing and Air Photo Interpretation on, Memillan, New York, 1992.
3. Compbell J.: Introduction to Remote Sension, Guilford, New York, 1989.
4. Curran, Paul J.: Principles of Remote Sensing. Longman, London, 1985.

5. Luder D,, Aerial Photography Interpretation: Principles and Application, Cc Graw Hill, New York, 1959.
6. Pratt W.K. Digital Image Processing. Wiley, New York, 1978.
7. Rao D. P. (eds.): Remote Sensing for Earth Resources, Association of Exploration Geophysicist, Hyderabad, 1998.
8. Thomas M. Lillesand and Ralph W. Kefer, Remote Sensing and Image Interpretation, Wiley & sons, New York, 1994.
9. Aronoff S. Geographic Information Systems: A. Management Perspective, Publication Oikawa, 1989.
10. Burrough P.A. Principles of Geographic Information Systems for La n d Rison Assessment Oxford University Press, New York, 1986.
11. Fraser Taylor D.R. Geographic information Systems. Pergamon Press, Oxford 1990.
12. Maquire D.J.M.F. Goodchild and D.W. Rhind (eds.). Geographic information System 'Principles arid Application. Taylor & Francis, Washington, 1991.
13. Mark S. Monmonier. Computer - assisted Cartography, Prentice-Hall, Englewood Cliff, Jersey, 1982.
14. Star J. and J. Estes, Geographic Information Systems: An Introduction, Prentice Englewood Cliff, New Jersey, 1994.
15. चौनियाल, देवी दत्त : सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली

GEOGRAPHY PROJECT SEC – PRINCIPLES OF REMOTE SENSING & GIS - (SEM.-4)

Marks: Pro. = 30

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Air photo and image interpretations, mapping land use and land cover, land evaluation, urban land use, landform and its processes, weather studies and studies of water resources: integration of Remote Sensing and GIS. Remote sensing and hazard management, remote sensing and environmental management. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 5

CORE COURSE –DSC-A: **(Credits: Theory-04, Project-02)**

ELECTIVE COURSE –DSE -A: **(Credits: Theory-04, Project -02)**

AEC **(Credits: 02)**
VAC **(Credits: 03)**
SEC **(Credits: 03)**

GEOGRAPHY SEMESTER – 5 CORE COURSE – DSC-A

CORE COURSE – DSC-A: (Credits: Theory-04, Project -02)
Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

SETTLEMENT GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Definition, Nature and scope of settlement geography; Types of settlements, Factors affecting the origin and growth of settlements, Origin and growth of Rural Settlement: Pattern and classification, house types and building Material.

UNIT - II

Nature and scope of Urban Geography, Origin and growth of towns during ancient. Medieval and Modem period. Factors affecting the growth. site and situation, Trends of Urbanizations in India since 1901. Functional classification of cities. Urban economic base - the basis and non-basis concept. Urban hierarchy based on functions. Urban Morphology (concentric zone theory, sector theory and multiple nuclei theories) Urban Land use- city core. commercial. residential and industrial areas.

UNIT - III

Models and Theories of urban growth and structure: the rank size rule, the primate city, the central place theory Contemporary urban issues and problems. City – Region Relationship Umland. Rural-Urban fringe, suburbs. Principles of town planning.

Suggested Books:

1. Bose, A., India's Urbanization 1947-2000, Tata McGraw Hill, New Delhi
2. Carter H., The Study of Urban Geography, Edward Arnold, London, 1972
3. Chisholm, M., Rural Settlement and Land Use. Hutchinson. London, 1970
4. Clout. R.D., Rural Geography, Pergamon Press, London, 1970
5. Dickinson, R.E., City. Region and Regionalism, Kegan Paul, Trench, Teubner & Co ., London,
6. Ghosh. Sumita, Introduction to Settlement Geography, Orient Longman, Calcutta, 1998
7. Krishan, G., Nagar Bhoogol, Punjab State University Text Book Board, Chandigarh (Punjab)
8. Mayer. H.M. & Kohn, C.F.(eds.). Readings in Urban Geography, Chicago
9. जोशी,रतन : नगरीय भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर।
10. बंसल एस.सी. : नगरीय भूगोल।

GEOGRAPHY PROJECT – SETTLEMENT GEOGRAPHY - (SEM.-5)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Case study of a settlement, observations of its various characteristics- structure, form, house types, building material, functions, population characteristics, transport, market etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 5 - ELECTIVE COURSE – DSE-A

ELECTIVE COURSE – DSE-A: (Credits: Theory-04, Project -02)

Note: Student has to choose any one: -

1. **Population Geography & Project**
2. **Resource Geography & Project**

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

1. POPULATION GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Population geography: definition, nature and scope and interdisciplinary study, theories of population growth - pre-Malthusian views, Malthus' theory, Marxist theory, Optimum population theory, demographic transition model, world population distribution, growth trends and determinants.

UNIT - II

Migration: history, theories, trends and patterns of international and internal migration, Consequences of Migration and Current Issues, population dynamics: fertility and mortality - measurement, determinants and distribution, world population composition and characteristics, world population urbanization, trend pattern and challenges.

UNIT - III

India - population characteristics and relationship with development: population control movement and policies: urbanization and population explosion; contemporary issues - ageing of population: declining sex ratio.

Suggested Books:

1. Daugherty, Helen Gin, Kenneth C.W. Kammeyir, An Introduction to Population (Second Edition), The Guilford Press, New York, London, 1998.
2. Garnicr, B.J. Geography of population Longrrian, London. 1970.
3. Mamoria, C.B. India's Population Problem, Kitab Mahal New Delhi, 1981.
4. Sunda.ra.m K. V. a.nd Sudesh Nangia., (ed.) Population Geography, Henlage
5. Publications, Delhi, 1986.
6. UNDP: Human Development Report, Oxford University Press, Oxford, 2000.
7. Woods R.. Population Amalysis' in Geography Longman, London, 1979.
8. Census of India, India, 2011.
9. बघेल, अनुसुइया : शिशु मर्त्यता : सिंघई पब्लिशर्स एण्ड डिस्ट्रीब्यूटर, रायपुर, 2004.
10. ओझा, रघुनाथ : जनसंख्या भूगोल. हीरालाल : जनसंख्या भूगोल.
11. चन्दना, आर.सी. : जनसंख्या भूगोल. त्रिपाठी,
12. रामदेव : जनसंख्या भूगोल
13. कुलश्रेष्ठ, के.पी. जैव भूगोल, किताब घर, कानुपर।
14. जोशी रतन : जैव भूगोल एवं जैव विविधता, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।

GEOGRAPHY PROJECT 1-DSE-A - POPULATION GEOGRAPHY - (SEM.-5)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Case study of a Region Population, observations of its various characteristics- structure, growth, population characteristics, factors affecting, future prospects, etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

2. RESOURCE GEOGRAPHY **Theory: 60 Lectures**

UNIT - I

Nature, scope and significance of the Geography of Resources, Definition and classification of resources – renewability, availability and distribution of major natural resources – soils, forests, fish, marine resources - biotic resources.

UNIT - II

Important minerals and their world distribution - Iron ore, Copper, Aluminum, Coal, Petroleum, Major manufacturing industries and their localization - Iron and steel and Cotton Textile, Agriculture- wheat, rice, maize, cotton, tea, sugarcane, coffee and tobacco.

UNIT – III

Problem of Resource utility, exploitation and conservation, planning and management, sustainable development, WTO and Globalization, its effect on developing countries, Resource Regions of the world.

Suggested Books:

1. Alexander, J.W. : "Economic Geography" Prentice Hall.
2. Jones and Darkenwald. "Economic Geography" Macmillan.
3. Miller E,: "Geography of Manufacturing" Prentice Hall.
4. सिंह के.एन. : आर्थिक भूगोल के मूल तत्त्व'' वसुन्धरा प्रकाशन, गोरखपुर।
5. जैन पी : ''आर्थिक भूगोल'' रस्तोगी प्रकाशन, मेरठ।
6. मामोरिया सी.बी. : ''आर्थिक भूगोल'' साहित्य भवन पब्लिकेशंस, आगरा।
7. नेगी बी.एस. : संसाधन भूगोल।

GEOGRAPHY PROJECT 2 – DSE-A - RESOURCE GEOGRAPHY - (SEM.-5)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Case study of a Resource, observations of its various characteristics, uses, factors affecting, production, future prospects, etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 5 AEC (Credits: -02)

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

CARTOGRAPHIC TECHNIQUES (Lectures- 30)

1. Types and uses of cartographic symbols – point, line and area symbols, classification of distribution maps.
2. Representation of population data – distribution (dot), density (choropleth), growth (ring), age and sex-composition (Pyramid-simple, superimposed and compound), urban & rural population (dot & circle, dot & sphere).
3. Maps & Diagrams - Isopleths, choropleth, chorochromatic, isochrones and population potential surface maps, Sten-de-Geer's and Stilgen-Baur's method. Value-area cartogram, Triangular diagram, Block & Sphere, Ergograph – simple and Ogilvie's. (All these be computed from the statistical data, preferably based on district or tehsil unit areas)

Suggested Books:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्राय पी के शर्मा ,रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।

GEOGRAPHY PROJECT – CARTOGRAPHIC TECHNIQUES- 5 AEC

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: The student is expected to write a report using relevant maps and diagram and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 5 VAC **(Credits: -03)**

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

ENVIRONMENTAL AWARENESS **(45 Lectures)**

UNIT – I

Environment- meaning, types of environments, component of environment, man environment, relationship. Environmental pollution- definition, types of pollution, air, water and noise pollution- meaning, sources, effect. Human population growth impact on environment. Human health and welfare.

UNIT – II

Environmental sustainability, Millennium Development goals, sustainability development goals, national and international convention. Earth summit 1992, United Nations framework convention on

climate change (UNFCCC)and the Montreal and Kyoto Protocol and convention on biological diversity, United Nation Convention to combat desertification (UNCCD), Vienna Convention on protection of the Ozone Layer, Convention of migratory species (CMS), International Union for conservation of nature (IUCN), convention on international trade of endangered species of wild flora and fauna (CITES), Ramsar Convention on wetlands, Basil Convention on trans-boundary movement of hazardous substances.

UNIT – III

Environmental Ethics, anthropocentric views, biocentric views, eco centric views, environmental literacy. Role of Indian and other religion and cultures in the environmental conservation, public awareness, environmental movements, Chipko, silent valley, Bishnoi's of Rajasthan. Environmental Protection Act, Air, Water, Solid Waste Pollution Act in India, Wildlife Protection Act, Forest Conservation Act.

Suggested Books:

1. Agarwal, D.P. (1992): Man And Environment in India Through Ages, Books and Books. New Delhi.
2. Arthur, N. Stellar and Alan, H. Stellar (1973): Environmental Geoscience, Interaction Between Natural System and Man, Willey International Ed.
3. Balakrishnan, M. (1998): Environmental Problem and Prospects in India. Oxford and IBH Publication, New Delhi.
4. Barrow, C. J (2003): Environmental Change and Human Development. Arnold Publication
5. Bhaduri, S., And Basu, R. (2006): Society Development Environment, Progressive Publishers

GEOGRAPHY PROJECT – ENVIRONMENTAL AWARENESS- 5 VAC

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Degradation of the Environment, Environmental Pollution - causes, impact and measures of control. Environmental Ethics, Environmental literacy. Role of Indian and other religion and cultures in the environmental conservation, public awareness, Environmental Protection Act. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 5 SEC (Credits: -03)

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

RESEARCH METHODOLOGY (45 Lectures)

UNIT - I

Nature, scope and significance of the statistical techniques in geography. Data – types, sources, Methods of Data Collection: Observation, Questionnaire, Schedule and Interview; Sampling: Sampling Methods, Size of Sample, editing tabulation and classification.

UNIT-II

Frequency distributions, characteristics of frequency distribution: Number of classes, class interval; Types of frequency graphs – histogram; frequency polygon and frequency curve.

UNIT-III

Measures of central tendency- mean; median and mode.

Suggested Books:

1. Aslam, Mahmood: Statistical Methods in Geographical Studies, Rajesh Publication, Delhi 1977.
2. Duncan, C.D. et.al: Statistical Geography C. Problems in Analysis Areal Data, Free of Gleneo, New York, 1961.
3. Gregory, S.: Statistical Methods and the Geographer, Longman's London, 1963.
4. King, L.J.: Statistical Analysis in Geography, Prentice Hall, Englewood Cliff, N.J.
5. Lewis Peter: Maps and Statistics, Methuen & Co. Ltd., London, 1977.
6. Norchiffe, Inferential Statistics for Geographers, Kalyani Publishers, New Delhi, 1979.
7. Yeats Mauries, : An Introduction to Quantitative Analysis in Economic Geography, McGraw Hill, New York. 1968

GEOGRAPHY PROJECT – RESEARCH METHODOLOGY- 5 SEC

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: A student is expected to prepare questionnaire for any local area and problem and interpret the data. The student is expected to write a report using data and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 6

CORE COURSE –DSC-A: **(Credits: Theory-04, Practical-02)**

ELECTIVE COURSE –DSE -A: **(Credits: Theory-04, Project -02)**

AEC **(Credits: 02)**
VAC **(Credits: 03)**
SEC **(Credits: 03)**

GEOGRAPHY SEMESTER – 6 CORE COURSE – DSC-A

CORE COURSE – DSC-A: (Credits: Theory-04, Practical -02)

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

1. REGIONAL GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Concept of region, Types of regions, Asia-relief, drainage, climate, natural vegetation, soils, minerals, industries, population, economic development of continent.

Australia - relief, drainage, climate, natural vegetation, minerals, industries, population and demography of continent.

UNIT - II

Europe - relief, drainage, climate, natural vegetation, minerals, industries and demography of continent.

Africa- relief, drainage, climate, natural vegetation, minerals, industries and demography of continent.

UNIT - III

North America - relief, drainage, climate, natural vegetation, minerals, industries and demography of continent.

South America - relief, drainage, climate, natural vegetation, minerals, industries and demography of continent.

Suggested Books:

1. Cole, J. "A Geography of the World's Major Regions" Routledge, London.
2. Debliz H.: "Geography: Regions and Concept"
3. Minshul Roger, "Regional Geography."
4. सिंह एवम् राव, ''तीन दक्षिणी महाद्वीप'' वसुन्धरा प्रकाशन।
5. लाल बी : ''उत्तरी अमेरिका का भूगोल''
6. मामोरिया, : ''प्रादेशिक भूगोल''
7. विश्व का प्रादेशिक भूगोल –डॉ हरिमोहन सक्सेना, रस्तोगी पब्लिकेशन ,गंगोत्री, शिवाजी रोड, मेरठ
8. विश्व का प्रादेशिक भूगोल– एस डी मौर्य, प्रवालिका प्रकाशन, इलाहाबाद

GEOGRAPHY PRACTICAL - DSC-A – (SEM.-6)

Practical: 60 Lectures

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

COURSE CONTENTS:

- Standard deviation, Calculation of coefficient of correlation (Spearman's and Carl Person's), Value-area cartogram. Triangular diagram.
- **Field Survey:** Prismatic compass's survey - importance. Appliances. Methods: Radiation Intersection. Traverse (closed and open traverse) correction of bearings and removal of closing error - Bowditch. Graphical and mathematical method. Calculation of WCB. RB and calculation of included angles (CIA)
- Dumpy Level: Application, Use, Survey and Plotting.
- Abney Level: Application, Use, Survey and Plotting.

Suggested Books:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्रा, पी के शर्मा, रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।

GEOGRAPHY SEMESTER – 6 - ELECTIVE COURSE – DSE-A

ELECTIVE COURSE – DSE-A: (Credits: Theory-04, Project -02)

Note: Student has to choose any one of the following: -

1. **Political Geography & Project**
2. **Industrial Geography & Project**

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

1.POLITICAL GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Nature, History & development, Scope and significance of Political Geography; Political Geography and Geopolitics. Approaches to the study of political Geography – Morphological and Functional, Unified field Theory of S.B. Jones. Role of physical, demographic, economic and social factors in political geography.

UNIT - II

State as a politico-territorial phenomenon. The changing value of locations. Size and shape in political geography of states. Organization of government over the national territory – unitary and federal. Boundaries and frontiers: Functions and classification of international boundaries, Capital and core areas.

UNIT - III

Global strategic views – Mackinder, Spykman, De-seversky and Mahan, under development and international policies. North-South Dialogue and New international economic order. International economic order. International tensions - Identification of areas with special reference to West Asia and the Indian Ocean Region, Regionalism in International Relations, Nature & effects of international and national terrorism.

Suggested Books:

1. Blij, H.J.De : Systematic Political Geog., John Willey & Sons, New York.
2. Dixit, R.D. : Political Geography : A contemporary perspective, Tata McGraw Hill, New Delhi.
3. Muir, R, : Modern Political Geography, McMillan, London.
4. Prescott, J.R.V. : Political Geography, Methuen & Co. London.
5. Taylor P. : Political Geography, Longman, London.
6. भट्टाचार्य एवं आच्छा : राजनैतिक भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी।
7. सक्सेना, हरिमोहन : राजनैतिक भूगोल, रस्तोगी एण्ड कम्पनी, मेरठ।

GEOGRAPHY PROJECT- POLITICAL GEOGRAPHY= DSE-A (SEM.-6)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Case study of a Political Region, observations of its various characteristics- structure, growth, population characteristics, political & cultural factors affecting, policies, etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

2. INDUSTRIAL GEOGRAPHY **Theory: 60 Lectures**

UNIT - I

Nature, scope and recent developments, elements and factors of localization of manufacturing industries: centralization and decentralization of industrial enterprises; horizontal, vertical and diagonal linkages of modern industries. Theories and models of industrial location: Weber, Losch, Isard and Hoover.

UNIT - II

Distribution and spatial pattern of manufacturing industries – Iron and Steel, Aluminium, Copper, energy goods and automobiles; textiles, chemicals, Petro-chemicals, Ship-building, Pulp and Paper, hardware and software industries; Methods of measuring the spatial distribution of manufacturing industries; location quotient.

UNIT - III

Environmental degradation caused by manufacturing industries industrial hazards and occupational health. Impact of manufacturing industries on economic development; Role of globalization on manufacturing sector. Shifting of industries and its impact on the urban fringe; changing industrial policy – need for integrated industrial development.

Suggested Books:

1. Llyod and Dicken: location in Space –Theoretical Approach to Economic Geography.
2. M.C. Cart & Lindberg Hodder & Lee: Economic Geography.
3. Smit, D.E. Cox K.P. man: Industrial Location. A Economic Geographic analysis, Location and Behaviour – An Introduction to Human Geography.
4. Riley, RC.: Industrial Geography, 1973. Chalto and windus London.

5. Alexander, J.W.: Economic Geography, Prentice Hall, New Delhi.
6. Besoh : A Geography of World Economy.
7. Hoover, E.M.: The Location of Economic Activity, M C Graw Hill Books Co., New York.
8. Choudhary, M.R.: Industrial Geography of India.

GEOGRAPHY PROJECT-INDUSTRIAL GEOGRAPHY-DSE-A (SEM.-6)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Visit to an industrial unit discuss the factors affecting its establishment and growth, environmental degradation due to it. future prospects. etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 6 AEC (Credits: -02)

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

STATISTICAL METHODS IN GEOGRAPHY

Theory: 30 Lectures

UNIT – I

Nature, scope and significance of the statistical techniques in geography. Measures of central tendency-arithmetic, harmonic and geometric mean; median, quartile and mode.

UNIT - II

Measures of variations of dispersion – quartile deviation, mean deviation, standard deviation; Lorenz curve; Normal curve; Relative variation; measures of Skewness; Kurtosis.

UNIT - III

Methods of Correlation – Graphical, Spearman's Rank, Carl Pearson's, Methods of interpolation and extrapolation, index number.

Suggested Books:

1. Aslam, Mahmood: Statistical Methods in Geographical Studies, Rajesh Publication, Delhi 1977.
2. Duncan, C.D. et.al: Statistical Geography C. Problems in Analysis Areal Data, Free of Gleneo, New York, 1961.
3. Gregory, S.: Statistical Methods and the Geographer, Longman's London, 1963.
4. King, L.J.: Statistical Analysis in Geography, Prentice Hall, Englewood Cliff, N.J.
5. Lewis Peter: Maps and Statistics, Methuen & Co. Ltd., London, 1977.
6. Norchiffe: Inferential Statistics for Geographers, Kalyani Publishers, New Delhi, 1979.
7. Yeats Mauries: An Introduction to Quantitative Analysis in Economic Geography, McGraw Hill, New York. 1968

GEOGRAPHY PROJECT- STATISTICAL METHODS IN GEOGRAPHY -AEC (SEM.-6)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: A student is expected to prepare questionnaire for any local area problem, interpret, analysis and corelate the data. The student is expected to write a report using data and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 6 VAC (Credits: -03)

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

WASTE MANAGEMENT **(45 Lectures)**

UNIT - I

Classification of solid waste based on type and sources, segregation, categorization and composition of waste, factors affecting waste generation. Waste characteristic physical and chemical, public health and environmental effect. Waste collection- types of collection system, collection services and equipment's. Frequency of collection, waste storage methods, storage capacity. Solid waste management rules overview of waste management legislation the solid waste management rules. 2016. The construction and demolition waste management rule 2016.

UNIT - II

Plastic waste – types: thermoplastic and thermosetting, sources and colour coding, uses, present and future trends of plastics in India. Impact of plastic on marine life. Wildlife, human and health environment, economic impact of plastic ban. Plastic waste management, waste disposal methods, plastic recovery, recycling of plastic waste 4 r's (reduction, reuse, recycle, recovery) recycling method of PVC, PET, PMMA, HDPE, LDPE, PS. Use of plastic inroads, issues, challenges central pollution control board guidelines for plastic waste. Plastic waste management rules. 2016 and amendments.

UNIT - III

E waste- sources, characteristic, generation of e waste, health hazard of e waste, growth of electrical and electronic industry in India, Indian and global scenario of e waste. Methods of e waste collection, safety protocols for handling e waste online offsite storage and transportation of e waste. E waste management rules. 2016 batteries management and handling rules. 2001

Swachh Bharat - terminology, Gandhian philosophy of cleanliness. Swachh Bharat Abhiyan hygiene, sanitation and sustainable waste management. Indicators for Swachh Bharat, rural sanitation coverage across household 2014 vs 2022, open defecation free (ODF), villages parameters, ODF plus model, key indicators, urban sustainable sanitation, garbage free cities, garbage free star rating cities schemes and programmes of government.

Suggested Books:

1. Sasikumar, K.: Solid Waste Management
2. O.P. Gupta.: Elements of Hazardous Waste and Management
3. Rajaram Vasudevan: Solid and Liquid Waste Management. Waste To Wealth
4. Al. Ramanathan, Jagdeep Singh: Solid Waste Management, Present and Future Challenges
5. Khan Lh: Textbook of Solid Waste Management
6. T.V. Ramachandra: Management of Municipal Solid Waste
7. P. Aarne Vesilind, William, A Worrell, Debra, R. Reinhart, Solid Waste Engineering
8. Solid Waste Management Manual. CPCB, New Delhi
9. Zeng, Xianlai: E - Waste: Regulations, Management Strategy and Current Issues.
10. Li, Yuan Chun: E - Waste: Management, Types and Challenges
11. Varsha Bhagat- Ganguly: E - Waste Management: Challenges and Opportunities in India
12. Rakesh Johari: E Waste: Implication, Regulation and Management in India And Current Global Best Practises
13. S.C. Shastri, Environmental Law, 7/E, 2022

GEOGRAPHY PROJECT – WASTE MANAGEMENT - VAC (SEM.-6)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: A student is expected to observe and analysis management of waste in the local area. interpret, analysis and corelate the data. The student is expected to write a report using data and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 6 SEC **(Credits: -03)**

Note: Student has to choose any one of the following: -

1. **Hypothesis Testing in Geography and Project**
2. **Internship and Project**

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

HYPOTHESIS TESTING IN GEOGRAPHY **(45 Lectures)**

UNIT - I

Meeting and concept of research, research problem, meaning and identification. Regression analysis. Simple liner construction of regression line multiple regression and correlation, Regression residuals.

UNIT - II

Hypothesis and testing of hypothesis. Hypothesis testing needs and types of hypothesis, goodness of fitness and significance and content and confidence level.

UNIT - III

Chi-square test, binomial test, T-test, Mann-Whitney U-test, F- test. Report writing.

Suggested Books:

1. Aslam, Mahmood: Statistical Methods in Geographical Studies, Rajesh Publication, Delhi 1977.
2. Duncan, C.D. et.al: Statistical Geography C. Problems in Analysis Areal Data, Free of Gleneo, New York, 1961.
3. Gregory, S.: Statistical Methods and the Geographer, Longman's London, 1963.
4. King, L.J.: Statistical Analysis in Geography, Prentice Hall, Englewood Cliff, N.J.
5. Lewis Peter: Maps and Statistics, Methuen & Co. Ltd., London, 1977.
6. Norchiffe: Inferential Statistics for Geographers, Kalyani Publishers, New Delhi, 1979.
7. Yeats Mauries,: An Introduction to Quantitative Analysis in Economic Geography, McGraw Hill, New York. 1968

GEOGRAPHY PROJECT- HYPOTHESIS TESTING IN GEOGRAPHY- SEC- (SEM.-6)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: A student is expected to observe and analysis any problem in the local area. interpret, analysis and corelate the data. The student is expected to write a report using data and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

2. INTERNSHIP & PROJECT (Related to Theory Paper)

GEOGRAPHY SEMESTER – 7

CORE COURSE –DSC-A: **(Credits: Theory-04, Practical-02)**

CORE COURSE –DSC-B: **(Credits: Theory-04, Project -02)**

ELECTIVE COURSE –DSE -A: **(Credits: - 04)**

ELECTIVE COURSE –DSE -B: **(Credits:-04)**

Note: Student has to choose one each from DSE- A and DSE – B: -

DSE - A - Geography of Environment or Disaster Management

DSE – B - Transport Geography or Agricultural Geography

GEOGRAPHY SEMESTER – 7 CORE COURSE – DSC-A

CORE COURSE – DSC-A: **(Credits: Theory-04, Practical -02)**

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

URBAN GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Nature and scope of urban geography, Factors affecting origin and growth of towns during Ancient, Medieval and modem Period, Site and Situation, Definition and criteria of urban centre, Chief characteristics of Modern town – Metropolis, Conurbation, Megalopolis, Trends of Urbanization – World and India (since 1901).

UNIT - II

Functional classification of cities, Urban Hierarchy based on functions, Central place theory, Rank size relationship, Theories of urban growth. Morphology of Indian cities, Urban Land use – commercial, Industrial and residential areas.

UNIT - III

Contemporary urban issues and problems, Urban policies. City region Relationship: Umland, Rural-Urban fringe, satellite towns, suburbs, green belt and garden city, Principles of town planning, Master Plan, Smart city.

Suggested Books:

1. Carter: The Study of Urban Geography, Edward Arnold, London.
2. Johnson, J.H.: Urban Geography, Pergamono Press, London.
3. Mayer &Cohn: Readings in Urban Geography, Central Books Depot., Allahabad.
4. Smailes, A.E.: The Geography of Town: hut Chinson, London.
5. Sovani, N.V.: Urbanisation and Urban India, Asia Publishing House.
6. Taylor, G.: Urban Geography, Methuen & Co., London.
7. Turner, R.: India's Urban Future, University Press, Bombay.
8. जोशी,रतन : नगरीय भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर।
9. बंसल एस.सी. : नगरीय भूगोल।

GEOGRAPHY PRACTICAL- DSC-A – (SEM.-7)

Practical: 60 Lectures

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

COURSE CONTENTS:

- Projection - General principles, classification and choice of projections. Construction. Properties. Merit and demerits, limitations and use of projections. Projections suitable for map of India.
- Cylindrical: Simple, Equal area. Galls and Mercator's projection. Zenithal (Polar case) : Equidistant, Equal Area, Gnomonic, Orthographic. Stereographic, Conical: One standard parallel, two standard parallels, Bonne's and Polyconic. Conventional: Mollweide's and Sinusoidal projection.

Suggested Books:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्राय पी के शर्मा ,रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।

GEOGRAPHY SEMESTER – 7 CORE COURSE – DSC-B

CORE COURSE – DSC-B: **(Credits: Theory-04, Project -02)**

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

EVOLUTION OF GEOGRAPHICAL THOUGHT

Theory: 60 Lectures

UNIT - I

The nature of geography: meaning & definitions, philosophy and recent trends in geography; Development of modern geography in India. Geography of Vedic age and Geography of Puranas – Dwipa and Ocean, River and Mountain systems; Ancient classical Geography – Contribution of Greek and Roman – with special reference to the work of Herodotus, Eratosthenes, Posidonius, Strabo and Ptolemy.

UNIT - II

Contribution of Arab Geographers. German School of Geography – Contribution of Kant, Varenius, Humboldt, Ritter, Ratzel and Richthofen; School of French Geography – contribution of Blache and Brunhes; British and American School of Geography – contribution of Mackinder, Herbertson, Miss Semple, Carl Saur; Huntington and Davis. Man-environment relationships – Determinism, possibilism and neo-determinism: Dualism in Geography – Physical and human, systematic and regional.

UNIT - III

Quantitative revolution in geography; Major Concepts in Geography – terrestrial unity and interconnections, region and types of regions, Areal differentiation; Behavioural geography, Humanistic and Welfare geography. Models and analogues: Hypothesis – meaning & need. Regional delimitation and quantitative analysis.

Suggested Books:

1. Dickinson &Howarth: Making of Geography.
2. Hartshorne R.: The Nature of Geography, AAAG.
3. Hartshorne R.: Perspective of the nature of Geography, John Murray, London.
4. Jones & Jones (Ed.) % American Geography Inventory and Prospects Syracuse.
5. Taylor, G. (Ed.): Geography in the Twentieth Century.

6. Woolridge & East: Spirit and purpose of Geography.
7. Ali, S.M. : Georaphy of Puranas, PPH, Delhi.
8. जैन, एस.एम. : भौगोलिक चिन्तन का विकास, साहित्य भवन, आगरा।
9. कौशिक, एस.डी. ': भौगोलिक विचारधारा एवं विधि तंत्र, रस्तोगी प्रकाशन, मेरठ।
10. सिंह यू. : भौगोलिक चिन्तन के मूलाधार, वसुन्धरा प्रकाशन, नई दिल्ली।
11. जाट, बी.सी. : भौगोलिक विचारधाराएँ एवं विधि तन्त्र, मलिक एण्ड क. जयपुर।
12. वर्मा, एल.एन. एवं खत्री, एल.सी. : भौगोलिक विचारधाराएँ, राज. हिन्दी ग्रन्ध अकादमी।

GEOGRAPHY PROJECT 2-DSC-B-EVOLUTION OF GEOGRAPHICAL THOUGHT - (SEM.-7)

Marks: Pro. (ESE: 30) **(30 Lectures)**

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Philosophy and recent trends in geography; Development of modern geography in India. Geography of Vedic age and Puranas, Contribution of Greek, Roman, Arab, German, French, British, American Geographers. Quantitative revolution in geography; Major Concepts in Geography, Areal differentiation; Behavioural geography, Humanistic and Welfare geography. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 7 - ELECTIVE COURSE – DSE-A

ELECTIVE COURSE – DSE-A: (Credits: -04)

Note: Student has to choose one from DSE- A: -

DSE - A - Geography of Environment or Disaster Management

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

1. GEOGRAPHY OF ENVIRONMENT

Theory: 60 Lectures

UNIT - I

Concept of environment and ecology, nature and scope of geography of environment. Concept of ecology and ecosystem - definition and elements. Energy flow in this ecosystem. Productivity in the ecosystem, Eco cycles, types of ecosystems. Man-environment relationship, human ecological adaptations, transformation of nature by man, perception of environment and its quality.

UNIT – II

Degradation of the Environment development vis-a-vis ecological crisis. Environmental Pollution water, air, noise, soil, solid waste and radioactive- causes, impact and measures of control with Indian examples. Reduction in biodiversity and depletion of forests, global warming, Global ecological imbalance, problem of population, resources and ecological crisis Environment and quality of life

UNIT – III

Environmental Management- Management of forest, soil, wildlife, energy and mineral resources, environmental education, monitoring and mapping, Conservation of Natural Resources, Ecological planning for sustainable development in India, Environmental policies and programmes (international and national). Environmental problems and planning in India, disaster management types, components and role of peoples.

Suggested Books:

1. Batel, B, (ed): Management of Environment, Wiby Eastern Limited, New Delhi, 1980.
2. Desh Bandhu (ed): Environmental Management, Indian Environment Society, New Delhi.
3. Singh & Singh (eds): Geography of Environment, Concept, New Delhi
4. Savinder Singh: Geography of Environment, Allahabad

5. Murdock, W (ed): Environmental Resources, Pollution and Society. Sin over Association. Inc publication Sundar Lary, Massachusetts.
6. Gupta and Gurjar: Sustainable Development. Rawat Publication, Jaipur.
7. Brij Gopal: Elements of Ecology
8. Strahler, A.N.: Geography and Man's Environment. John Willey
9. Centre for Science and Environment: The State of India Environment, a Citizen Report. 1982, 1985. New Delhi.
10. सविन्दर सिंह: पर्यावरण भूगोल, इलाहाबाद।
11. श्रीवास्तव, वी के.: पर्यावरण, भूगोल एवं पारिस्थितिकी वसुंधरा प्रकाशन, गोरखपुर।
12. सक्सेना, एच. एम.: पर्यावरण एवं पारिस्थितिकी भूगोल राजस्थान हिंदी ग्रंथ अकादमी जयपुर।
13. बाकरे, बाकरे एवं वाधवा : पर्यावरण अध्ययन रस्तोगी प्रकाशन, मेरठ।

GEOGRAPHY PROJECT1-DSE-A - GEOGRAPHY OF ENVIRONMENT - (SEM.-7)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Degradation of the Environment, development vis-a-vis ecological crisis, Environmental Pollution - water, air, noise, soil, solid waste - causes, impact and measures of control. Reduction in biodiversity and depletion of forests, global warming, Global ecological imbalance, problem of population, resources and ecological crisis Environment and quality of life. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

2. DISASTER MANAGEMENT

Theory: 60 Lectures

UNIT - I

Understanding Disasters, Definition & Terminology of Disasters, Causation of disasters; Understanding Natural Disasters Types, Causes and Effects, Understanding Man-Made Disasters Types, Causes and Impacts; Risk Assessment and Vulnerability Analysis;

Environmental Hazards and Disasters; Concept of Environmental Hazards, Environmental Risk and Environmental Disasters.

UNIT - II

Human ecology geography and its application in geographical research in hazards and disasters; Environmental Hazards & Disasters: Typology, Mitigation and Preparedness; Natural hazards and Disasters -Natural Disaster Reduction & Management; Man induced hazards & Disasters, Social Aspect, Economic Aspect; Prediction of Hazards & Disasters, Measures, Use of Technology in Disaster Management; Disaster Management-An integrated approach for disaster preparedness, mitigation & awareness.

UNIT - III

Disaster Management Perspective: India and Disaster Management in India, Global Perspective on Disaster Management; A regional survey of Cyclonic Disaster, Disaster in Hills, Urban Disaster with reference to India; Environmental policies and programmes in India-Institutions, Environmental Legislations in India, Awareness, Conservation Movement, Education and training; Integrating Disaster Management and Development, Gender Perspective in Disaster Management.

Suggested Books:

1. Ghosh G. K (2001): Disaster Management (6 volumes); Saujanya Distributors, Delhi
2. Gaur, Ramakant, (2006): Disaster Management
3. Gulia, K S (2008): Disaster Management,
4. Goel, S. L, Et al. Disaster Management
5. Bose, B.C. (2008) Disaster Management in the 21st Century,
6. Sinha, Dilip Kumar. (2007): Natural Disaster Reduction: Global Perspectives, South East Asian Realities and Global trategies (Anthem Press India)
7. Singh, R.B. (2006): Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
8. N.C Mahanti (2006) Disaster Management-Narosa Publishing House
9. Talwar, Arun Kumar, Junejaand Satish (2008): Encyclopedia of Disaster management (10 volumes)-Saujanyabooks, Delhi
10. Smith, Keith (2004): Environmental Hazards: Assessing Risk and Reducing Disaster. Routledge. Place of Publication: New York. Publication
11. Jennifer Reed (2005): Earthquakes: Disaster & Survival
12. Trivedi, Priyaranjan (ed.), (2007), Encyclopedia of disaster management (12 volumes) Delhi
13. Damon P. Coppola (2007), Introduction to International Disaster Management
14. George D. Haddow Introduction to Emergency Management-, Published by Butterworth Heinemann.

15. Dr. Jayeshsinh Shah and Mr. Ashutoshsinh Tambe (Editors)(2002): Textbook of Disaster Management, A Sadguru Shree Aniruddha Upasana Trust publication, Mumbai.

GEOGRAPHY PROJECT 2 - DISASTER MANAGEMENT - DSE-A (SEM.-7)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Environmental Hazards and Disaster – causes, effects, types, impact, management, environmental legislations, awareness, conservation, Gender perspective. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 7 - ELECTIVE COURSE – DSE-B

ELECTIVE COURSE – DSE-B: (Credits: -04)

Note: Student has to choose one from DSE – B: -

DSE – B - Transport Geography or Agricultural Geography

Marks: 70 (ESE: 3Hrs) + 30 (Pro.) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

1. TRANSPORT GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Transportation Geography: Meaning, Definition and Subject matter, Development of Transportation geography: Ideas of Edward Ulman, Ideas of M.E.E. Hurst, Modes of Transportation: Ways, Oceanic transportation, Air transportation.

UNIT - II

Concepts and measures of distance, Transportation and spatial stricture, Transportation and spatial processes: Regional specialization, Transportation cost, Ideal processes of development of transportation, Network analysis: indices as measures of connectivity, Basic network configuration

UNIT - III

Measures of nodal accessibility, gravity model Allocation models, Urban transport problems, Major transport routes of the world, Transport planning, Transport system in India.

Suggested Books:

1. Abler, Adams and Gould, Spatial organization: the geographers view of the world, Prentice Hall, New York.
2. Hagget, P.et al, Locational Analysis in Human Geography, Edward Arnold, London 1977.
3. Hagget, P and R.J. Chorley, Network Analysis in Geography, Arnold, London 1968.
4. Hussain, M.et al, transport geography: perspective in economic geography series anmol publications Pvt. Ltd. New Delhi.
5. James P.E. and C.E. Jones (eds) American Geography inventory and prospect, Syracuse university press, Syracuse, 1954.
6. Patankar, P.G. Urban Transport in Distress, Control institute of Rood Transport, Pune.
7. Raza, Moonis and Y.P. Agrawal, Transport Geography of India. Concept Publishing Company, New Delhi 1985.
8. Ulman, E.L. American Commodity Flow, University of Washington Press. 1957
9. White H.P. and M.L. Senior, Transport Geography, Longman, London, 1983
10. Woodcock, R.G. and M.J. Baily, Quantitative Geography, Mc Donald and. Evans.
11. Yeats, Maurice, An Introduction, Quantitative Analysis in Human Geography, Mc Graw Hill Book Company, New York.
12. सिंह जे. (1977), परिवहन एवं व्यापार भूगोल, लखनऊ हिन्दी ग्रन्थ एकादमी।
13. प्रसाद कमला (2010), परिवहन भूगोल, University Publication, London UK.
14. कौशिक देवेश (2012), परिवहन भूगोल, हिन्दी बुक सेन्टर, नई दिल्ली।

GEOGRAPHY PROJECT 1 – DSE-B - TRANSPORT GEOGRAPHY - (SEM.-7)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: The student is expected to write a report on Modes of transport, transportation cost, network analysis, measures of nodal accessibility, urban problems and transport planning. The report is to be presented for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

2. AGRICULTURAL GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Nature, scope and significance of Agricultural Geography. Approaches to the study of Agricultural Geography – Commodity, Environmental, Systematic and Regional. Determinants of agricultural land use: Physical, Social, economic and cultural.

UNIT - II

A critical review of Whittlesey's agricultural classification, agricultural types – their characteristics and distribution in the world. Patterns of land use with special reference to India. Agricultural of U.S.A., China & India. Agro and Social forestry; Green and Blue revolution in India.

UNIT - III

Agricultural statistics and their mapping; agricultural regionalization – concept, methods of delimitation; Traditional and statistical methods; Crop-ranking; Crop-combination regions; Weaver's crop-diversification, concentration methods. Agricultural Efficiency –concept and methods of measurements, Nutrition and food balance sheet, crop-pattern and deficiency disease

Suggested Books:

1. Gregor, H.P.: Geography of Agriculture, Prentice Hall, New York, 1970.
2. Grigg, D.B.: the Agricultural Systems of the World. Cambridge University Press, New York, 1974.
3. Mammon, A.M.: Agriculture and Environment Changs, Jhn Wiley, London, 1995.
4. Morgan W.B. and Norton, R.J.C.: Agricultural Geography. Mathusan London, 1971.

5. Morgan, W.B.: Agriculture in the Third World – A Spatial Analysis Westview Press, Boulder, 1978.
6. Sauer, C.O.: Agricultural Origins and Dispersals, M.L.T. Press, Mass, U.S.A., 1969.
7. Singh, J. and Dhillon, S.S.: Agricultural Geography. Tata McGrow Hill Pub, New Delhi, 1988.
8. Tarrant, J.R.: Agricultural Geography. Wiley, New York, 1974.
9. Stamps, L.D. Kostro Wisckie: Land Britain, Issues and Misuses, World Types of Agriculture, Polish Academy, Warsaw.
10. Shafi, M.: Land Use in Eastern U.P., Aligarh University Press.
11. Ali Mohammed: Situation of Agriculture Development in India, Concept Publication Co., Delhi.
12. Symon Leslie: Agricultural Geography, G. Bell and Sons, Ltd, London, 1967.
13. प्रमिला कुमार : कृषि भूगोल, मध्य प्रदेश हिन्दी अकादमी।
14. सिंह, ब्रजभूषण : कृषि भूगोल, गोरखपुर

GEOGRAPHY PROJECT 2 – DSE-B- AGRICULTURAL GEOGRAPHY - (SEM.-7)

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Determinants of agricultural land use, agro and social forestry, green and blue revolution impact, combination region, nutrition and food balance sheet, Deficiency diseases, etc. The student is expected to write a report and present it for the viva-voce examination.

Important Note: Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.

GEOGRAPHY SEMESTER – 8

Semester 8 will consist of two courses:

1. Honours without Research Degree

2. Honours with Research Degree

GEOGRAPHY SEMESTER – 8 (Honours without Research Degree)

A. **ELECTIVE COURSE –DSE -A: Oceanography & Project (Credits: - 04)**

B. **ELECTIVE COURSE –DSE -B: Geography of Migration & Project (Credits: -04)**

C. **ELECTIVE COURSE –DSE -C: Climatology & Project (Credits: - 04)**

D. **ELECTIVE COURSE –DSE -D: Social & Cultural Geography & Project (Credits: -04)**

E. **ELECTIVE COURSE –DSE -E: Geography of South Asia & Project (Credits: - 04)**

GEOGRAPHY SEMESTER – 8 - ELECTIVE COURSE – DSE-A

ELECTIVE COURSE – DSE-A: (Credits: -04)

Marks: Theory 70 Project- 30

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

A. OCEANOGRAPHY

Theory: 60 Lectures

UNIT - I

Nature and Scope of Oceanography; Distribution of land and water; World Oceans and their formations, Major features of ocean basins - Continental Margin, Oceanic Ridges and Rises, Abyssal Plains, Oceanic Trenches, Volcanoes. Physical and chemical properties of sea water.

UNIT - II

Factors affecting temperature and Salinity in Oceans – their distribution, Factors affecting density, Origin and composition of sea salt and residence time, Tides, Types of Ocean Currents, geostrophic Currents, thermohaline circulation. Ocean current in Pacific, Atlantic and Indian Ocean.

UNIT - III

Marine-biological environment: biozones, types of organisms; plankton, nekton and benthos, Major marine environments; estuary, deltas, Impact of Humans on the marine environment. Law of the sea; exclusive economic zone; marine deposits and formation of coral-reefs.

Suggested Books:

1. Davis Rechard J.A.: "Oceanography-An Introduction to the Marine Environment". Wm. C. Brown Iowa, 1986.
2. Duxbury, C.A. and Duxbury B.: An Introduction to the world's Oceans-C. Brown. Iowa 2nd ed., 1986.
3. Garrison, T.: "Oceanography - An Introduction to Marine Science" Books/Cole, Pacific Grove, USA, 2001.
4. Gross, M. Grant: Oceanography, a View of the earth, prantice-Hall inc, New Delhi, 1987.
5. King C.A.M. Oceanography for Geographers 1962.
6. Sharma, R. C. "The Oceans" Rajesh N. Delhi, 1985.
7. Urnmerkutty, A.N.P. Science of the Eceans and Human life, NBT, New Delhi, 1985.
8. Ornmany, F.D.: The Ocean.
9. Sharma, R. C. & M. Vital: Oceanography: A Brief Introduction kislaya Pub. New Delhi.
10. Siddartha, K..: Oceanography: A Brief Introduction, Kislya Pub. New Delhi.
11. नेगी, बी.एस.: जलवायु तथा समुद्र विज्ञान.
12. सिंह, सविन्द्र सिंह – समुद्र विज्ञान, प्रयाग पुस्तक भवन, इलाहाबाद (उ.प्र.) 2011
13. लाल, डी. एस – समुद्र विज्ञान

GEOGRAPHY PROJECT - OCEANOGRAPHY

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Related to Topic

GEOGRAPHY SEMESTER – 8 - ELECTIVE COURSE – DSE-B

ELECTIVE COURSE – DSE-B: (Credits: -04)

Marks: Theory 70 Project- 30

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

B. GEOGRAPHY OF MIGRATION

Theory: 60 Lectures

UNIT - I

Introduction: Definition, Nature, Scope, Significance and Concepts, Determinants of Migration: Push and Pull Factors, Incentives for Migration: Empirical Evidence and Current Significance, Process of Migration and Application of Theories.

UNIT - II

Types of Migration: Internal Migration and International Migration, Consequences of Migration and Current Issues, Migration and Its Geographical and Demographic Significance, International Migration: Problems and Prospects, Pattern of Migration.

UNIT - III

International Laws and Conventions, Environmental Issues and Migration, Refugee Migration: Global and National Pattern in Refugee Migration, International Laws and Conventions, Recent Development in Migration in Developed and Developing Countries.

Suggested Books:

1. Brown, A.A. ed. (l977): Internal Migration: A Comparative Perspective, Academic Press, New York
2. Cohen, Robin (1996): Theories of Migration, Edward Elga, Cheltenham.
3. Demko, G. et. al (1977): Population Geog: A Reader, New York, McGraw Hill.
4. Harvey, David (1973): Social Justice and City, Edward Arnold and The Johns Hopkins University Press, Baltimore.
5. Jackson. J. A. (1969): Migration. University Press, Cambridge.
6. Jones, E.ed. (1975): Readings in Social Geography, Oxford University Press, Oxford.
7. Khadaria, B. (2010): India Migration Report 2009: Past, Present and Future Outlook, Cambridge University Press, New Delhi
8. Kosinski, L.A. et.al. eds (1975): People on The Move, Methuen, London.

9. Oberai, A.S. and Singh, H.K.M. (1983): Causes and Consequences of Internal Migration: A Study in the Indian Punjab, Oxford University Press Delhi.
10. O'Neill, B. C. O. (2001): Population and Climate Change, Cambridge University, Press, Cambridge.

GEOGRAPHY PROJECT - GEOGRAPHY OF MIGRATION

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Related to Topic

GEOGRAPHY SEMESTER – 8 - ELECTIVE COURSE – DSE-C

ELECTIVE COURSE – DSE-C: (Credits: -04)

Marks: Theory 70 Project- 30

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

C. CLIMATOLOGY

Theory: 60 Lectures

UNIT - I

Meaning, Definition & Scope of Climatology; Weather & Climate Components; Composition & Structure of the Atmosphere; Insolation: Solar Radiation and Heat Budget; Temperature-Measurement & Distribution: Pressure and Winds. Water Vapour. Humidity Measurements; Evaporation; Condensation & Sublimation.

UNIT - II

Clouds: Formation & Classification; Precipitation: Causes, Forms, Processes and types; types and Distribution of Rainfall; Air Masses and Fronts; Atmospheric Disturbances: Cyclone and Anticyclone. Climatic Classification of the world: Koppen, Thornthwaite & Trewartha.

UNIT - III

Major Climatic Region of the world & Study of Tropical Rain Forest, Savana and Hot Desert Type of Climate; Effect of El-Nino, La-Nina and Southern Oscillation on weather and Climate of the World. Global Climatic Change: Evidences; Role of "Earth Summit" Conferences: Microclimatic Environment; City Climate & Rural Climate; Air Pollution: Acid Rain; Ozone Depletion; Greenhouse Effects and Global Warming.

Suggested Books:

1. 1. Barry, R.G. and Chorley P..1.; Atmosphere, Weather and Climate, Routledge, London and New York, 1998.
2. Critchfield, J.H.: General Climatology, Prentice Hall, India, New Delhi, 1993.
3. Das, P.K.: Monsoons 'National Book Trust, New Delhi, 1987.
4. Fein, J.S. and Stephens, P.N.: Monson's. Wiley Intercedence, 1987.
5. India Met. Dett: Climatological Tables of Observatories in India, Govt. of India 1968.
6. Lal, D.S.: Climatology, Chaitanya Publications, Allahabad, 1986.
7. Lydolph, P.H.: The Climate of the Earth, Rowman, 1985.
8. Menon, P.A.: Our Weather, N.B.T.., New Delhi, 1989.
9. Peterson, S.: Introduction to Meteorology, Me G-r-aw Hill Book, London, 1969.
10. Robinson, P.J. and Henderson S.: Contemporary Climatology, Henlow, 1999.
11. Thompson, R.D. and Perry, A (ed.) : Applied Climatology, Principles and Practice. Routledge, London. 1997.
12. तिवारी अनिल कुमार : जलवायु विज्ञान, राजस्थान हिन्दी ग्रंथ अकादमी
13. सिंह,सविन्द्र, प्रवालिका पब्लिकेशन्स, इलाहाबाद

GEOGRAPHY PROJECT - CLIMATOLOGY

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Related to Topic

GEOGRAPHY SEMESTER – 8 - ELECTIVE COURSE – DSE-D

ELECTIVE COURSE – DSE-D: (Credits: -04)

Marks: Theory 70 Project- 30

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

D. SOCIAL AND CULTURAL GEOGRAPHY

Theory: 60 Lectures

UNIT – I

Social Geography: Nature, Meaning & Development; Philosophical Bases of Social Geography (Positivism, Structuralism); Social Structure & Social Processes; Concept of Social Space. Elements of Social Geography: Ethnicity, Tribe, Dialect, Language, Caste & Religion; Socio-Cultural Regions of India; Linguistic Elements in India.

UNIT – II

Cultural Geography: Nature, Meaning & Development; Culture: Definition, Elements & Components; Culture Areas & Cultural Realm; Cultural Complexes, Areas and Region, Cultural Heritage, Cultural Ecology. Cultural Convergence, Globalisation of Culture.

UNIT – III

Social Well-being and Quality of Life, Social Exclusion, Spatial distribution of social groups in India (Tribe, Caste, Religion and Language), Racial Elements in India's Population; Tribes of India (Gond, Santhal, Bhil, Garo, Khasi, Munda, Bodo, Bhutia and Sentinelese).

Suggested Books:

1. Ahmad, A. (1993): Social Structure and Regional Development, Rawat Publications, Jaipur
2. Ahmad, A. (2012): Social Geography of India, Concept Publishing Company, New Delhi

3. Anderson, K., Domosh, M., Pile, S. and Thrift, N. (2003): Handbook of Cultural Geography, SAGE Publications, London
4. Jordon, G. (1995): Cultural Politics, Blackwell, Oxford
5. Mike, C. (1998): Cultural Geography, Routledge, London
6. Panelli, R. (2004): Social Geographies: From Difference to Action, Sage Publications, London

GEOGRAPHY PROJECT - SOCIAL AND CULTURAL GEOGRAPHY

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Related to Topic

GEOGRAPHY SEMESTER – 8 - ELECTIVE COURSE – DSE-E

ELECTIVE COURSE – DSE-E: (Credits: -04)

Marks: Theory 70 Project- 30

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

E. GEOGRAPHY OF SOUTH ASIA **Theory: 60 Lectures**

UNIT - I

South Asia as a region: geography, polity, history and economy; SAARC, Study of Pakistan under the following heads: geographical and political units, climate and climatic regions, agriculture, mineral resources, trade and political relations.

UNIT - II

Study of Bangladesh and Bhutan under the following heads: geographical and political units, climate and climatic regions, agriculture, mineral resources, trade and political relations.
Study of Nepal under the following heads: geographical and political units, climate and climatic regions, agriculture, mineral resources, trade and political relations.

UNIT – III

Study of Sri Lanka and Maldives under the following heads: geographical and political units, climate and climatic regions, agriculture, mineral resources, trade and political relations. South Asian Urbanisms and Urbanization: Origins and post-colonial development and urbanization, Neo liberal globalization/urbanisation.

Suggested Books:

1. Ahmed, A. 2009. Geography of the south Asian subcontinent: A critical approach, Concept Publishing Company.
2. Anjaria, J. S., and McFarlane, C. (eds.), 2011. Urban navigations: Politics, space and the city in South Asia, Routledge.
3. Batra, A. 2012. Regional Economic Integration in South Asia: Trapped in Conflict? (Vol. 64), Routledge
4. Chattopadhyaya, H., and Sarkar, S. K. (eds.), 2003. Ethnic Composition and Crisis in South Asia: India (Vol. 1), Global Vision Publishing House.
5. Hagerty, D. T. 2005. South Asia in world politics, Rowman & Littlefield Publishers.
6. Hirst, J. G. S., and Zavos, J. 2013. Religious traditions in modern South Asia, Routledge
7. Jain, B. M. 2010. India in the new South Asia: strategic, military and economic concerns in the age of nuclear diplomacy (Vol. 45), IB Tauris.
8. Mathur, S. K. 2007. Global Economic Trends and South Asia, ICFAI Books.
9. Mitra, A. P., and Sharma, C. (eds.), 2012. Global environmental changes in South Asia: a regional perspective, Springer Science & Business Media.

GEOGRAPHY PROJECT - GEOGRAPHY OF SOUTH ASIA

Marks: Pro. (ESE: 30)

Evaluation of project work may be as per the following guidelines:

- Project model (if any) and the Project record notebook = 20 marks
- Project presentation and viva-voce = 10 marks

Overall project dissertation may be evaluated under the following heads: Motivation for the choice of topic, Project dissertation design, Methodology and Content depth, Results and Discussion, Future Scope & References, Presentation style, Viva-voce.

Project Course Content: Related to Topic

SEMESTER – 8 FOR HONS. WITH RESEARCH DEGREE

NOTE: DISSERTATION IS COMPULSORY.

STUDENT CAN CHOOSE ANY TWO AMONGST THE FOLLOWING PAPERS (Syllabus is same as of Honours without Research): -

A. **Oceanography & Project**
B. **Geography of Migration & Project**
C. **Climatology & Project**
D. **Social & Cultural Geography & Project**
E. **Geography of South Asia & Project**

DISSERTATION (COMPULSORY)
(In lieu of ANY 3 Papers of Semester 8)

RESEARCH COURSE: (Credits: -12)

Marks: 300

Guidelines to Examiners for End Semester Examination (ESE):

Overall project dissertation may be evaluated under the following heads:

- Motivation for the choice of topic
- Project dissertation design
- Methodology and Content depth
- Results and Discussion
- Future Scope & References
- Participation in Internship programme with reputed organization
- Application of Research technique in Data collection
- Report Presentation
- Presentation style
- Viva-voce

DISSERTATION

The candidates offering this paper will be required to submit dissertation at least two weeks before the commencement of the theory examination. 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 to 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 Professor of five years standing. The faculty members will be able to supervise maximum two candidates for dissertation.

The paper will consist of:

1. Field work/Lab work related to the research.
2. Preparation of dissertation based on the work undertaken.
3. Presentation of project work in the seminar on the assigned topic in the Department itself & open viva there on.

TOPICS

Different topics will be allotted to each student under a supervisor (Faculty member of the Department).

The distribution of marks for dissertation course will be as follows:

1. Dissertation – 200 Marks
2. Viva – voce – 100 Marks

GUIDELINES:

- A Dissertation (Master's Thesis) on any branch of Geography will be a comprehensive work based on conceptual aspects, field work and analysis of primary and secondary data in the laboratory. Dissertation should contain the objectives, sources of information, Web Resources, methods and approaches. Interrelations between different aspects of the study should be the focus of the dissertation.
- The dissertation must contain minimum 80-100 pages. Text of the dissertation should not exceed 10,000 words and should ideally be divided into the following sections: Introduction, Statement of problem(s) and Objectives -Methodology, Information and Analysis, Results, Discussions, Conclusions, References/Bibliography and Appendices (if any). Maps, diagrams and sketches, excluding photographs, should not exceed 50 pages of A4 size paper typed on one and half space and 12 font size formats.
- It is to be produced individually by the students and this must be stated clearly in a certificate from the supervisor(s) and Head of the Department of Geography.

ALLIED ELECTIVES
(FOR STUDENTS OPTING GEOGRAPHY AS MINOR)

GEOGRAPHY SEMESTER – 1
INTER DISCIPLINARY COURSE – IDC-1

CORE COURSE – IDC-1: (Credits: Theory-04, Practical -02)

Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

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Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PHYSICAL GEOGRAPHY Theory: 60 Lectures

Unit - I

Definition of Physical Geography, Solar System, Origin of the earth, Motions of the Earth and its Satellite, Solar and Lunar eclipse, Zones of the interior of the Earth and Geological time scale. Wagener's theory of continental drift, Plate Tectonics; Isostasy.

Unit - II

Theories of Mountain Building — Joly, Kober and Holmes; Diastrophic Forces — Faults and folds, Earthquakes and Volcano, Concept Of cycle of Erosion- Davis and Penck; Landforms associated with Fluvial, Glacier, Aeolian, Karst and Coastal landscapes.

Unit - III

Composition and layers of Atmosphere; Insolation and Heat Budget of the Earth: Temperature and Pressure; Atmospheric circulations- Planetary and Local winds; Relief features of the Ocean, Distribution of temperature and salinity in oceans; Ocean currents and Tides.

Suggested Books:

1. Strahler, A.H.: Elements of Physical Geography.
2. Wooldridge, S.W.: The Physical Basis of Geography, Longman's Green & Co. London 1959.
3. Mathur. I.R.: Climatology, Mc. Graw Hill, New York.
4. Banerjee, H.C. & D.S.: Mosam Vigyan, Rajasthan Hindi Granth Academy Jaipur.
5. Gerald, S.: General Oceanography – An Introduction, John Willey & Sons, New York.
6. Finch &Trewartha: Elements of Physical Geography.
7. Sharma. R.C.: Oceanography for Geographers, Chaitanya Publishers, Allahabad.
8. सविन्द्र सिंह : भौतिक भूगोल – वसुन्धरा प्रकाशन, गोरखपुर (उ.प्र.)।
9. मामोरिया एवं रतन जोशी : भौतिक भूगोल–साहित्य भवन पब्लिकेशन, आगरा।
10. वी.एस. चौहान एवं अलका गौतम : भौतिक भूगोल–रस्तोगी प्रकाशन,
11. **भौतिक भूगोल: डी. आर. खुल्लर, कल्याणी पब्लिकेशन ।**

GEOGRAPHY PRACTICAL IDC-1 – SEMESTER 1 60 Lectures

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 Marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 Marks

Viva-voce = 5 Marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

Course Contents:

1. The nature and scope of cartography.
2. Scales - Plain. Diagonal and Comparative.
3. Enlargement, reduction and combination of maps – Square & Ray Method.
4. Methods of Representation of Relief - Hachures, Spot Height, Bench Mark, Hill Shading, Layer tint, Contours. Relief features, Types of Slopes, Valleys, Waterfall, Gorge, Plateau, Conical Hill, Ridge, Saddle & Pass.

Books Recommended:

1. Singh, R. L. : Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. **प्रायोगिक भूगोल- डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर**

9. प्रायोगिक भूगोल- आर एन मिश्रा; पी के शर्मा ,रावत पब्लिकेशन सेक्टर 3, जवाहर नगर, जयपुर
10. प्रायोगिक भूगोल- डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली

GEOGRAPHY SEMESTER – 2
INTER DISCIPLINARY COURSE – IDC-1

CORE COURSE – IDC-1: (Credits: Theory-04, Practical -02)
Marks: 70 (ESE: 3Hrs) + 30 (Pr. 3Hrs) =100

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

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Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

GEOGRAPHY OF RAJASTHAN Theory: 60 Lectures

Unit - I

Rajasthan: Location; Physiographic Regions; Geological structure; Climate and Climatic regions; Drainage system and lakes; Soil types and regions, erosion and conservation: Vegetation – types and Distribution. Land utilization in Rajasthan.

Unit - II

Agriculture — types and characteristics, production and distribution of Bajra, Wheat, Maize, Cotton, Mustard, Sugarcane. Major irrigation projects- Chambal, Mahi and Indira Gandhi Canal Project (I.GC.P.); Distribution and production of minerals — Metallic and Non-metallic; Power Resources — Coal, Petroleum and Natural Gas; Hydel and non-conventional energy resources, distribution and production of Cotton Textile, Sugar and Cement Industries.

Unit - III

Population: Distribution and density; Population structure — age and sex ratio, urban and rural, literacy, population growth causes, problems and solutions. Social and cultural status of major tribes — Bhil, Grassia, Meena, Saharia, Status of Women in Rajasthan.

Suggested Books:

1. Mishra, V.C.: Geography of Rajasthan, N.B. T. Delhi.
2. Chauhan, T. C. Geography of Rajasthan, Scientific Publication, jodhpur.
3. Bhalla, L.R. : Geography of Rajasthan, Kuldeep Publication, Ajmer.
4. चौहान, टी.एस., राजस्थान का भूगोल, विज्ञान, प्रकाशन, जोधपुर।
5. भल्ला, एल.आर. राजस्थान का भूगोल,, कुलदीप प्रकाशन, अजमेर।
6. एच.एम. सक्सेना, राजस्थान का भूगोल, राजस्थान हिन्दी ग्रन्थ एकादमी,
7. एच.एस. शर्मा, राजस्थान का भूगोल, पंचशील प्रकाशन, जयपुर।

GEOGRAPHY PRACTICAL IDC-1 - SEMESTER - 2 60 Lectures

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

Course Contents:

- Study of Topographical sheets - Scheme of Indian Topo-sheets. Interpretation of a hilly and a plain area of India in respects of relief, drainage, Human settlement, Transport & Communication Pattern, Profile Drawing.
- Representation Of Geographical Data by Diagrams-One- Dimensional Diagram- Line-Polyline, Bar-Simple, Compound Multiple, Pyramid- Simple, Superimposed, Compound, Two-Dimensional Diagram - Square, Rectangle, Ring, Divided Circle, Three-Dimensional Diagram Sphere, Block pile.

Books Recommended:

1. Singh, R. L. : Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल- डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर
9. प्रायोगिक भूगोल- आर एन मिश्रा; पी के शर्मा ,रावत पब्लिकेशन सेक्टर 3, जवाहर नगर, जयपुर

10. प्रायोगिक भूगोल- डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली

GEOGRAPHY SEMESTER – 3
INTER DISCIPLINARY COURSE – IDC-1

CORE COURSE – IDC-1: (Credits: Theory-04, Practical -02)

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

HUMAN GEOGRAPHY

Theory: 60 Lectures

UNIT - I

Definition, nature, scope, development and history of Human Geography; Principles of Human Geography; Elements of Human Geography - according to Vidal de-la-Blanche, Brunhes, Huntington; Branches of Human geography; Concepts of man environment relationship. Concept of dualism in geography.

UNIT - II

Division of races of Mankind: spatial distribution, physical and social profile of racial groups. Early economic activities of mankind: food gathering, hunting, fishing and shifting cultivation. Human adaptation to environment (i) Cold Region - Eskimo; (ii) Hot, Region- Bushman, Pigmy, Bedouins (iii) Plateau - Khirghiz, Masai, Gonds (iv) Mountain - Gujjars, Naga (v) Plain- Bhil and Santhal.

UNIT - III

Distribution of population, world distribution pattern - physical, economic and social factors influencing spatial distribution; concepts of over population, under population and optimum population; demographic transition theory. Migration - types, Raven stein laws of migration, Concept of Human Development Index.

Suggested Books:

1. Bergwan, Hall, New Edward Jersey, 1995. E: Human Geography; Culture, Connection and Land Scape, Prentice-
2. Carr, M : {atterns, Process and change in Human Geography, Me Millan Education London, 1987.
3. Fellman, J.L. : Human Geography- Landscapes of Human Activities. Brown and Benchmark Pub., U.S.A. 1997.
4. De Blij H.J. : Human Geography, Culture, Society and Space, John Wiley, New York, 1996.
5. Maurya, S.D. Human Geography, Pranavcia Publication, Allahabad.

6ण कौशिक : मानव भूगोल के सरल सिद्धान्त, रस्तोगी एण्ड कम्पनी, मेरठ।

7ण विश्व नाथ द्विवेदी एण्ड कनोजिया : मानव भूगोल के सिद्वान्त, किताब महल, इलाहाबाद।

8ण जोशी रतन : मानव एवं पर्यावरण, साहित्य भवन पब्लिकेशन, आगरा।

9ण कास्वा : मानव एवं पर्यावारण, मलिक प्रकाशन, जयपुर।

10ण गुर्जर आर.के. एवं जाट बी.सी. : मानव भूगोल, पंचशील प्रकाशन, जयपुर।

GEOGRAPHY PRACTICAL IDC-A – (SEM.-3) **Practical: 60 Lectures**

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

COURSE CONTENTS:

- Types and uses of cartographic symbols - point, line and area symbols.
- Classification of distribution maps- Qualitative Maps (Choro Schematic & Choro Chromatic), Quantitative Maps (Choropleth, Isopleth, Dot, Dot & Circle, Dot & Sphere Maps)
- Traffic-flow diagram. Simple and Compound Windrose, Climograph, Hythergraph and Climatograph.

Suggested Books:

1. Singh, R. L. : Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.

3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्राय पी के शर्मा ,रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।

GEOGRAPHY SEMESTER – 4
INTER DISCIPLINARY COURSE – IDC-1

CORE COURSE – IDC-1: (Credits: Theory-04, Practical -02)

Instruction to Question Setter for End Semester Examination (ESE):

The question paper of Semester Examination for the Disciplinary Centric Core Course (DCCC) and the Discipline Specific Elective (DSE) will be of 70 marks and it will be divided into two parts i.e. Part - A and Part -B.

Part - A will consist of 10 Compulsory questions There will be at least three questions from each unit and answer to each question shall be limited up to 50 words. Each question will carry 2 marks. Total 20 marks.

Part- B will consist of 10 questions. At least three questions from each unit will be set and students will have to answer five questions, selecting at least one question from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 Marks. Total 50 marks.

Note: Students have to pass in external theory paper and in Practical/ Internal assessment separately.

Note: There may be subdivisions in each question asked in Theory Examinations.

PAPER – 1: GEOGRAPHY OF INDIA

Theory: 60 Lectures

UNIT - I

Geographical Location of India; Physiography of India; Drainage systems; Climate of India, Monsoon; Koeppen's climatic regions of India. Soil types - distribution and characteristics, Natural Vegetation types, distribution and conservation.

UNIT - II

Spatial distribution of population and density: Socio Economic implications of population explosion: urbanization, Gender discrimination. Types of Agriculture, Green revolution vis-vis traditional farming; Agricultural regions and its relevance in agricultural development

planning. Major crops of India viz. wheat. rice, sugarcane, cotton jute, coffee, tea; Dairy Farming;

UNIT - III

Minerals Resources: - iron-ore, copper, manganese and Sources of Power Coal. Petroleum, hydropower, atomic energy. Resources Regions of India: Industries - Iron and steel, textile, cement, aluminium, industrial regions of India. Transportation – railways, road, air and water. Planning regions of India.

Suggested Books:

1. Deshpande C.D.: India -A Regional Interpretation. Northern Book Centre. New Delhi, 1992.
2. Singh R.L. (ed): India - A Regional Geography, National Geographical Society, India. Varanasi, 1971.
3. Singh: O.H.K. and Leammonth, A.T.A.: India and Pakistan - land people and Economy, Methuen & Co., London. 1967.
4. Wadia, D.N.: Geography of India, McMillan & Co., London 1967,
5. Khullar DR: India (A Comprehensive Geography) Kalyani Publication, New Delhi.
6. Negi, Geography of India.
7. Indian Year Book of (Latest India. Edition) : Publication Division, Delhi.
8. Chatterji, S.B.: Climatology of India (Calcutta University, Calcutta)
9. Gazetteers of India: Publication Division, New Delhi.

10ण वी.के. तिवारी : भारत का वृहत भूगोल, हिमालय पब्लिकेशन।

11ण मामोरिया एवं जैन : भारत का वृहत भूगोल, साहित्य भवन, आगरा।

12ण सुरेश चन्द्र बंसल, भारत का वृहत भूगोल

GEOGRAPHY PRACTICAL IDC-A – (SEM.-4)

Practical: 60 Lectures

Marks: Pr. (ESE: 3Hrs) =30

There will be one Practical Examination of 3 Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Lab Work = 15 marks (Attempt any 3 Questions out of 5 Questions given)

Practical record/file = 10 marks

Viva-voce = 5 marks

Four periods of one hour per week per batch of 40 students.

Minimum 15 sheets must be prepared by students and signed by Professor with date otherwise students will be responsible.

COURSE CONTENTS:

- **Statistical methods** - computation of Data, Preparation of frequency tables, Graphical presentation of frequencies distribution. Histogram. Frequency polygon. Frequency curve and ogive. Mean, Median and Mode.
- **Plane Table Survey** – Re-Sectioning (Two and Three-Point Problems). Mechanical Method, Llano's, Bassel's and Trial and error.

Suggested Books:

1. Singh, R. L.: Elements of Practical Geography, Kalyani Publishers. New Delhi.
2. Robinson, A.H.: Elements of Cartography, John Wiley & Sons, New York.
3. Mishra, RP: Fundamental of Cartography, Macmillan, New Delhi.
4. Sharma, J. P. Prayogik Bhugol, Rastogi Publication, Meerut.
5. Mishra, R.N. Practical Geography Methods and Techniques, Pareek Publication, Jaipur.
6. जे.पी. शर्मा : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
7. एम.एस.जैन. : प्रायोगिक भूगोल, साहित्य भवन, आगरा।
8. प्रायोगिक भूगोल– डॉ पीआर चौहान , वसुन्धरा प्रकाशन ,गोरखपुर।
9. प्रायोगिक भूगोल– आर एन मिश्राय पी के शर्मा ,रावत पब्लिकेशन जवाहर नगर, जयपुर।
10. प्रायोगिक भूगोल– डी आर खुल्लर ,कल्याणी पब्लिशर्स, नई दिल्ली।