

B.A. Part-I Examination 2022

GEOGRAPHY

Note: There will be two theory papers of 3 hours duration carrying 75 marks each, and a practical paper of 06 hours duration of 50 marks. Candidates will have to pass in theory and practical separately.

New Examination Scheme 2014:

Part	Total No. Q.	Marks each Q.	Total Marks
A	10	1	10
B	5	7	35
C	3	10	30
		Total	75
		Theory - Max. Marks: 75	Min marks: 27
		Practical- Max. Marks: 50	Min marks: 18

PAPER I

PHYSICAL BASIS OF GEOGRAPHY

Max. Marks: 75

Unit 1 : Origin of the earth; Interior of the earth; Theory of Isostasy ; Earth movement : Folds and faults (their types only); Rocks and their classification

Unit 2 : Earthquake and Volcanoes; Major landforms: Mountains, plains, Plateaus and Lakes

Unit 3 : Weathering and Denudation: Normal cycle of erosion; \Work of rivers, glaciers, ground water and winds

Unit 4: Atmosphere: Composition and Structure; Insolation and Temperature; Atmospheric Pressure and Winds, Humidity and Precipitation; Cyclones

Unit 5 : Hydrosphere: Temperature of ocean water ; Salinity of Ocean ; Ocean Deposits; Configuration; Tides and currents

BOOKS RECOMMENDED

Monkhouse, F.j. : Principles of physical Geography, Hodder sloughtpn, London, 1984

Sing, S. : Bhu-Arti Vigyan, Tara Publications, Varanasi, 1976

Daya, P. Bhu-Arti Vigan, Shukla Book Depot, Patna 1982

Agarwal, K.M.L. : Bhutik Bhugol, Sahitya Bhawan, Agra, 1988

Tikha, R.N. : Bhautik Bhugol, kedarnath Ramnath, Meerut, 1980

Dubey, R.N. : Bhautik Bhugol ke Adhar, Kitab mahal, Allahabad, 1980

Mamoria, C.B. and Nyati, J.N. : Bhusss-Vigyan, Shib lal agarwal & co. , Agra,1983

सिंह, के. एन. भौतिक भूगोल ज्ञानोदय प्रकाशन, गोरखपुर 1995

चौहान, बी. सी. एवं गौतम, ए, भौतिक भूगोल, रस्तोगी पब्लिकेशन्स, मेरठ

PAPER II

GEOGRAPHY OF INDIA

Max. Marks : 75

- Unit 1 : A study of India with reference to its Physiography, Drainage, Climate and Climate divisions; Soils and their problems; Natural vegetation: types and distribution; Forest resources and their conservation
- Unit 2 : Principal Minerals :Iron ore, Manganese, Mica; Power resources: Coal, Petroleum and Hydroelectric; Major Industries: Iron and Steel, Cotton Textile, Sugar, Cement, Pulp and Paper
- Unit 3 : Agriculture : Main characteristics and problem of Indian agriculture; Principal agriculture crops: wheat, rice, sugarcane, tea and cotton; Irrigation-irrigation sources, their distribution and major Irrigation Project of India: Bhakra Nangal Project, Damodar Valley corporation
- Unit 4 : Population : Growth, Distribution and Density; Transport: Rail, Road, Water and Airways; India's foreign trade composition and trends
- Unit 5 : Regional Geography of Kashmir valley, Chhota Nagpur Plateau, Malabar Coastal region and Middle Ganga Plain

RECOMMENDED READINGS

बंसल, एस. सी. भारत का भूगोल, मीनाक्षी प्रकाशन, मेरठ, 1985

Chauhan, V.S. : Bharat Vistrit Bhugol, Rastogi & Co., Meerut, 1985

Chaudhuri, M.R. : An Economic Geography of India, Oxford And IBH, Calcutta

Das, gupta and Kapur : Bharat va Pakistan ka Arthik va Vanijya Bhugol, Premier Publishing, Delhi

Dubey, R.N. : Bharat ka Arthik Bhugol, Kitab Mahal, Allahabad

Jain, P. ; Bharat Mahan, Agra book store, Agra

Mamoria, C.B. : Bharat ka Bhugol, Sahitya Bhawan, Agra, 1988

Publications Division, Government of India Year Book, 1998

Singh, B. : Bharat ka Bhugol, Rajsthan Hindi Granth Academy, Jaipur

Sharma, T.C. and Coutionho, O. : Economic And Commercial Geography of India, Vikas Pub.House New Delhi, 1987

Singh. R.L. (ed.) : India A Regional Geography, National Geographical Society of India, Varanasi, 1981

Singh, U. : Bharat Ka Nawin Arithik Bhugol, Students, Friends, Varanasi

चौहान, टी. एस. भारत का भूगोल, विज्ञान प्रकाशन, जयपुर, 1998

सिंह, जगदीश, भारत का भूगोल, ज्ञानोदय प्रकाशन, गोरखपुर 1997

बी.ए प्रथम वर्ष परीक्षा 2022

भूगोल

नोट : दो सैद्धांतिक प्रश्न पत्र होंगे प्रत्येक तीन घण्टे की अवधि तथा 75 अंको का होगा

50 अंकों की एक प्रायोगिक परीक्षा भी होगी विद्यार्थियों को सैद्धांतिक एवं प्रायोगिक परीक्षाओं में पृथक- पृथक उत्तीर्ण होना अनिवार्य होगा।

New Examination Scheme 2014:

Part	Total No. Q.	Marks each Q.	Total Marks
A	10	1	10
B	5	7	35
C	3	10	30
		Total	75

प्रथम प्रश्न-पत्र
भूगोल के भौतिक आधार

अधिकतम अंक: 75

- इकाई 1: पृथ्वी की उत्पत्ति; भूगर्भ की बनावट; भूसंतुलन का सिद्धान्त; पृथ्वी की हलचलें; वलन एवं भ्रंश ;उनके मात्र प्रकार ; चट्टानें एवं उनका वर्गीकरण
- इकाई 2: भुकम्प एवं ज्वालामुखी, प्रमुख स्थलस्वरूप : पर्वत, मैदान, पठार एवं झीले
- इकाई 3: अपक्षय एवं अनाच्छादन; सामान्य अपरदन चक्र; नदियाँ, हिमनदियाँ, भूमिगत जल तथा पवन के कार्य
- इकाई 4: वायुमण्डल, सघटन एवं संरचना; सूर्याभिताप एवं तापमान; वायुमण्डलीय दाब एवं हवाएं आर्द्रता एवं वृष्टि, चक्रवात
- इकाई 5 जलमण्डल: समुद्री जल का तापमान समुद्रिक लवणता; समुद्री निक्षेप; समुद्री नितल की बनावट ज्वार-भाटा एवं जलधाराएं

द्वितीय प्रश्न-पत्र
भारत का भूगोल

अधिकतम अंक: 75

- इकाई 1: भारत का धरातल, प्रवाह प्रणाली, जलवायु एवं जलवायु विभाग, मिट्टी एवं उसकी समस्याएं, प्राकृतिक वनस्पति: प्रकार एवं वितरण, वन संसाधन एवं उनका संरक्षण
- इकाई 2: प्रमुख खनिज: लौह अयस्क मैग्जीन अभ्रक, शक्ति साधन: कोयला, खनिज-तेल एवं जल-विद्युत, प्रमुख उद्योग: लौह एवं इस्पात, सुती वस्त्र, शक्कर, सीमेन्ट कागज एवं लुग्दी
- इकाई 3: कृषि : भारतीय कृषि की प्रमुख विशेषताएं तथा समस्याएं, प्रमुख कृषि फसलें: गेहूं, चावल, गन्ना, चाय व कपास, सिंचाई के प्रमुख स्रोत एवं उनका वितरण, भारत की प्रमुख सिंचाई परियोजना: भाखडा नांगल, दामोदर घाटी निगम
- इकाई 4: जलसंख्या: वृद्धि, वितरण एवं घनत्व, यातायात : रेल, सडक, जल एवं वायु भारत का विदेश व्यापार, सघटन एवं प्रवृत्तियां
- इकाई 5: कश्मीर घाटी, छोटा नागपुर पठार, मालाबार तटीय प्रदेश तथा मध्य गंगा मैदान

**GEOGRAPHY PRACTICAL
SCHEME**

Four Practical Periods per week per group of 20 students

Max. Marks : 50

Min marks : 18

Duration : 6 Hrs.

1. Lab Work (Written paper)	: 02 Hours	21 Marks
2. Record Work & Viva	: 02 Hours	9+5 = 14 Marks
3. Field Survey & Viva Voce	: 02 Hours	10+5=15 Marks

Total Marks: 50 Marks

Note: Each Candidate is required to complete at least Twenty Exercise in the Record Book.

1. Scales: Plain, Comparative, Time and Diagonal; Methods of enlargement and reduction of maps with square methods
2. Knowledge and use of meteorological instruments: Maximum and Minimum Thermometer, Thermograph, Stevenson's Screen, Aneroid Barometer, Barograph, Rain Gauge , Windvane, Anemometer, Dry and Wet Bulb Thermometer; Study and Interpretation of Indian weather maps (January and July)
3. Climatic graphs showing (i) Maximum, Minimum and Mean Temperature (ii) Monthly rainfall (iii) Monthly temperatures, rainfall and relative humidity (iv) Rainfall Variability (v) Histogram of Rainfall (vi) Hythergraph (vii) Climograph and (viii) Wind rose diagram
4. Chain and Tape Survey

RECOMMENDED READINGS

Singh, R.L. : Elements of practical geography, Students friends Varansi, 1987

Sing, R. and Kanaujia, E.R.S. : Map work and practica

Geography, Center Book Depot. Allabad.

Monkhuous, F.J and Wilkins, H.R. : Map ana Diagrams, Methuen, London 1994

Robison, A.H. : Elements of Cartography, John Willey & Sons, New York.

Sharma, J.P. Prayocik Bhoogol, Rastogi Prakashan meerut & Sons, New youk.

Jain, S.M. : Prayogatimak Bhoogol, sathya Bhawan, Agra.

भूगोल प्रायोगिक

योजना

20 विधार्थियों के एक समुह हेतु प्रायोगिक के चार कालांश प्रति सप्ताह

अधिकतम अंक रू 50

न्यूनतम अंक रू 18

समय अविधि रू रू 06 घण्टे

1. प्रयोगशाला कार्य ;लिखित प्रश्न-पत्र	2 घण्टे	21 अंक
2. प्रायोगिक अभ्यास पुस्तिका एवं साक्षात्कार	2 घण्टे	9+5=14 अंक
3. क्षेत्रीय सर्वेक्षण एवं साक्षात्कार	2 घण्टे	10+5=15 अंक
योग:		50 अंक

निर्देश ; प्रत्येक विधार्थी को प्रायोगिक अभ्यास पुस्तिका में कम से कम 20 अभ्यास आरेखित करने होंगे।

1. मापक: साधारण, तुलनात्मक, समय तथा कर्णवत, मानचित्र विवर्द्धन तथा संकुचन की विधियाँ: वर्ग विधि पर आधारित अभ्यास
2. मौसम सम्बन्धी उपकरणों का ज्ञान तथा प्रयोग: अधिकतम तथा न्यूनतम तापमापी, थर्मोग्राफ, स्टीवेंन्सन स्क्रीन, निद्रव-वायुदाबमापी, तापमापी, भारतीय मौसम मानचित्रों का अध्ययन एवं निर्वचन ; जनवरी तथा जुलाई।
3. जलवायु : आरेख: (1) अधिकतम, न्यूनतम तथा मध्य तापदर्शी, (2) मासिक वर्षादर्शी, (3) मासिक ताप, वर्षा तथा सापेक्षिक आर्द्रतादर्शी, (4) वर्षा विचलनदर्शी, (5) वर्षा का हिस्टोग्राम, (6) हिदरग्राफ, (7) क्लाइमोग्राफ (8) वात्तारेख
4. जरीब एवं फीता सर्वेक्षण

B.A. Part-II Examination 2023

GEOGRAPHY

Note: There will be two theory papers of 3 hours duration carrying 75 marks each, and a practical paper of 06 hours duration of 50 marks. Candidates will have to pass in theory and practical separately.

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Part	Total No. Q.	Marks each Q.	Total Marks
A	10	1	10
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			Total : 75

Theory - Max. Marks : 75 Min marks : 27

Practical- Max. Marks : 50 Min marks : 18

PAPER I

HUMAN GEOGRAPHY

Unit 1 : Definition, scope and principles of human geography ; its relationship with other Social science; Schools of human geography; Environmentalism, Possibilism and Neo-determinism

Unit 2 : Geographic environment and man : Influence of major land forms, climate and water bodies on human activities ; Forms of adaptation to environment; human life in principal environments : Equatorial regions, Tropical deserts, Monsoon lands, Temperate grasslands, Mediterranean lands and Polar region

Unit 3 : Races of mankind : Criteria for classification; Classification schemes of Kroeber, Haddon and G. Taylor; Population: growth, distribution and density in the world

Unit 4 : Human settlements : Site, forms and types ; House types with special reference to India

Unit 5 : Urbanization : Meaning, growth and causes of Urbanization; Principal agglomerations of world functional classification of Indian cities; slums and associated problems with reference to India, Problems of urbanization and remedies

RECOMMENDED READINGS

Brunches, J. : Human Geography

Huntington, E ; The principles of Human Geography, John Wiley & Sons, N. Y.
Eperillou, A. V. Human Geography, Longmans, 1965
Money, D. C. : An Introduction to human Geography, U. I. P. London
Karan, M. P. : Manav bhugol ke sidhant , kitabghar, Kanpur .
Mamoria , C. B. : Principles of Human Geography .
Dwivedi, R.L. & Singh R.L. : Manav Bhugol Ki Samiksha
Blache Vidal deela : Manav Bhugol Ke Siddhant (in Hindi)
Jain , : J.K. & Bohra, D.M. : Vishwa ka Sanskritik Bhugol, Academic Publishers, Jaipur, 1983
Leong, G.C. & Morgan, G.C. & morgan. G.c. : Human and Econnomic Geography, O.U.P., Oxford, 1986
Husain, Majid : Human Geography, Rawat Publications, Jaipur and Delhi.
कौशिक एस डी मानव भूगोल के सरल सिद्धांत, रस्तोगी पब्लिकेशन्स, मेरठ
सिंह, बी एन व एम के : मानव भूगोल, प्रयाग पब्लिकेशन्स इलाहाबाद

PAPER II

GEOGRAPHY OF RAJASTHAN

- Unit 1 : Physiography and Physiographic divisions, Climate, Soil, Natural vegetation
- Unit 2 : Population : growth, distribution and density; Tribal population distribution, principal tribes- Bhil, Meena and Girasiya; Rural settlements: growth pattern, types and building material; Tourism in Rajasthan-geographical perspective
- Unit 3 : Mineral resources: Distribution and reserves of important minerals; Industry: Localization factors and spatial pattern; Transportation: Railways and roads, their pattern and accessibility
- Unit 4 : Agriculture : Agricultural land use, Principal crops : wheat, maize, bajra, oilseeds and cotton ; irrigation sources, spatial aspects of development of ground water; Principal irrigation Projects: Indira Gandhi Canal, Chambal Valley project and Mahi Bajaj Sagar; Animal Husbandry: Number, spatial pattern and principal breeds
- Unit 5 : A detailed study of Marusthali, Aravalli Region, Eastern Agro-Industrial Region and Hadauti Region

RECOMMENDED READINGS

Gupta & Prakash (ed.) : Environmental Analysis of Thar Desert, English Books Depot, Dehradun, 1979

- Misra, V.C. : Geography of Rajasthan, NBT, New Delhi, 1967(also available in Hindi)
- Roonwal, M.L. (ed.) :Natural Resources of Rajasthan, Vols. I & II, University of Jodhpur, 1977
- Sharama, R.C. : Settlement Geography of the India Desert, Korwar Brother, New Delhi, 1972
- Singh, R.L. (ed.) : India : A Regional Geography, National Geographical Society of India, Varanasi, 1917
- Bhalla, L.R. : Rajasthan ka Bhugol
- Mehr, I, : Rajasthan ka Bhugol
- चौहान, टी. एस. : राजस्थान का भूगोल, विज्ञान प्रकाशन, जयपुर 1988
- निगम, एम एन एवं तिवारी, ए.के. : राजस्थान का भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर

GEOGRAPHY PRACTICAL SCHEME

Four Practical Periods per week per group of 20 students

Max. Marks: 50	Min. marks: 18	Duration: 06 Hours.
		Marks
4. Lab Work (Written paper) :	02 Hours	21 Marks
5. Record Work & Viva Voce :	02 Hours	9+5 = 14Marks
6. Field Survey & Viva Voce :	02 Hours	10+5=15 Marks

Total Marks 50 Marks

Note : Each Candidate is required to complete at least Thirty Exercises

1. Methods of Depiction of Relief: Spot Height, Hachures, Formlines and Contours, Interpolation of Contours, Intervisibility By Drawing Sections with a knowledge of Dead Ground; Scale of slope of contours and Section Drawing: Slopes, Conical Hill, Ridge, 'V' Shape Valley, Gorge, Waterfall, Pass, Saddle, Plateau, Escarpment, Sand Dune, 'U' shaped valley, Hanging Valley, Cliff and lake
2. Representation of socio-cultural and economic data by diagrams and diagrammatic maps : (1) Bar : Simple and Compund (2) Rectangular (3) Square (4) Block Pile (5) Wheel (6) Circle and scales of Square root and cube root
3. Representation of socio-cultural and economic data by distribution maps: Choroschematic, Choro-pleth, Isopleth and Dot Methods
4. Plane Table Survey

Recommended Readings :

Singh, R.L. : Elements of Practical Geography, Students Friends, Varanasi, 1987.
Singh, R. and Kanaujia, L.R.S. : Map Work and Practical Geography, Central Book Depot, Allahabad.
Monkhouse, F.J. and Wilkinson, H.R. : Map and Liagrams, Methudn, London 1994.
Robinson, A.H.: Elements of Cartography, John Willey & Sons, New Yourk.
Mishra, R.P.: Fundamental of Cartography, Macmillan, New Delhi.
Kellay, Georgep : Map Projections, Mathuen & Co., London. Steers,
J.K. : Map Projections, University of London Press, London.
Sharma, J.P.: Prayogik Bhoogol, Rastogi Prkashan, Meerut.
Jain, S.M.: Prayogatmak, Boogol, Sahitya Bhagwan, Agra.

बी.ए. द्वितीय वर्ष परीक्षा 2023

भूगोल

प्रथम प्रश्न-पत्र

मानव भूगोल

- ईकाई1: मानव भूगोल की परिभाषा, विषय क्षेत्र एवं सिद्धांत, अन्य समाज विज्ञानों से इसका सम्बन्ध ; मानव भूगोल की विशेषताएं : नियतिवाद, सम्भववाद तथा नव नियतिवाद
- ईकाई2: भौगोलिक पर्यावरण तथा मानव : प्रमुख भु-आकारों जलवायु तथा जलाशयों का मानव क्रियाओं पर प्रभाव; पर्यावरण अनुकूलन के रूप; प्रमुख पर्यावरण प्रदेशों में मानव जीवन : विषुवत्रेखीय प्रदेश, उष्ण मरुस्थल, मानसून प्रदेश, समशीतोष्ण तृणक्षेत्र, भूमध्यसागरीय प्रदेश तथा ध्रुवीय प्रदेश
- ईकाई3: मानव प्रजातियां : वर्गीकरण के आधार; क्रोमर, हैडन तथा जी टेलर के वर्गीकरण; जनसंख्या : विश्व में वृद्धि, वितरण तथा घनत्व
- ईकाई4 : मानव अधिवास : स्थिति, आकृति एवं प्रकार; भारत के विशेष सन्दर्भ में गृह प्रकार
- ईकाई5: नगरीकरण : अर्थ, वृद्धि तथा कारण, विश्व के मुख्य जनसमुह, भारतीय नगरों का प्रकार्यात्मक वर्गीकरण, गंदी बस्ती एवं उससे जुड़ी समस्याएँ, भारत के सदर्भ में-नगरीकरण की समस्याएँ एवं उपचार |

RECOMMENDED READINGS

Brunches, J. : Human Geography
Huntington, E ; The principles of Human Geography, John Wiley & Sons, N. Y.
Eperillou, A. V. Human Geography, Longmans, 1965
Money, D. C. : An Introduction to human Geography, U. I. P. London
Karan, M. P. : Manav bhugol ke sidhant , kitabghar, Kanpur .

Mamoria , C. B. : Principles of Human Geography .

Dwivedi, R.L. & Singh R.L. : Manav Bhugol Ki Samiksha

Blache Vidal deela : Manav Bhugol Ke Siddhant (in Hindi)

Jain, : J.K. & Bohra, D.M. : Vishwa ka SansKritik Bhugol, Academic Publishers, Jaipur, 1983

Leong, G.C. & Morgan, G.C. & morgan. G.c. : Human and Econnomic Geography, O.U.P., Oxford, 1986

Husain, Majid : Human Geography, Rawat Publications, Jaipur and Delhi.

कौषिक एस डी मानव भूगोल के सरल सिद्धांतए रस्तोगी पब्लिकेणन्सए मेरठ

सिंह, बी एन व एम के : ;2009द्ध मानव भूगोल, प्रयाग पब्लिकेणन्स इलाहाबाद

द्वितीय प्रश्न-पत्र

राजस्थान का भूगोल

इकाई 1 : धरातल तथा धरातलीय विभाग; जलवायु, मृदा, प्राकृतिक वनस्पति

इकाई 2 : जनसंख्या: वृद्धि, वितरण तथा घनत्व, आदिवासी जनसंख्या, प्रमुख आदिवासियों का वितरण-भील, मीणा, गरासिया, ग्रामीण अधिवास-वृद्धि, स्वरूप, प्रकार तथा भवन निर्माण सामग्री, राजस्थान में पर्यटन-भौगोलिक परिप्रेक्ष्य

इकाई 3 : खनिज ससांधन-वितरण, उत्पादन तथा प्रमुख खनिजों के भन्डार, उद्योग-स्थायीकरण के कारण तथा स्थानिक

प्रतिरूप; यातायात-रेल तथा सड़कें-उनके प्रतिरूप एवं अभिगम्यता

इकाई 4 : कृषि- कृषि भूमि उपयोग, प्रमुख फसलें-गेहूं, मक्का, बाजरा, तिलहन तथा कपास, सिंचाई के साधन, सिंचाई विकास के क्षेत्रीय पहलू, भूमिगत जल, प्रमुख सिंचाई योजनाएं-इन्द्रिरा गांधी नहर योजना, चम्बल घाटी योजना तथा माही बजाज सागर योजना; पशुपालन-संख्या; क्षेत्रीय प्रारूप तथा प्रमुख नस्लें

इकाई 5 : मरुस्थली : अरावली प्रदेश, पूर्वी कृषि औद्योगिक प्रदेश तथा हाड़ौती प्रदेश का विशद अध्ययन

भूगोल प्रायोगिक योजना

20 विधार्थियों के एक समुह हेतु प्रायोगिक के चार कालांश प्रति सप्ताह

अधिकतम अंक : 50

न्यूनतम अंक : 18

समय अविधि : : 06 घण्टे

अंक

1. प्रयोगशाला कार्य (लिखित प्रश्न-पत्र)	2 घण्टे	21 अंक
2. प्रायोगिक अभ्यास पुस्तिका एवं साक्षात्कार	2 घण्टे	9+5=14 अंक
3. क्षेत्रीय सर्वेक्षण एवं साक्षात्कार	2 घण्टे	10+5=15 अंक
		योग 50 अंक

निर्देश : प्रत्येक विधार्थी को प्रायोगिक अभ्यास पुस्तिका में कम से कम 30 अभ्यास आरेखित करने होंगे |

1. धरातल को प्रदर्शित करने की विधियां – स्थानिक ऊंचाई, हैश्यूर, खण्डित रेखाएँ, समोच्च रेखाएँ तथा समोच्च रेखाओं का प्रति छेदन, अन्तर्दृश्यता, सेक्शन खींचकर अदृश्य भुखण्ड का ज्ञान तथा ढाल मापक, समोच्च रेखाएं खण्ड चित्र खींचना-ढाल, शंक्वाकार पहाड़ी, कटक **U** आकार की घाटी, गॉर्ज,जलप्रताप, दर्रा, सेडल (काटी) , पठार एस्कार्पमेन्ट, बालुका स्तूप, **V** आकार की घाटी, झूलती हुई घाटी तथा झील |
2. सामाजिक सांस्कृतिक व आर्थिक आंकड़ों का आरेखों एवं आरेखीय मानचित्र से प्रदर्शन – (1) साधारण व मिश्रित दण्डारेख (2)आयताकार (3) वर्गाकार (4) ब्लॉक पाइल (5) चक्र चित्र, (6) वृत्त चित्र, वर्गमुल तथा घनमूल मापनी |
3. समाजिक, सांस्कृतिक व आर्थिक आंकड़ों का वितरण मानचित्रों से प्रदर्शन :वर्ण प्रतीकी विधि, छायांकन विधि, सम-मान रेखा विधि बिन्दु विधि |
4. सम-पटल सर्वेक्षण

B.A. Part-III Examination 2024

GEOGRAPHY

Note: There will be two theory papers of 3 hours duration carrying 75 marks each, and a practical of 50 marks. Candidates will have to pass in theory and practical separately.

Theory - Max. Marks : 75 Min marks : 27

Practical- Max. Marks : 50 Min marks : 18

PAPER 1

ECONOMIC GEOGRAPHY

- Unit 1 : Nature, scope and methods of economic geography ; economic resources; their classification and conservation; fundamental occupations of man: fishing and livestock raising
- Unit 2 : Agriculture : subsistence, intensive commercial grain farming, plantation agriculture and mixed farming, dairying; principal agricultural crops: wheat, rice, maize, tea, coffee, rubber, cotton, sugarcane and sugar beet
- Unit 3 : Minerals : Iron ore, Manganese and Copper ore; Sources of power: Coal, Petroleum, Hydroelectricity and Nuclear
- Unit 4 : Industries : Iron and Steel, Cotton Textile, Pulp and Paper, Major Industrial Regions: The Lake region of U.S.A., Ruhr basin of Germany and Manufacturing belts of Japan.
- Unit5 : Transportation : Rail, Water-major ocean routes and inland waterways of Europe, former USSR; Air-factors affecting air transportation, Principal air-routes of the world; International trade: Bases of international trade; barriers to trade and pattern of world trade

BOOKS RECOMMENDED

Hartshorn, T.A. and Alexander, J.W. : Economic Geography, prentice-Hall of India Pvt.Ltd.,New Delhi, 1988.

Das, Gupta and Kapur: Adhunik Arithik va Vanijiya Bhugol, Premier Publishing Company, Delhi

Dubey, R.N. : Economic and Commercial Geography Kitab Mahal, Allahabad

Leong, G.C. and Morgan, G.C. : Human and Economic Geography, OUP, Oxford, 1986.

Wheeler and Muller : Economic Geography, Jonh Wiley and Sons, N.Y. II Edition.

Mamoria, C.B. : Arithik Vanijiya Bhugol, Gaye Prasad and Sons, Agra

Negi, B.S. : Geography of Resources, Kedarnath Ramnath, Meerut, 1980.

Ranner, G.T. : World Economic Geography

Singh, A and Raza : Parkratik Sansadhan, 1980

Singh, K.N. and Singh J. : Arithik Bhugol ke Multatva, Gyanodaya Prakashan, Gorakhpur, 1996.

कौशिक, एस. डी. : आर्थिक भूगोल के सरल सिद्धान्त, रस्तोगी, पब्लिकेशन्स, मेरठ

सिंह, जगदीश: ससांधन भूगोल, ज्ञानोदय प्रकाशन, गोरखपुर,

PAPER II

ENVIRONMENTAL GEOGRAPHY

- Unit 1: Definition and scope of Environmental Geography : its relationship with other subjects; elements of environment; man-environment relationships, Percipient and quality of environment.
- Unit 2: Ecology: definition\scope and types; ecosystem; meaning, types; components, functioning, productivity and stability; geobiochemical cycles : Water, Carbon, Nitrogen and oxygen
- Unit 3: Environments problems: Causes, population increase; urbanisation, industrialisation, transportation, pesticides and wars; environmental pollution: air, water, soil and noise, measure for control
- Unit 4 : Environmental hazards: Ozone depletion, green house effect, El-nino, Global warming, acid rain, floods, droughts, volcanoes, earthquakes, landslides, collapse of big dams, health hazards and energy crisis
- Unit 5: Ecological basis of environmental management: sustainability of human ecosystem; conservation of natural resources: soil, water, forests, minerals and energy ; national and international efforts on environmental management; environmental education

RECOMMENDED READINGS

Arvilla, R: Man and Environmental: Crisis and Strategy of Choice, Penguin, Hammonds – Worth, 1967.

Botkin, D.B. and E.A. Keller: Environmental Studies, C.F. Merrill Pub. Co. Columbus, Ohio, 1982.

Das Saman, R.F. : Environmental Conservation, John Wiley & Sons, New York, 1976.

Detwyler, R. : Man's Impact on Environment, John Wiley & Sons, New York 1972.

Duffey, E : Conservation of Nature, Collins, London, 1970.

Edington J.M. and M.A. Edington : Ecology and Environmental Planning, Champan and Hall, London,1977.

Furley, P.A. and W.W. Newey : Man and the Biosphere, Butterworths, London, 1983.

Gerasimov, I.P. : Geography and Ecology , Progress Publication, Moscow, 1983.

Jonathan T : Introduction to Environmental Studies Sunders College Publishing, Philadilphia Holt-Saunders, Japan, 1985.

M.I.T. : Study of Critical Environmental Problems, The M.I. T. Press, Cambridge, Massachusetts, 1970.

Park C. C. : Ecology and Environmental Management, Butterworths, London, 1980.

Singh, P. : Environmental Pollution and Management, Chugh Publication, Allahabad, 1985.

अवस्थी नरेन्द्रमोहन एवं आर पी तिवारी: पर्यावरण भूगोल, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल

नेगी, पी एस : पारिस्थितकी, विकास एवं पर्यावरण भूगोल, रस्तोगी एण्ड कम्पनी मेरठ,

तिवारी, विजय कुमार: पर्यावरण और पारिस्थितकी, हिमालय पब्लिशिंग हाऊस, मुम्बई,

सक्सेना, हरिमोहन : पर्यावरण एवं पारिस्थितिकी भुगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर,
सिंहं सविन्द्र: पर्यावरण भुगोल, प्रयाग पुस्तक भवन, इलाहाबाद
सिंहं, जगदीश : वातावरण नियोजन एवं संविकास, ज्ञानोदय प्रकाशन, गोरखपुर,
श्रीवास्तव, वी के एवं बी पी राव: पर्यावरण और पारिस्थितिकी, वसुन्धरा प्रकाशन, गोरखपुर,
रघुवंशी, अरुण एवं चन्द्रलेखा रघुवंशी: पर्यावरण और प्रदुषण, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल
जोशी, रतन : पर्यावरण भुगोल, साहित्य भवन पब्लिकेशन्स, आगरा
सक्सेना, हरिमोहन : पर्यावरण एवं प्रदुषण,, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर,

GEOGAPHY PRACTICAL SCHEME

Four Practical Periods per week per group of 20 students

Max. Marks : 50 Min marks : 18 Duration : 6 Hrs.

			Marks
1.	Lab Work (Written paper) :	02 Hours	21 Marks
2.	Record Work & Viva-voce :	02 Hours	9+5 = 14Marks
3.	Field Survey & Viva-Voce :	02 Hours	10+5=15 Marks

Total Marks: 50 Marks

Note : Each Candidate is required to complete at twenty five exercises.

Syllabus:

1. Study and interpretation of topographical sheets of typical areas of India; scheme of Indian topographical sheets with a complete knowledge of their latest version
2. Profile drawing: serial, super-imposed, composite and projected; Knowledge of vertical exaggeration
3. Geographical construction of following map projections: Cylindrical projection; Simple Cylindrical (Equidistant), Cylindrical Equal Area, Mercator; Conical Projection: One standard parallel, Two standard parallel, Bonne, Poly-Conic, Zenithal Projection (Polar (Case only) : Equidistant, equal area, Gnomonic, Stereographic, Orthographic
4. Measure of Central Tendency : Mean, Median Mode and Standard Deviation
5. Prismatic Compass Survey: Corrections of Bearings and Closing of errors by Bowditch method

RECOMMENDED READINGS

Sing, R.L. : Elements of Practical Geography, Students Friends, Varanasi, 1987.

Singh, R. and Kanaujia, L.R.S. : Map work and Practical Geography, Central Book Depot, Allahabad.

Monkhouse, F.J. and Wilkinson, H.R. Map and Liagrams, Methudn, London 1994.

Robinson, A.H. : Elements of Cartography, Jonh Willy & Sons, New York.

Mishra, R.P.: Fundamental of cartography, Macmillan, New Delhi.

Kellay, Georgrp : Map Projections, Methuen & Co., London.

Steers, J.K. : Map Projections, University of London Press, London.

Sharma, J.P. : Prayogik Bhoogol, Rastogi Prkashan, Meerut.

Jain, S.M.: Prayogatmak, Bhoogol, Sahitya Bhawan, Agra.

बी.ए तृतीय वर्ष परीक्षा 2024

भूगोल

प्रथम प्रश्न-पत्र

आर्थिक भूगोल

- इकाई 1: आर्थिक भूगोल की प्रकृति, क्षेत्र एवं विधियां, आर्थिक संसाधन—उनका वर्गीकरण और संरक्षण, मानव के आधारभूत व्यवसाय—मछली पकड़ना, पशुपालन
- इकाई 2: कृषि: निर्वहन, गहन व व्यावसायिक अन्न उत्पादन, बागानी कृषि, मिश्रित कृषि, दुग्ध व्यवसाय; प्रमुख कृषि उत्पादन: गेहू, चावल, मक्का, चाय, कहवा, रबड़, कपास गन्ना तथा चुकन्दर
- इकाई 3: खनिज: लोहा—अयस्क, मैंगनीज और तांबा: शक्ति के साधन—कोयला, खनिज तेल, जल विद्युत शक्ति और परमाणु शक्ति
- इकाई 4 : उद्योग: लोहा और इस्पात, सुती वस्त्र, कागज एवं लुग्दी उद्योग; प्रमुख औद्योगिक क्षेत्र: संयुक्त राज्य अमेरीका की झील क्षेत्र, जर्मनी का रुरबेसिन और जापान की औद्योगिक पेटियां
- इकाई 5 : यातायात: रेल, जल यातायात—प्रमुख समुद्री मार्ग, पूर्व सोवियत रुस एवं युरोप के आन्तरिक जल मार्ग, वायु यातायात और उसे प्रभावित करने वाले कारक; विश्व के प्रमुख वायु मार्ग; अन्तर्राष्ट्रीय व्यापार: अन्तर्राष्ट्रीय व्यापार के आधार, व्यापार के अवरोध विश्व—व्यापार के प्रतिरूप

BOOKS RECOMMENDED

Hartshron, T.A. and Alexander, J.W. : Economic Geography, prentice-Hall of India Pvt.Ltd.,New Delhi, 1988.

Das, Gupta and Kapur: Adhunik Arithik va Vanijiya Bhugol, Premier Publishing Company, Delhi

Dubey, R.N. : Economic and Commercial Geography Kitab Mahal, Allahabad

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Wheeler and Muller : Economic Geography, Jonh Wiley and Sons, N.Y. II Edition.

Mamoria, C.B. : Arithik Vanijiya Bhugol, Gaye Prasad and Sons, Agra

Negi, B.S. : Geography of Resources, Kedarnath Ramnath, Meerut, 1980.

Ranner, G.T. : World Economic Geography

Singh, A and Raza : Parkratik Sansadhan, 1980

Singh, K.N. and Singh J. : Arithik Bhugol ke Multatva, Gyanodaya Prakashan, Gorakhpur, 1996.

कौशिक, एस. डी. : आर्थिक भूगोल के सरल सिद्धान्त, रस्तोगी, पब्लिकेशन्स, मेरठ

सिंह, जगदीश: ससाधन भूगोल, ज्ञानोदय प्रकाशन, गोरखपुर,

द्वितीय प्रश्न-पत्र

पर्यावरण भूगोल

- इकाई 1: पर्यावरण भूगोल की परिभाषा एवं विषय क्षेत्र: अन्य विषयों से इसका सम्बन्ध: पर्यावरण के तत्व: मानव-पर्यावरण सम्बन्ध: पर्यावरण अवबोध एवं गुणवत्ता
- इकाई 2: पारिस्थितिकी: अर्थ, विषयक्षेत्र और प्रकार; पारिस्थितिकी-तंत्र: अर्थ, प्रकार, घटक, क्रियाशीलता, उत्पादकता और स्थायित्व: भू-जैव रसायन चक्र, जल, कार्बन, नाईट्रोजन और ऑक्सीजन
- इकाई 3: पर्यावरण समस्याएं: कारण; जनसंख्या वृद्धि; नगरीकरण; औद्योगीकरण; परिवहन; कीटनाशक और युद्ध; पर्यावरण प्रदूषण: वायु, जल, मृदा एवं ध्वनि: नियंत्रण हेतु उपाय
- इकाई 4: पर्यावरण संकट : ओजोन क्षय, हरित गृह प्रभाव, एलनिनो, ग्लोबल वार्मिंग अम्ल वर्षा, बाढ़, सुखा, ज्वालामुखी, भुकम्प, भू-स्खलन, बड़े बांधों का ढहना, स्वास्थ्य आपदाएं और ऊर्जा संकट
- इकाई 5: पर्यावरण प्रबन्ध के पारिस्थितिक आधार : मानव पारिस्थितिकीय तंत्र की सुदृढशीलता; प्राकृतिक संसाधनों का संरक्षण: मृदा, जल, वन, खनिज और ऊर्जा: पर्यावरण प्रबन्ध के राष्ट्रीय एवं अन्तर्राष्ट्रीय प्रयास: पर्यावरण शिक्षा

RECOMMENDED READINGS

- Arvilla, R: Man and Environmental: Crisis and Strategy of Choice, Penguin, Hammonds – Worth, 1967.
- Botkin, D.B. and E.A. Keller: Environmental Studies, C.F. Merrill Pub. Co. Columbus, Ohio, 1982.
- Das Saman, R.F. : Environmental Conservation, John Wiley & Sons, New York, 1976.
- Detwyler, R. : Man's Impact on Environment, John Wiley & Sons, New York 1972.
- Duffey, E : Conservation of Nature, Collins, London, 1970.
- Edington J.M. and M.A. Edington : Ecology and Environmental Planning, Champan and Hall, London, 1977.
- Furley, P.A. and W.W. Newey : Man and the Biosphere, Butterworths, London, 1983.
- Gerasimov, I.P. : Geography and Ecology , Progress Publication, Moscow, 1983.
- Jonathan T : Introduction to Environmental Studies Sunders College Publishing, Philadilphia Holt-Saunders, Japan, 1985.
- M.I.T. : Study of Critical Environmental Problems, The M.I. T. Press, Cambridge, Massachusetts, 1970.
- Park C. C. : Ecology and Environmental Management, Butterworths, London, 1980.
- Singh, P. : Environmental Pollution and Management, Chugh Publication, Allahabad, 1985.

अवस्थी नरेन्द्रमोहन एवं आर पी तिवारी: पर्यावरण भुगोल, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल
 नेगी, पी एस : पारिस्थितिकी, विकास एवं पर्यावरण भुगोल, रस्तोगी एण्ड कम्पनी मेरठ,
 तिवारी, विजय कुमार: पर्यावरण और पारिस्थितिकी, हिमालय पब्लिशिंग हाऊस, मुम्बई,
 सक्सेना, हरिमोहन : पर्यावरण एवं पारिस्थितिकी भुगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर,
 सिंह सविन्द्र: पर्यावरण भुगोल, प्रयाग पुस्तक भवन, इलाहाबाद
 सिंह, जगदीश : वातावरण नियोजन एवं संविकास, ज्ञानोदय प्रकाशन, गोरखपुर,
 श्रीवास्तव, वी के एवं बी पी राव: पर्यावरण और पारिस्थितिकी, वसुन्धरा प्रकाशन, गोरखपुर,
 रघुवंशी, अरुण एवं चन्द्रलेखा रघुवंशी: पर्यावरण और प्रदुषण, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल
 जोशी, रतन : पर्यावरण भुगोल, साहित्य भवन पब्लिकेशन्स, आगरा
 सक्सेना, हरिमोहन : पर्यावरण एवं प्रदुषण,, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर,

भूगोल प्रायोगिक योजना

20 विधार्थियों के एक समुह हेतु प्रायोगिक के चार कालांश प्रति सप्ताह

अधिकतम अंक : 50

न्यूनतम अंक : 18

समय अवधि : 06 घण्टे

अंक

1. प्रयोगशाला कार्य (लिखित प्रश्न-पत्र)	2 घण्टे	21 अंक
2. प्रायोगिक अभ्यास पुस्तिका एवं साक्षात्कार	2 घण्टे	9+5=14 अंक
3. क्षेत्रीय सर्वेक्षण एवं साक्षात्कार	2 घण्टे	10+5=15 अंक
	योग	50 अंक

निर्देश : प्रत्येक विधार्थी को प्रायोगिक अभ्यास पुस्तिका में कम से कम 25 अभ्यास आरेखित करने होंगे |

पाठ्यक्रम :

- 1^प भारत के प्रारूपी क्षेत्रों के भूपत्रकों का अध्ययन व व्याख्या; भारत के भूपत्रकों की योजना तथा उनके नवीनतम संस्करण का पूर्ण ज्ञान परिच्छेदिका रेखांकन: कमिक, अध्यारोपित, संयुक्त एवं प्रक्षेपित ऊर्ध्वाधर विस्तारण का ज्ञान|
- 2^प निम्नलिखित मानचित्र प्रक्षेपों का रेखीय आरेखण: बेलनाकार प्रक्षेप : साधारण बेलनाकार (समदुरी), बेलनाकार समक्षेत्रफल, मरकेटर शंक्वाकार प्रक्षेप : एक प्रमाणिक अक्षांश, दो प्रमाणिक अक्षांश रेखा, बोन, बहुशंक्वाकार |
 खमध्य प्रक्षेप : (केवल ध्रुवीय अवस्थाएं), सम-दुरस्थ सम-क्षेत्रफल केन्द्रक (नोमोनिक) त्रिविम (स्टीरोग्राफिक), लम्बकोणीय (ऑर्थोग्राफिक)
- 3^प केन्द्रीय प्रवृत्ति के माप: माध्य, माध्यिका, बहुलक तथा प्रमाप विचलन |



**JAI NARAIAN VYAS UNIVERSITY JODHPUR
(RAJASTHAN)**

FACULTY OF ARTS, EDUCATION AND SOCIAL SCIENCES

SYLLABI

FOR

M.A. GEOGRAPHY (SEMESTER SCHEME)

M.A. (I & II SEMESTER) CBCS EXAMINATION - 2022

&

M.A. (III & IV SEMESTER) CBCS EXAMINATION - 2023

DETAIL EXAMINATION SCHEME FOR CHOICE BASED CREDIT SYSTEM

GUIDELINES

Definitions of Key Words:

1. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
2. **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed elective and skill courses. A student need to select **two elective papers** offered by the Department in which he/she is doing core course this shall be part of core programme during third and fourth semester. Each student has to complete **four skill courses:** two within the Department and two from other Department within JNV University or the Universities approved by JNV University
3. **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/ tutorials/laboratory work/ field work/ project work/ self-study etc. or a combination of some of these.
4. **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree is prescribed in terms of number of credits to be completed by the students.
5. **Credit Point:** It is the product of grade point and number of credits for a course.
6. **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one period of teaching (lecture or tutorial) or two periods of practical work/field work per week.
7. **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.
8. **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
9. **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.
10. **Programme:** An educational programme leading to award of the Postgraduate Degree in the Core subject in which he/she is admitted.
11. **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
12. **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to November/ December and even semester from December/January to May.
Odd semester University examination shall be during second/third week of December and even semester University examination shall be during second/third week of May. The Department shall conduct the Practical examination of odd and even semesters as per the Panel of Examiners approved by the University. Each Board of examiners shall consist for one external Examiner from other University/Institute and another from the Department.
13. **Transcript or Grade Card or Certificate:** Based on the grades earned, a statement of grades obtained shall be issued to all the registered students after every semester. This statement will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester

Fairness in Assessment

Assessment is an integral part of system of education as it is instrumental in identifying and certifying the academic standards accomplished by a student and projecting them far and wide as an objective and impartial indicator of a student's performance. Accordingly the Faculty of Arts, Education & Social Sciences resolves the following:

- a. All internal assessments shall on term test and seminar. Attendance shall carry the prescribed marks in all papers.
- b. In each semester two out of four theoretical components of the University examinations shall be undertaken by external examiners from outside JNV University, who may be appointed by the competent authorities.

Grievances and Redressal Mechanism

- a) The students will have the right to make an appeal against any component of evaluation. Such appeal has to be made to the Head of the Department concerned as the case may be clearly stating in writing the reason(s) for the complaint / appeal.
- b) The appeal will be assessed by the Chairman and he/she shall place before the **Grievance Redressal Committee (GRC)**, Chaired by the Dean, Faculty of Arts, Education & Social Sciences comprising of the HOD of the concerned Department and if need be Course Teacher(s) be called for suitable explanation; GRC shall meet at least once in a semester and prior to CCA finalization.
- c) The Committee will consider the case and may give a personal hearing to the appellant before deciding the case. The decision of the Committee will be final.

Table 1: Grades and Grade Points

S.No.	Letter Grade	Meaning	Grade Point
1	'O'	Outstanding	10
2	'A+'	Excellent	9
3	'A'	Very Good	8
4	'B+'	Good	7
5	'B'	Above Average	6
6	'C'	Average	5
7	'P'	Pass	4
8	'F'	Fail	0
9	'Ab'	Absent	0

- i. A student obtaining Grade F in a paper shall be considered failed and will be required to reappear in the University End Semester examination.
- ii. For noncredit courses (Skill Courses) 'Satisfactory' or "Unsatisfactory" shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA

Grade Point assignment

= and > 95 % marks Grade Point 10.0
90 to less than 95 % marks Grade Point 9.5
85 to less than 90 % marks Grade Point 9.0
80 to less than 85 % marks Grade Point 8.5
75 to less than 80 % marks Grade Point 8.0
70 to less than 75 % marks Grade Point 7.5
65 to less than 70 % marks Grade Point 7.0
60 to less than 65 % marks Grade Point 6.5
55 to less than 60 % marks Grade Point 6.0
50 to less than 55 % marks Grade Point 5.5
45 to less than 50 % marks Grade Point 5.0
40 to less than 45 % marks Grade Point 4.5
35 to less than 40 % marks Grade Point 4.0

Computation of SGPA and CGPA:

- i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student,
i.e.

$$SGPA (S_i) = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

Where C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.

- ii. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme,

i.e.

$$\text{CGPA} = \frac{\sum (C_i \times S_i)}{\sum C_i}$$

where S_i is the SGPA of the i th semester and C_i is the total number of credits in that semester.

- iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

Illustration for SGPA

S.No.	Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade)
1	Course 1	6	B	6	6 x 6 =36
2	Course 2	6	B+	7	6 X 7 =42
3	Course 3	6	B	6	6X 6 = 36
4	Course 4	6	O	10	6 X 10 =60
	Total	24			36+42+36+60=174

Thus, $\text{SGPA} = 174/24 = 7.25$

Illustration for CGPA

	Semester- I	Semester-II	Semester-III	Semester-IV
Credit	24	24	24	24
SGPA	7.25	7.25	7	6.25

$$\text{CGPA} = \frac{(24 \times 7.25 + 24 \times 7.25 + 24 \times 7 + 24 \times 6.25)}{96}$$

$$666/98 = 6.94$$

Semester-wise Theory Papers/Practical / Skill component

Type of course	Course code	Title of the Course	Lecture-Tutorial-Practical/Week	No. of credits	Continuous Comprehensive Assessment (CCA)	End-Semester Examination (ESE) [University Examination]	Total
Semester I							
Core course 1	GCC 101		6-0-0	6	30	70	100
Core course 2	GCC 102		6-0-0	6	30	70	100
Core course 3	GCC 103		6-0-0	6	30	70	100
Core course 4	GCC 104		6-0-0	6	30	70	100
Practical Course 5	GPC 105		0-0-12	6	30	70	100
Skill Course I	GSC 101		2-0-2				
Total				30	150	350	500
Semester II							
Core course 6	GCC 201		6-0-0	6	30	70	100
Core course 7	GCC 202		6-0-0	6	30	70	100
Core course 8	GCC 203		6-0-0	6	30	70	100
Core course 9	GCC 204		6-0-0	6	30	70	100

Practical Course 10	GPC 205		0-0-12	6	30	70	100
Skill course II	GSC 202		2-0-2				
Total				30	150	350	500
Semester III							
Core course 11	GCC 301		6-0-0	6	30	70	100
Core course 12	GCC 302		6-0-0	6	30	70	100
Discipline Specific Elective 1	One Elective paper from the list of Group I GEC 303(a,b,c)		6-0-0	6-0-0	6	70	100
Discipline Specific Elective 2	One Elective paper from the list of Group II GEC 304(a,b,c)		6-0-0	6-0-0	6	70	100
Practical Course 15	GPC 305						
Skill course III	GSC 303		2-0-2				
Total				24	120	280	400
Semester IV							
Core course 16	GCC 401		6-0-0	6	30	70	100
Core course 17	GCC 402		6-0-0	6	30	70	100
Discipline Specific Elective 3	One Elective paper from the list of Group I GEC 403(a,b,c)		6-0-0	6-0-0	6	70	100
Discipline Specific Elective 4	One Elective paper from the list of Group II GEC 404(a,b,c)		6-0-0	6-0-0	6	70	100
Practical Course 20	GPC 405						
Skill course IV	GSC 404		2-0-2				
Total				24	120	280	400

*** The Department shall offer one skill course per semester from the list of skill courses approved for the Department.**

In view of the course content, the Department of Geography distributed the Periods between Theory/Tutorial/Practical as under per paper

- 6: 0 : 0 (six lectures only (no tutorial and no practical) per week) – For Theory
- 0: 0 :12(no lecture, no tutorial and twelve practical only per week)- For practical per paper
- 2+0+2 (two lectures, no tutorial and two practical/field experimentations) - For Skill course

The Duration of the Period shall be forty five minutes. In each of these combinations, the first value stands for the same number of lecture instructions per week, whereas the last two values stand for doubles the number of tutorial/practical instructions per week

In each practical group the number of students that can be accommodated will be fifteen.

Course Evaluation (Evaluation of the Students)

All courses (Core/ Elective/ Practicals) involve an evaluation system of students that has the following two components:-

- (i) **Continuous Comprehensive Assessment (CCA)** accounting for 30% of the final grade that a student gets in a course; and
- (ii) **End-Semester Examination (ESE)** accounting for the remaining 70% of the final grade that the student gets in a course.
 - (i) **Continuous Comprehensive Assessment (CCA):** This would have the following components:
 - a. **Term Test:** One term test shall be arranged for each paper prior to End-Semester Examination; examination duration shall be of three hours; maximum marks shall be 60 (reduced to 15).
 - b. **Seminar:** Each student shall prepare and deliver a seminar per theory paper; maximum marks shall be 40 (reduced to 10). The seminar shall be completed prior to term test for all the papers.
 - c. **Classroom Attendance** – Each student will have to attend a minimum of 75% Lectures / Tutorials / Practicals. A student having less than 75% attendance will not be allowed to appear in the End-Semester Examination (ESE). Attendance marks will be awarded by following the system proposed below:

Those having 75% attendance and greater than that will be awarded CCA marks as follows:-

75% to 80%	=	1 mark
81% to 85%	=	2 marks
86 to 90%	=	3 marks
91% to 95%	=	4 marks
96% and above	=	5 marks

Note: Compensation in classroom attendance of a student will be as per prevalent University rules.

Each student's cumulative attendance shall be displayed in the Department Notice Board every month with a copy to the Dean, Faculty of Arts, Education & Social Sciences.

- d. CCA is based on open evaluation system without any bias to any student.
- e. Any grievance received in the Department from student shall be placed before the **Grievance Redressal Committee** with adjudicated comments

Each component marks will be added making it rounding as per norms.

Marking Scheme of Continuous Comprehensive Assessment (CCA)

Components	Maximum Marks	Reduced and Original Marks
Term Test	60	(reduced to 15)
Seminar	40	(reduced to 10)
Classroom Attendance	05	05
Total Marks of CCA	100	30

Note : Classroom Attendance marks will be as follows :-

Those having 75% attendance and greater than that will be awarded CCA marks as follows:-

Percentage	Marks
75% to 80%	1 mark
81% to 85%	2 marks
86 to 90%	3 marks
91% to 95%	4 marks
96% and above	5 marks

Skill Course Evaluation: Based on his/her performance and hands on practice, the respective Department shall declare the result as "Satisfactory" or "Non-Satisfactory"; each student need to get a minimum of three "Satisfactory" declaration for the course completion

For the Term test and ESE:

Part A

Ten questions (Definitions, illustrations, functions, short explanations, etc; 25-50 words) for one mark each. $10 \times 1 = 10$ marks; comprising questions from each Unit; no choice in this part

Part B

Four questions of long/explanatory answer (500 words) type, one drawn from each Unit; with internal choices : $4 \times 15 = 60$ marks.

10+60 = 70 marks

MEDIUM

Candidates are not allowed to use any medium except Hindi or English for answering question papers.

For answering papers in the subjects of English/Hindi the medium will be corresponding language only.

Qualifying for Next semester

- i. **A student acquiring minimum of 40% in total of the CCA is eligible to join next semester.**
- ii. A student who does not pass the examination (CCA+ESE) in any course(s) (or due to some reason as he/she not able to appear in the ESE, other conditions being fulfilled, and so is considered as 'Fail'), shall be permitted to appear in such failed course(s) in the subsequent ESE to be held in the following October / November or April / May, or when the course is offered next, as the case may be.
- iii. A student who fails in one or more papers in a semester shall get three more chances to complete the same; if he/she fails to complete the same within the prescribed time, i.e. three additional chances for each paper; the student is ineligible for the Postgraduate degree in the Subject in which he/she is admitted, for additional chances examination fee shall be on additive basis.

Improvement Option:

Every student shall have the opportunity to improve Credit through University Examination only. Improvement opportunity for each paper is only with two additional chances; improvement examination fee shall be on additive basis; the Credit obtained in improvement examination shall be final.

Result Declaration:

The ESE (End Semester Examination/University Examination) results shall be declared within twenty days of the last examination. The Theory Classes of even semesters shall begin from the next day of ESE; whereas odd semester classes shall commence after summer vacation.

POST -GRADUTE COURSE: A DESCRIPTION

The full course is of FOUR SEMESTERS spread for TWO YEARS duration. A semester-wise list of courses to be offered is given below. In each paper there will be four units.

SEMESTER I

SEMESTER II

SEMESTER III

SEMESTER IV

Elective paper group – First – Semester III

Elective paper group – Second – Semester III

Elective paper group – First – Semester IV

Elective paper group – Second – Semester IV

Skill Courses in the respective subject

Electives would be discipline centric and only students from concerned departments can register.

ADMISSION

The details of the eligibility conditions and admission procedures are given in the admission forms and on university website. The admission would be done on the basis of merit as per university rules. Reservation for SC, ST and OBC would also be done as per J.N.V. University, Jodhpur rules. Candidates are required to attend minimum 75% of the classes in theory and practicals both.

FACILITIES

The Department of Geography possesses several sophisticated, advanced and modern equipments required for teaching and research.

Faculty Members

Dr. Jai Singh, Professor & Head

Professor

Dr. Rajendra Parihar

Dr. Irfan Mehar

Assistant Professor

Dr. Arjun Lal Meena

Dr. Asha Rathore

Mr. Govind Singh

Dr. Lalit Singh Jhala

Dr. Omprakash

Dr. Gaurav Kumar Jain

Dr. Ashwani Arya

Dr. Anamika Poonia

TEACHING AND EXAMINATION SCHEME

Per Semester

Course	Periods/Week	Examination hours	CCA	ESE	Total
Theory Papers/ Practicals					
Course I	6	3	30	70	100
Course II	6	3	30	70	100
Course III	6	3	30	70	100
Course IV	6	3	30	70	100
Practical Courses V	12	6	30	70	100

UNIVERSITY EXAMINATION

Each course paper shall be of three hours duration.

Note: The number of elective to be taught from each group in a particular year shall be decided by the Department. Electives offered will be announced at the beginning of the academic session. Each student shall be assigned one Elective Paper from Group ONE and the second from Group TWO. Elective papers will be allotted on merit-cum-choice basis as far as possible. In the odd semester two skill courses will be those offered by the respective departments in the even semester skill courses will be from other departments.

SCHEME OF EXAMINATION FOR M.A GEOGRAPHY (SEMESTER SYSTEM) FOR THE EXAMINATION OF 2022

INSTRUCTIONS FOR THE PAPER SETTERS AND THE STUDENTS

Max. Marks - 70
Min. Marks – 25

Duration – 3 hours

Note :

- (i) There shall be 9 questions in all. Five questions have to be attempted.
- (ii) The first question shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 words each. It shall carry 10 marks and shall be a compulsory question.
- (iii) Rest of the paper shall contain 8 questions with internal choice. The entire syllabus has been divided into four units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidate shall attempt one question from each unit.

SEMESTER I

1. THEORY PAPER/ Practical Credits (Four Core Papers)	ESE	CCA	Total	Lecture- Tutorial- Practical/Week	
Paper- I(GCC 101) Advanced Physical Geography	70	30	100	6-0-0	6
Paper -II (GCC 102) Evolution of Geographical Thought	70	30	100	6-0-0	6
Paper-III (GCC 103) Geography of Arid lands	70	30	100	6-0-0	6
Paper- IV (GCC 104) Social and Cultural Geography	70	30	100	6-0-0	6
Paper- V (GPC 105) Practical (Cartography)	70	30	100	0-0-12	6
.....					
.....	Grand Total		500 Marks	30 Credits	

Total marks of Semester I 500 marks and credits 30

Skill Course-I(GSC101) Basic skills in Geography (for Students of the Deptt.)
2-0-2

SEMESTER-II

1. THEORY PAPERS/Practical Credits (Four Core Papers)	ESE	CCA	Total	Lecture	Tutorial- Practical/Week	
Paper- VI(GCC 201) Environment Geography	70	30	100		6-0-0	6
Paper –VII(GCC 202) Urban Geography	70	30	100		6-0-0	6
Paper- VIII (GCC 203) Economic and Resources Geography	70	30	100		6-0-0	6
Paper- IX (GCC 204) Geography of Tourism	70	30	100		6-0-0	6
Paper- X (GPC 205) Practical) (Cartography and project)	70	30	100		0-0-12	6
.....					
	Grand Total		500 Marks			30 Credits

					
	Total marks of Semester II 500 and 30 Credits					
					
	Total marks of M.A (Semester I and II) 1000 marks and Credits 60					

Skill Course-II(GSC202) Basic in Geography (for Students of other Deptt.) **2-0-2**

*Geographical Tour will organized before II semester and report will be submitted after the examination of II semester (For every 15 students one teacher shall accompany the group).

**M.A GEOGRAPHY
(SEMESTER I) 2022**

PAPER- I (GCC 101)

ADVANCED PHYSICAL GEOGRAPHY

Unit 1 : Interior of the earth, Isostasy, Continental drift, plate tectonics, Earth movements: folding and faulting;

Unit 2 : Work of sub-aerial denudation: Erosional and depositional work of rivers, winds, glaciers, Karst topography

Unit 3 : Heat balance of the earth and distribution of temperature, distribution of atmospheric pressure and winds; fronts; climatic classification- Koppen

Unit 4 : Oceanography : Ocean bottom relief, ocean currents, coral reefs, tides

RECOMMENDED READINGS

Critchfield : General climatology

Davis, WM, : Geographical Essays: 2nd ed.

Jeffereys, H. : The earth

Jenkins, J.T. : A Text-Book of Oceanography

Miller, A.A. : Climatology

Monkhouse, F.J. : The principal of Physical Geography

Murray, J. : The ocean

Patterson, S. : Introduction to meteorology

Seeman, A. : Physical Geography

Stress, J. : The Unstable Earth

Strahler, A.N.: Modern Physical Geography

Thornbury, W.D.: Principles of Geomorphology

Worcester, P.G.: A text-book of Geomorphology

Wooldrighed & Morgan: A text book of Geomorphology

Kaushik, S.D. : Bhu-Akriti-Vigyan, Rustogi. & Co., Meerut, 1983

Savindra Singh : Bhu-Akriti-Vigyan, Tara Publication, Varanasi, 1976

Dayal, P. : Bhu- Akriti Vigyan, Shukla Book Depot, Patan, 1982

PAPER-II (GCC 102)

EVOLUTION OF GEOGRAPHICAL THOUGHT

Unit I: Contribution of Greek and Roman geographers

Unit II: Arab scholars, the dark age in geography Recent trends in Geography

Unit III: Main characteristics and contributions of different schools- German, French, American and British school

Unit IV: The study of man- land relationship; modern theme in geographical thought- positivism, idealism, Marxism, radicalism, behaviorism and humanism; Concept of areal differentiation

Recommended Readings:-

1. Ali, S.M.: Geography of Puranas
2. Bunbury, E.H. : A History of Ancient Geography, 1955 (in two volumes).
3. Chatterjee S.P. : 50 years of Science in India, Development of Geography, Indian Science Congress Association, 1964.
4. Dickinson: Makers of Modern Geography ,1964
5. Dickson and Howarth: The Makers of Geography
6. East and Wooldridge : The Sprit and purpose of Geography
7. Freeman : A Hundred years of Geography
8. James , P.E. : All possible World A study of Geographical ideas, Indian Edition, Sachin Publication, Delhi 1980
9. Sykes, P. : A History of Exploration, routledge and Kegan Paul, London, 1954
10. Tylor, G. (ed.) : Geography in the 29 Century Wooldridge: Geographers as a Scientist

PAPER III (GCC 103)

GEOGRAPHY OF ARID LANDS

Unit 1: Meaning and causes of aridity; Indices of Aridity; Climate; Topography, Soils, Water resources and Minerals of the Arid lands of the world

Unit 2: Desertification: Extent of desertification in the world; causes of desertification: Parameters of desertification measures to control desertification

Unit 3: Detailed study of arid regions of Israel and Egypt with reference to Physiography, Soil, Agriculture, Irrigation and land reclamation

Unit 4 :Great Indian Desert: Origin, Physiography, Climate, Agriculture, Irrigation, Livestock raising and population

RECOMMENDED READINGS

Amiran, D.H.K. & Wilson, A.W. (ed.) : Coastal Deserts- Their Natural and Human Environments, The University of Arizona Press, Tucson, 1973

Arnon, I : Crop Production in Dry Regions; Vols. I & II, Leonard and Hill, London, 1972

Bhandari, M.M.: Flora of the Indian Desert, Scientific Publishers, Jodhpur, 1978

Biswas, M.R. & Biswas, A.X. : Desertification, Pergamon Press, New York, 1982

Chouhan, T.S. : Desertification in the World and its Control, Scientific Publishers, Jodhpur, 1997

Drenge, H.E. : Desertification of Arid Lands, Harwood Academic Publishers, 1983

Goudie, A. & J. Wilkinson: The Warm Desert Environment, Cambridge University Press, Cambridge, 1977

Hills, E.S.(ed.): Arid Lands, UNESCO. London, 1966

Hillel, D. : Negev Land, Water and Life in a Desert Environment, Praeger, N.Y. . 1982

Heathcote: Arid Lands- Their Uses and Abuses, Longmans, 1964

ICAR: Desertification and its Control, New Delhi, 1977

Jeanes, D.N. : Australia-A Geography, Routledge and Kegan Paul, London, 1978

Mann, H.S. (ed.) : Arid Zone Research and Development, Scientific Publishers, Jodhpur, 1980

Matlock, W.G.: Realistic Planning for Arid Lands, Harwood Academic Pub. 1981

Mann, H.S.(ed.) Scientific Reviews on Arid Zone Research, Scientific Publishers, Jodhpur, 1981

Meginnies, W.G., B.J. Godman and P. Paylore : Deserts of the World University of Arizona Press, 1968

Ministry of Food and Agriculture: Proceedings of the symposium on the Problems of Indian Arid Zone, New Delhi, 1967

PAPER- IV (GCC 104)

SOCIAL AND CULTURAL GEOGRAPHY

- Unit 1 : Nature, scope and contents of cultural geography; Evolution of cultural geography; Environment, culture and resources; Techniques and methods in cultural geography; Man's role as socio-cultural agent
- Unit 2 : Analysis of world population in terms of ethnic, religious and language groups; World pattern of literacy
- Unit 3 : Cultural regionalization of the world : A Study of the Culture, World with special reference to new world revolution – Polar World; European Worlds, American World
- Unit 4 : Dry World, Oriental World, African World and Pacific World

RECOMMENDED READINGS

- Carter, G.F. : Man and Land – A Cultural Geography, Holt, Rinehart and Winston, Inc. New York, 1968
- De Blij, Harm, J. : Man Shapes the Earth – Topical Geography, Hamilton Publication Company, Santa Barbara, California, 1974
- De Blij, Harm, J. : Human Geography- Culture, Society and Space, John Wiley and Sons, Inc., New York, 1977
- Dicken, S.N. and Pitts, F.R. : Introduction to Cultural Geography- A Study of Man and His Environment, Exrox College Publishing, Waltham, Massachusetts, 1970
- Dohrs, F.E. : Cultural Geography – Selected Readings, Dun-Donnelly Publishing Corporation, New York, 1967
- Eidt, R.C., Singh K.N. and Rana, P.B. Singh (ed.) : Man Culture and Settlement, Kalyani Publishers, New York, 1977
- Haggett, P. : Geography A Modern Synthesis, Harper and Row, New York, 1975
- Jones E. (ed.) : Readings in Social Geography, Oxford University Press, London, 1975
- Jordon, T.G. and Rowtree, L. : The Human Mosaic – A Thematic Introduction in Cultural Geography, Canfield Press, Harper and Row, New York, 1976
- Kariel H.G. and Kariel, P.F. : Explorations in Social Geography, Addison-Wesley Publishing Company, Inc. Reading, Massachusetts, 1972
- Kotars, John, F., and John, D. Nysteen ; Geography The Study of Location, Cultural and Environment, McGraw Hill Book Company, New York, 1974
- Phillbrick, A.K. :- The Human World, John Wiley and Sons. Inc., New York, 1967

Raitz, Kari, B. : Cultural Geography on Topographic Maps, Hamilton Publishing Company, Santa Barbara, California, 1975

Rolstlung, F. : Outline of Cultural Geography, California Book Company, Berkely, California, 1963

Russel, R.J.F.B. Kniffen and E.L. Pruitt ; Culture Worlds, the Max Million Company Ltd., London, 1969

Saure, Carl O. : Agricultural Origins and Dispersal, The Domestication of Animals and Foods Stuffs, The M.L.T. Press, Massachuseets, 1970

Sopher, David E. : Geography of Religions : Foundations of Cultural Geography Series, Prentice Hall Inc., Englewool Cliffs, New Jersey, 1967

Spencer, E; & W.L. Thomas: Asia, East by South – A Cultural Geography Jon Wiley & Sons, Inc. New York, 1971

Wagner, P.L. & M.W. Mikesell : Readings in Cultural Geography, The University of Chic age Press, Chicago, 1962

Wagner, P.L. : The Human Use of Earth, The Free Press, New York, 1964.

जैन, जे.के. एवं बोहरा, डी.एम. : विष्व का सांस्कृतिक भूगोल, ऐकेडेमिक पब्लिषर्स, जयपुर, 1983

Prakasa Rao, V.L.S. : Urbanization in India, Spatial Dimensions concept Publishers, 1983

PAPER V: (GPC 105)

CARTOGRAPHY

Teaching in Geography Practical shall be imparted in groups of 15 students.

Out of 100 marks assigned for geography practical, 30 marks for CCA and 70 marks for ESE .The division of ESE marks will be as - 40 marks are reserved for Laboratory Work Test, 15 marks for the evaluation of record book and 15 marks for viva on record book.

Syllabus Contents –

Unit I: Laboratory Test: Scheme and nomenclature of Survey of India topographical maps.

Unit II: Profiles: Meaning and usefulness of profile in studying landforms, types of profiles: Serial, Superimposed, composite, projected.

Unit III: Map Projections; Projections and their classification; simple conical equal area (Lambert's Projection), Bonne's Projection, Mercators; Gnomonic Zenithal (Polar and Equatorial cases), Orthographic Zenithal(Polar and Equatorial cases).

Unit IV: Statistical Methods: Classification and Tabulation of Statistical data, Frequency Distribution and graphs, Measures of Central tendency (Arithmetic mean, geometric mean, median and mode).

RECOMMENDED READINGS

Monkhouse, fJ and Wilkinson, H.R. : Maps and Diagrams, Methuen & Co., London

Raisze, E. : General Cartography, McGraw Hill, New york, 1960

Strees, J.A. : Maps Projections

Gregory, S : Statistical Methods and the Geographers, Methuen & Co., London, 1971

Singh R.L. : Elements of Practical Geography, Kalyani Publishers, new Delhi, 1979

Robinson, A.H. : Elements of Cartography, Chapman and Hall, London

Lawrence, G.R.P. : Cartographic methods, Methuen & Co., London 1971

Singh R. and Kanujia, L.R.S. : Map Work and Practical Geography, Allahabad

J. Kellaway : Map Projections

SKILL COURSE –I (GSC 101): BASIC SKILLS IN GEOGRAPHY

Objectives: To develop an understanding of Basic Skills in Geography

Syllabus content-

Unit I: Electromagnetic Spectrum , Aerial Photographic And Satellite Image Interpretation, Digital Cartography.

Unit II: Meaning, Components and Importance of GIS; Meaning and Concept of Remote Sensing (RS) ; Data models: Raster and Vector.

Unit III: Geological time scale, Highland and Lowland Regions , Tropical Deserts, Rainfall and its Types , Western Disturbances, Social Forestry ,Temperate Grasslands

Unit IV: Shape & Size of Earth: Geoid, Spheroid and Ellipsoid , Concept of Coordinate System, Albedo, Green House Effect, ENSO

Books Recommended

Singh, R.L and Rana, P.B. 2002. *Elements of Practical Geography*. Kalayani Publishers, New Delhi.

Khullar, D.R. 2000. *Essentials of Practical Geography*. New Academic Publishing Company, Jalandhar.25

Guha, P.K. 2008. *Remote Sensing for the Beginner*. East West Press Pvt. Ltd. New Delhi.

Panda, B.C. 2005. *Remote Sensing – Principles and Applications*. Viva Books Pvt. Ltd., New Delhi

Compbell, J. 1989. *Introduction to Remote Sensing*. Guilford, New York.

M.A GEOGRAPHY
SEMESTER II, Session-2022

PAPER- VI (GCC 201)

ENVIRONMENT GEOGRAPHY

Unit 1: Environmental Geography: Definition, Nature, And Scope.

Unit 2: Biosphere and Its Component; Concept of Ecology, Human Ecology And Ecosystem.

Unit 3: Biodiversity and Its Conservation, Concept of Biomes, Sustainable Development

Unit 4: Environment Pollution (Water, Air, Noise And Soil), Environmental Problems: Green House Effect, Ozone Deflection, Global Warming and Its Management

RECOMMENDED READINGS

Anderson, M.R.: Geography of Living Things

Clark, G.R.: The study of Soils in the field

Densereau, P.: Biogeography and Ecological Perspective

Hall, A.D. & Russel, P.J.: Social Conditions and plant Growth

Robinson, G.W.: Soils

Jones, R.L.: Biogeography-Structure, Process, Pattern and Change within the- Biosphere,

Hulton Educational Publication Ltd., Amersham, Bucks.

PAPER VII (GCC 202)

URBAN GEOGRAPHY

Unit-1: Meaning, scope and methods of approach in urban geography, origin and growth of cities from the earliest to the modern times, forces and processes of urban growth, Theories of urban Structure

Unit-2: Urban morphology and land use pattern, City retail structure and delimitation of CBD, Residential land use, urban population, Characteristics, Functional Classification of towns

Unit-3: Location, spacing and size of towns, urban hierarchy; The Central Place Theory, Rank-size rule, Growth Pole Theory

Unit-4: Urban sphere of Influence- Methods and criteria of delimitation, Rural- urban fringe, Elements And principles of town planning, Law of Garden City.

RECOMMENDED READINGS

Abercrombie, P.: Town and Country Planning, Oxford University Press, London, 1961

Alam, S.M. : Hyderabad-Secunderabad(Twin-cities) – A Study in Urban Geography, Allied Publishers, Bombay, 1965

Bartholomew, H. : Urban Landuse, Harwad University Press, Harward, 1932

Berry B.J. L. & A. Pred : Central Place Studies-Bibliography of Theory Applications, Regional Science Research Institute, Philadelphia 1961

Chorley, R.J. & P. Hagget : Socio-Economic Models in Geography(Part II and III or Models in Geography) Methuen, London, 1968

Dickinson, R.E. : The West European City, Rutledge and Kegan Paul, London, 1964

Gallion, A.B. & S.E. Isner : The Urban Pattern, City Planning and Design, D. Van Nostrand, Princeton, New Jersey, 1965

Garnier, B.J. & G. Chabot: Urban Geography, Longmans Green and Co. Ltd., London, 1967

Ghose, M.: Calcutta – A study in Urban Growth Dynamics, 1972

Jackson, J.N.: Surveys for Town and Country Planning, Hutchinson University Press, Syracuse, N.Y. , 1954

Jonson, J.N.: Urban Geogrphahy- An Introductory Analysis, Pergamon Press, 1967

Mayer, H.M. and Kohn, O.P.(ed.) : Readings in Urban Geography, University of Chicago Press, Chicago, 1959

Humford, L.: The city in History, Pehcan: 1966

Murphy, R.S. : The American City an Urban Geography, McGraw Hill, N.Y. 1966

King, I.J. & Golledge, R.G. : Cities, Space, and Behavior- The elements of

Norgorg, K (ed.) : Proceedings of the I.G.U. Symposium on Urban Geography, John Wiley & Sons, 1975

Putnom, R.G. FJ – Taylor and P.G. Kettle (ed.) : A Geography of Urban Places, Methuen, London, 1970

Robson, B.T. : Urban Growth, Methuen, Lodnon, 1963

Singh, R.L. : Banaras – A Study in Urban Geography, Nand Kishore & Sons, Banaras, 1965

Singh O.P. : Urban Geography (in Hindi), Tara Publishers, Varanasi, 1979

Smailes, A.E. : The Geography of Town, Hutchinson University Press, London, 1961

Taneja, K.L. : Morphology of Indian Cities, 1971

Taylor, T. : Urban Geography, Methuen, London, 1961

PAPER-VIII (GCC 203)

ECONOMIC AND RESOURCES GEOGRAPHY

Unit I: Factors affecting Production, Consumption and distribution of Principal raw materials

Unit II: Sectors of economy-primary, secondary and tertiary, quaternary; Agricultural Regions of the world; Von Thunen's model and its modifications

UNIT III: Definition and Concept of Resources, Classification of Resources

UNIT IV: Conservation and Management of Natural Resources: Meaning and Concept of conservation of Natural Resources, Resources Conservation and Management Methods of Natural resources: Soil Resource, Water Resource, Problems of Natural Resource Management in India

Recommended Readings:-

1. Alexander, J.W., Economic geography, Prentice Hall of India, New Delhi.
2. Berry, B.J.J., et al., D.M., Economic Geography, Prentice Hall.
3. Chatterjee, S.R., Economic Geography of Asia, Allied Book Agency, Calcutta, 1984.
4. Chisholm, M., Geography and Economy, G.Bell, London.
5. Guha and Chatterjee, A New Approach to Economic Geography of resources.
6. Morgan, W.B. and R.J.C. Munton, Agricultural Geography, Methuen, London, 1997.
7. Robinson, H., Economic Geography, MacDonald and Evans.
8. Rostow, W.W., The Stages of Economic Growth, Cambridge University Press, London, 1960.
9. Thomas, R.S., The Geography of Economic Activity, McGraw Hill, New York.
10. Zimmermann, E.W., World Resources and Industries, Harper.
11. Ramesh, A. (1984) Resource Geography (Ed.) R.P. Misra, Contribution to Indian geography, Vol Heritage Publishers, New Delhi.
12. Borton, I. and R.W. Kates. (1984) Readings in Resource Management and Conservation, University of Chicago Press, Chicago.
13. श्रीवास्तव वी.के. एवंराव, बी.पी., आर्थिकभूगोल के मूलतत्त्व (वसुन्धराप्रकाशन, गोरखपुर)।
14. जैन, हरकचन्द, सैद्धान्तिक आर्थिकभूगोल (कमलेश प्रकाशन, भीलवाड़ा)।
15. रजा, एमण एवं सिंह, ए., संसाधनभूगोल।
16. नेगी, बी.एस., संसाधनभूगोल।
17. सिंह एवं सिंह, आर्थिक और संसाधनभूगोल।
18. कौषिक, एस.डी., संसाधनभूगोल।

PAPER – IX (GCC 204)
GEOGRAPHY OF TOURISM

- Unit 1 : Tourism : Growth of travel through the ages, growth and development of modern tourism International organizations and tourism
- Unit 2 : Elements of Tourism : Economic and social significance of tourism, Domestic and Foreign tourism, Tourism transport and accommodation
- Unit 3 : Tourism in India : A land for all seasons; places of tourist interest, Cultural tourism, Problems and facilities, Role of Indian Tourism Development Corporation
- Unit 4 : Tourism in Rajasthan : Salient Features of desert and wild life of Rajasthan, Survey of the places of tourist interest; Cultural Heritage of Rajasthan, Fairs and Festivals, A study of internal and foreign tourist influx

RECOMMENDED READINGS

- Robinson, J.H. : A Geography of Tourism, Macdonald and Evans Ltd.
- Bhatia, A.K. : Tourism Development: Principles and Practices, Sterling Publishers, New Delhi(1982)
- Nagi, J.N. : Tourism and Hostelling: A worldwide Industry, Gitanjali Publishing House, New Dehli
- Robinson, H. : Geography and Tourism, Macdonald and Evans, New York(1976)
- Bhatia, A.K. : Tourism in India-History and Development, Sterling Publishers, New Delhi
- Ram Acharya : Tourism in India, National Publishers, New Delhi
- Dass Manoj : India- A Tourist Paradise, Sterling Publishers, New Delhi
- Crowthor, Geoff Raj Prakash and Wheeler Tony : India- A Travel- Survival Kit Lonely Plant Publications, Australia
- Dharampal : Idia- The Land People, National Book Trust, New Delhi
- Rathore, G.S. : Marwar Ki Sanskratic Dharohar, Sudha Prakashan, Jodhpur
- Seth, D.N. : Successful Tourism Management, Sterling Pub. Pvt. Ltd., New Delhi

PAPER – X (GPC 205)

CARTOGRAPHY AND PROJECT /INSTRUMENTAL SURVEY OF A REPUTED INSTITUTE/ GEOGRAPHICAL TOUR

Teaching in Geography Practical shall be imparted in groups of 15 students.

Out of 100 marks assigned for geography practical, 30 marks for CCA and 70 marks for ESE . The division of ESE marks will be as - 40 marks are reserved for Laboratory Work Test 10 marks for Project report & 05 marks for viva on project report *OR* instrumental survey of a reputed institute *OR* Geographical Tour (For every 15 students one teacher shall accompany the party), 10 marks for the evaluation of record book and 05 marks for viva on record book.

Syllabus contents:

Unit I: Laboratory Test: Interpolation of contours, methods of determination of intervisibility.

Unit II: Measures of dispersion: (Quartiles mean deviation and standard deviation), Variability

Indices

Unit III: Morphometric Analysis: Drainage density, stream length, stream orders and confluences;

Unit IV: Map Projections: Sinusoidal (Normal and Interrupted), Mollweide (Normal and Interrupted),

Choice of Projections

PROJECT REPORT /GEOGRAPHICAL TOUR

The project will be selected by candidates in consultation with the Head of the Department and the study report, duly approved by the teacher(s) concerned, is to be submitted along with the Practical Record.

The geographical tour and study and field tour or execution of typical areas with particular attention to anyone of the following aspects: Structure, terrain and geomorphology; Drainage and river valley development; Vegetation forms, Agricultural Industrial land use; Communication, Regional synthesis and analysis of physical and cultural landscape

RECOMMENDED READINGS

Monkhouse, fJ and Wilkinson, H.R. : Maps and Diagrams, Methuen & Co., London

Raisze, E. : General Cartography, McGraw Hill, New york, 1960

Strees, J.A. : Maps Projections

Gregory, S : Statistical Methods and the Geographers, Methuen & Co., London, 1971

Singh R.L. : Elements of Practical Geography, Kalyani Publishers, new Delhi, 1979

Robinson, A.H. : Elements of Cartography, Chapman and Hall, London

Lawrence, G.R.P. : Cartographic methods, Methuen & Co., London 1971

Singh R. and Kanujia, L.R.S. : Map Work and Practical Geography, Allahabad

J. Kellaway : Map Projections

SKILL COURSE II (GSC 202): BASICS IN GEOGRAPHY

Objectives : To develop an understanding of Basics in Geography and Environmental Issues

Syllabus Content-

Unit I: Elementary knowledge of Remote Sensing, GIS, GPS and Satellite Imagery, Directions: Cardinal Directions, Primary Inter-Cardinal, and Secondary Inter-Cardinal.

Unit II: Geographic Locations: Continents and Oceans; Nation-State Capitals, Metropolitan Cities of the World, Mountains and Rivers.

Unit III: Motions of Earth: Rotation and Revolution of Earth and their effects, Dimension of Earth, Shape & Size, Geoids, Spheroid and Ellipsoid.

Unit IV: Locational system, dates and time: Latitude, Longitude and Graticule; Time Zones and International Date Line

Books recommended

Gautam, Alka. 2004. *Climatology and Oceanography*. Rastogi Publication-Meerut, UP.

Singh, Savindera. 2009. *Physical Geography*. Vasundhra Publications, Gorkhpur, UP.

Goh Cheng Leong. 1995. *Certificate Physical and Human Geography*, Oxford University press, New Delhi

**SCHEME OF EXAMINATION FOR M.A GEOGRAPHY (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2023**

SEMESTER III

1. THEORY PAPERS/ Practical (Core Papers)	ESE	CCA	Total	Lecture- Tutorial- Practical/Week	Credits
Paper- XI (GCC 301) Research Methodology	70	30	100	6-0-0	6
Paper –XII (GCC 302) Geography of Population	70	30	100	6-0-0	6
<u>ELECTIVE PAPERS</u>					
Paper- XIII (GEC 303)					
Choose any one of the following-	70	30	100	6-0-0	6
(a) Applied Geomorphology					
(b) Geo informatics					
(c) Fundamentals of Agricultural Geography					
Paper- XIV (GEC 304)					
Choose any one of the following-	70	30	100	6-0-0	6
(a) Fundamentals Industrial Geography					
(b) Land use Planning and Rural Development					
(c) Quantitative Techniques in Geography					
Paper- XV (GPC 305) Practical (Cartography and project)	70	30	100	0-0-12	6
	Grand Total		500 Marks		30 Credits

.....
Total marks of Semester III 500 and 30 Credits

Skill Course-III(GSC 303)Introduction to fieldwork in Geography (for Students of the Deptt.)
2-0-2

M.A GEOGRAPHY (SEMESTER III), 2023

PAPER XI (GCC 301)

RESEARCH METHODOLOGY

Unit 1:- Problem Of Geographical Research, Identification Of Problems Of Regional and Systematic Geography. Nature And Source Of Data To Be Used Hypothesis, Models

Unit 2:- Preparation of Research Project and Report Writing, Cartographic Representation Of Agricultural, Transport, Marketing And Industrial Data Selected Techniques Of Spatial Analysis, Methods Of Measurement Of Concentration And Dispersion Of Economic Activities

Unit3:- Nearest Neighbor Analysis With Examples, Regional Interaction Analysis

Unit4:- Regional population analysis – population projection, population migration projection, network analysis with examples. Delimiting urban and market spheres of influence.

Recommended Readings:

1. David Unwin : Introductory Spatial Analysis, Methuen, London, 1981.
2. Gregory,S. : Statistical Methods And The Geographer, Langman , London 1978.
3. Mahmood.A. : Statistical Methods In Geographical Studies, Delhi, 1978.
4. Maruice Yeats : An Introduction To Quantitative Analysis In Human Geogra.Phy. Mcgraw Hill New York.
5. Peter Haggett, Andrew : Location Methods Vol.I And II Edward Arnold, London.

PAPER- XII (GCC 302)

GEOGRAPHY OF POPULATION

Unit 1 : Nature And Scope Of Population Geography; Major Population Theories

Unit 2 : Components Of Population Growth, Trends And Factor Affecting Fertility, Mortality and Migration In The World; Laws Of Migration And Theories

Unit 3 : Population Structure Of India And Its Characteristics; Sex And Age Structure, Fertility And Mortality; Distribution, Density And Growth Of Population In India; Population Problems And Policies

Unit 4 : Population Geography of Rajasthan: Distribution and Density Of Population; Sex Ratio; Rural and Urban Population; Study of scheduled castes and scheduled tribes population of Rajasthan with special reference to their distribution, literacy and welfare programmes.

RECOMMENDED READINGS

Asha, A. Bhide and Mrs. Tara Kimitkar, : Principles of Population Studies; Himalaya Publishing House, Girgaon, Bombay

Ashish Bose & D. Gupta : Population Studies in India, Vikas Publishing House, Ansari Road, New Delhi

Agarwal, S.N. : India's Population Problems, Tata McGraw Hill, New Delhi

Chandra Shekar : Infant Mortality, Population Growth and Family Planning in India, London

Mamoria, C.B. : India's Population Problems, Ktab Mahal, Allahabad

Mehta, B.C. : Regional Population Growth : A Case Study of Rajasthan, Research Books, Tilak Nagar, Jaipur

Lal, S.K. & Nahar, U.R. : Higher Education of SC & ST in Rajasthan, Jain Sons, Publication, New Delhi

Purohit B.D.&S.D. Hand Book of reservation for SC& ST, Jain sons publication, New Delhi

Singh, Munshi Hardaya: The Castes of Manihar, Census Report of 1891, Book Treasure, Sojati Gate, Jodhpur

PAPER-XIII (GEC 303)

(a) APPLIED GEOMORPHOLOGY

Unit 1 : Earth as a member of the solar system; main theories regarding the origin of the Earth, distribution of land and sea; Isostasy and its bearing on surface configuration, Materials of the earth's crust: Minerals and rocks, classification of fold.

Unit 2 : Geological structure : Dip, Strike, Folds, formation of the earth's crust, joints, faults, tensional and compression forces and topographic effects, Geographical time scale: Basis of division, standard time scale and the Indian equivalence.

Unit 3 : Landforms : Classification into first, second and third order, Constructional and destruction land forms and Geomorphic process : Weathering, rivers, groundwater, wind, glacier, waves, currents.

Unit 4 : Cycle concept in geography- development of the fluvial cycle in young, mature and old stages, interruptions of the fluvial cycle and their consequences, Division and Walter Peck system; Geomorphic cycle in deserts, limestone area, glaciated lands, volcanic plains and plateaus, domes and mountains;

RECOMMENDED READINGS

1. Thornbury, W. D. (Rep.2011): Principles of Geomorphology, John Wiley and Sons, New York.
2. Chorley, R. J., Schumm, S. A. and Sugden, D. E. (1984): Geomorphology, Methuen, London.

3. Kale, V. S. and Gupta, A. (Rep.2011): Introduction to Geomorphology, Orient Longman, Calcutta.
4. Savindra Singh (Rep. 2011): Geomorphology, Prayag Pustak Bhawan, Allahabad
5. Spark B. W. (1972): Geomorphology, Longman, New York
6. Steers, A. (1958). The Unstable Earth, Methuen, London
7. Ollier, C. D. (1981) Tectonics and Landforms, Longman , London
8. Strahler A. H and Strahler, A. N. (1992) : Modern Physical Geography, John Wiley, New York
9. Wooldridge and Morgan: Geomorphology
10. Holmes: Physical Geology
11. Fairbridge, R. W. (1968): Encyclopedia of Geomorphology, Reinholdts, New York.

PAPER-XIII (GEC 303)

(b) GEOINFORMATICS

Unit1: Remote sensing techniques: meaning and scope, development; types of imagery; Elements of interpretation, Digital cartography.

Unit 2 : Development of air photo interpretation techniques elements interpretation
Identification and mapping of natural and cultural landscape

Unit 3 : Fundamental of aerial photography system: types of photography, types of Stereoscopes;
coverage and vision; geometry of aerial photographs, photographic Resolution, parallax equation, flight planning, stereoscopic parallax

Unit 4 : Fundamental of digital image processing; geographic information system; Application of
remote sensing in geography

RECOMMENDED READINGS

Burrough; P.A. : Principles of Geographical Information Systems for Land Resources Assessment, Oxford University, Clarendon Press, 1986

Chouhan, T.S. and K.N. Joshi : Applied Remote Sensing and Photo-Interpretation, Vigyan
Prakashan, Jodhpur, 1955

Colwell, Robert, N. : Manual of Remote Sensing, I & II editions, Vol. I & II,
American Society of Photogrammetry, 1983

Jensen, J.R. : Introductory Digital Image Processing : A Remote Sensing Perspective, Prentice Hall, new Jersey, 1986

Lillesand, T.M. and Kiefer, R.W. : Remote Sensing and Image Interpretation, II edition, John Wiley and sons, 1987

Wolf, Paul, K. : Elements of Photogrammetry(with air photo-interpretation an remote sensing) McGraw Hill
Book co., 1974

Karani, P.J. : Remote Sensing, ELBS. London, 1985

Gautam, N.C. : SPGU Technology of Geography, NRSA, Hyderabad, 1994

Survey of India: Photogrammetry : Chapter Twelve, S.O.I., Dehradun, 1972

PAPER-XIII (GEC 303)

(c) FUNDAMENTALS OF AGRICULTURAL GEOGRAPHY

Unit I:- The nature, subject matter and progress in agricultural geography, approaches: Commodity, systematic, regional.

Unit II:- Selected agricultural concepts and their measurement –intensity of cropping , degree of commercialization, diversification and specialization, efficiency and Productivity.

Unit III:- Land-use survey and classification (British and Indian), Land capability classification (U.S. and Britain).

Unit IV:- A critical evaluation of the classification of world agriculture with special reference to Whittlesey, New perspectives in agriculture : contract farming , agri- business and food security.

RECOMMENDED READINGS :

1. Hussain, M., systematic Agricultural geography, Rawat Publications, Jaipur,1996.
2. Ilbery,B.W , Agricultural Geography ,Oxford university press ,oxford,1985.
3. Singh,J and Dhillon,S.S., Agricultural geography TATA McGraw Hill ,New delhi ,1984.
4. Singh ,Jasbir, Agricultural geography ,3rd edition, Oxford ,new delhi,2003
5. Symons ,L.,Agricultural Geography ,G.Bells ,London, 1967.
6. Alexander,j.w., economic geography ,prentice Hall ,n.j.,1968.
7. Gosal,G.S.and Krishan, Gopal, Regional disparities in levels of socio-economic development in Punjab, vishal publications,kurukshetra,1984.
8. Grigg D.B., The Agricultural systems of the world : An evolutionary approach, Cambridge university press ,Cambridge ,1978.

PAPER-XIV(GEC 304)

(a) FUNDAMENTALS OF INDUSTRIAL GEOGRAPHY

- Unit 1 :Contents and scope of industrial geography: Locations of Industry: Factors of industrial location, Theories and concepts of industrial location- the least cost school, the market area school, the marginal location school and the behavioral school
- Unit 2 :The location pattern of selected industries: iron and steel, cotton textile, pulp and paper industry, petroleum refining, machinery and machine tools
- Unit 3 : The Locations pattern of selected industries: automobile industry, ship building industry, cement industry, aluminum industry
- Unit 4 :Manufacturing in selected regions: Kwanto plain, the Ural Region, the Ruhr Basin, the New England Region, Bengal Bihar Industrial Belt

TEXT BOOKS

- Reley R.C. : Industrial Geography, Charto and Winpuls, London
- Smith, Daird, M. : Industrial Location, Wiley and Sons, New York
- Miller, E.W. : A geography of Manufacturing Prentice Hall, New Jersey

RECOMMENDED READINGS

- Jorred, A.R.: A Geography of Manufacturing, MacDonald and Evans Ltd. , London
- Hunter, H.L. and Writght, A.J. : Factors of Industrial Location in Ohio, Columbus, 1969
- Choudhary, M.R. : Indian Industries Development and Location, Calcutta, 197
- Jarret, H.R. : Geography Manufacturing, MacDonald and Evans Ltd. London, 1964
- Pounds, N.I.G. : The Geography of Iron and Steel
- Smith W. : Geography of Location of Industry, Liverpool
- Thoman, R.S. and Paltoh, D.H. : Focus on Geographic Activity, New York, 1964
- Mountjoy, A.C. : Industrialization and Underdeveloped Counties, London, 1963
- Howver, E.M. : The Location of Economic Activity, London, 1948
- Alexander, J.W. : Economic Geography, Prentice Hall, New Jersey, 1963
- Alexanderson, G. : Geography of Manufacturing, Prentice Hall, New Jersey, 1967
- Bos, H.C.: Spatial Dispersion Activity, University Press, Rootterdam, 1965
- Greenhert, M.L. : Plant Location in Theory and Practice University of North Caroline Press, Chapal Hill, 1956
- Isard, W. : Location and Space Economy, MIT Press, Cambridge Mass, 1965
- Losch, A. : The Economics of Location, Yale University Press, New Hevan, 1954
- Eshail, LC.: Plant Location, American Research Council, New York, 1956

- Estant, R.O. and Buchana, R.D. : Industrial Activity and Economic Geography Hutchinson & Co. Ltd., London, 1964
- Ghose, B.C. : Industrial Location.
- Britto Jh, H.H. : Regional Analysis and Economic Geography, G. Belland Sons, London,
- Carlson, A.S.: Economic Geography of The Industrial Material, Rhid Shell Pub. Corp. New York, 1965
- Mastin, J.S. : Greater London- An Industrial Geography, G. Bell and Sons, London
- Sinha, B.N. : Industrial geography of India, World Press, Calcutta Weber, Alfre: theory of Location of Industries, English edition, University of Chicago, 1929
- Aiderfer, E.B. and Midal, H.E. : Economic of American Industry, New York, 1957
- Hunder, H.L. and Wright, A.J. : Factors of Industrial Location in Ohio, Columbus, 1969
- Florence, P. Sargant : Industrial Investment, Location and Size of Plant, Cambridge, 1949
- Wilber Zelinsky : “A Method of Measuring Chage in Distribution of Manufacturing Activity”
Economic Geography, April, 1958, pp- 94-126
- Alexander, J.W. and Linberg, James B. : Measurement of Manufacturing: Coefficients of Correlation, Journal of Regional Science, Vol. 3 1961 Pp. 71-81
- Thomson, Hohn, H. : A New Method of Measuring Manufacturing Annals of Association of American Geographers, Vol- 45, 1955, PP. 416-35
- Elliot Frncis, E. : Location Factors Affecting Industrial Plant, Economic Geography, Vol, 24, 1941m pp. 283-85

PAPER-XIV (GEC 304)

(b) LAND USE PLANNING AND RURAL DEVELOPMENT

- Unit 1 : Geography and rural development; Agricultural Geography and rural development; Agricultural location theory, Rural land use; Agricultural, pastoral and forestry land use competition. Land use and landscape, Approaches to rural development, growth centre approach, infrastructure reformist
- Unit 2 : Rural settlement, Housing, population and employment, rural transport, service provision, derivation, recreation, health nutrition
- Unit 3 :Rural planning and land management; Resource development and integrated rural development; Crop and soil management, livestock range and management; Water management, Ecological management, desertification – monitoring and control
- Unit 4 : Rural development in Rajasthan; Major tools and techniques, Rural development schemes – Irrigation and land development schemes; Drought prone areas schemes, Desert Development programme ; integrated rural development in Rajasthan, Tribal areas development: Watershed development

REFERENCE READING

- Giig, A. W. : An Introduction to Rural Geography, Edward Arnold, 1985 Association of country Councils: Rural Deprivation London, Acc, 1979
- Allan J.A. ; Remote Sensing in Land use Studies, Geography 65, 1980
- Tiwari, A.K. : (ed.) : Desertification : Monitoring and Control, Scientific Pubs., Jodhpur, 1988
- Anderson, J.R.L.J. : Hardarkar: Agricultural Decision Analysis, Ames: Iowa State University Press, 1977
- Andreas, B. Farming Development and Space – World Agricultural Geography, New York: Water Gryter, 1981
- Morgan, W.B. and R.J.G. Munom : Agricultural Geography, Methuen, London, 1971
- Pacione, M.: Rural Geography, Parpur Clarks, (Ed.) and Row 1984- Register of Research in Rural Geography, Leicester : Rural Geography Study Group, 1981
- Bowier, I.R. : Agricultural Geography – Profess in Human Geography-8, 1987
- Newbury, P.A.R.P. : Geography of Agriculture Machonald and Evans, Plymouth, 1980
- Grigg, D.B. : The Agricultural Systems of the World, Cambridge university Press, 1974
- Grigg, D.B. : An Introduction of Agricultural Geography, Hutchinson, London, 1984
- Jones, A : Rural Housing – The Agricultural Tied College, Bell, London, 1975
- Lassey, W.R. : Planning in Rural Environment, Mc Graw hill, New York,1973
- Lavety, P. (ed.) ; Recreational Geography, David and Charles, Newton Abbot, 1974
- Leasdale, R. Settlement Systems in Sparsely Populate Regions and Homes (ed.), Oxford, Pergamon, 1981
- Menab, A. : Integrated Rural Development, Gloucester Collage of Arts, 1984

PAPER-XIV (GEC 304)

(c) QUANTITATIVE TECHNIQUES IN GEOGRAPHY

- Unit 1: Use of quantitative methods in Geography, Classification and tabulation of statistical data;
Frequency distribution and graphs; Lorenz curve
- Unit 2 : Simple and multiple correlation: Linear and non-linear regression; Residuals from regression:
Significance tests; Chi-square test; students 't' test
- Unit 3 : Sampling and its objective; Sampling techniques and their application to geographical
Problems; Measures of central tendency and measures of dispersion
- Unit 4 : Multivariate analysis: Principal component analysis; Theory of probability and normal frequency
distribution

RECOMMENDED READINGS

- Bunge, W. : Theoretical Geography and Studies in Geography, Ser, C. General and Mathematical Geography, No. 1, Department of Geography, University of Lund, C.W.K. Glerup, Lund, 1973
- Cole, J.P. and Kin, C.A.M. : Quantitative Geography, Wiley, 1968

Dalton, R. and others: Correlation Techniques in Geography, George Phillip & Sons Ltd. London, 1972

Dixon, C. and B. Lech: sampling Methods for Geographical Research, CAMOG 17, Geo Abstracts, University of East Angila, Norwich, U.K., 1978

Duncan, O.D. : Statistical Geography- Problems in Analysing Areal Data. 1961

Elhance, D.N. : fundamentals of Statistics, Kitab Mahal, Allahabad, 1962

Fesguon, R. : Linear Regression in Geography, CATMOG, 15, Geo Abstract University of East Angila, 1981`

Gregory, S. : Statistical Methods and the Geographers, Longman, London, 1978

King, L.J. : statistical Analysis n Geography, Prentice Hall, 1960

Monkhouse, F.J. and Wilkson, H.R. : Maps and Diagrams, B.I. Publication, Bombay, 1980

Toyne, P. and Peter, T. Newby: Techniques in Human Geography, Macmillan, London, 1976

Yeastes, M. : An Introduction to Quantitative Anlysis in Human Geography, MacGraw hill Book Company , New York, 1974

Mohammed, A. : Statistical Methods in Geography, Rajesh Publications, New Delhi, 1977

David Ebon: Statistics in Geogrpahy- A Practical Approach, 1980

PAPER –XV (GPC 305)

CARTOGRAPHY AND SURVEYING

Out of 100 marks assigned for geography practical, 30 marks for CCA and 70 marks for ESE . The division of ESE marks will be as - 40 marks are reserved for Laboratory Work Test, 10 marks for the field survey/plotting and 05 marks for viva on field survey/plotting 10 marks for the evaluation of record book and 05 marks for viva on record book.

Syllabus Contents:

Unit I: Representation of geographical data by means of Graphs (Simple, Compound, Smoothed, Cumulative, Frequency and Triangular).

Unit II: Diagrams (Bar and Pie diagrams; Proportional bars, Circles, Spheres and Cubes) and Interpretation and construction of Climatic Maps: Choroschematic, Choropleth and Isopleths maps, Dot maps.

Unit III: Interpretation and construction of Climatic graphs: Rainfall distribution, variability, intensity and duration, hythergraph, Climograph, Wind direction diagram, dispersion diagrams, Accessibility.

Unit IV: Surveying: Small Geographical surveys of given areas by Theodolite (verniner scale), Plane table and Prismatic compass. Leveling; Principles and method; Contouring of small areas through Dumpy level and Clinometers (Indian pattern)

Books recommended

Singh, R.L. (ed.) : Applied Geography, Proc. Summer School (1966), Deptt. Geog., B.H.U., N.G.S.I., Varanasi-5 1968

Stride, M. (ed.) : La Geographic Appique Dans Le Mondel, Applied Geography in the World, Proc Prague Meeting (1966)

I.G.U. : Commission on Applied Geography, Czechoslovak Academy of Science, Prague, 1969

Sarfalvi, B. : Research Problems in Hungarian Applied Grography, Academia Kiado, Budapest, 1969

SELECTED JOURNALS

Applied Science and Development (Published under the revised title Applied Geography and Development since Vol. 18(1980), Institute for Scientific Co-operation, Tubngen, Federal Republic of Germany ,

Bainnual Journal Beginning with Vol/ I, 1973

Geoforum : Journal of Physical, Human and Regional Geography, Pergamon press ltd. , Oxford.,, A quarterly journal beginning with Vol. I, 1970

SKILL COURSE –III (GSC 303):

INTRODUCTION TO FIELDWORK IN GEOGRAPHY

Objectives: To develop an understanding of Basic of fieldwork in Geography

Syllabus content-

Unit I: Definition, Need and Objectives of field work in Geography.

Unit II: Methods and Techniques, Stages and Equipments of field work in Geography.

Unit III: Major Problems or Limitations of field work in Geography, Preparation of Project Report

Unit IV: Socio- Economic Field Survey of the Selected Localities

Books recommended

Singh, Gopal . 2012. *Map Work and Practical Geography*. Reprinted. Vikas Publishing House, Pvt Ltd. Noida, UP.

Singh, R.L and Rana, P.B. 2002. *Elements of Practical Geography*. Kalayani Publishers, New Delhi.

Khullar, D.R. 2000. *Essentials of Practical Geography*. New Academic Publishing Company, Jallandhar.25

Guha, P.K. 2008. *Remote Sensing for the Beginner*. East West Press Pvt. Ltd. New Delhi.

Lunsbury J.F. and Aldrich, F.T. 1979. *Introduction to Geographic Field Methods and Techniques*.

Charles E. Mercill Publishing Company, Columbus.

M.A. GEOGRAPHY SEMESTER-IV-2023
PAPER – XVI (GCC 401)

REGIONAL PLANNING AND DEVELOPMENT

- Unit – I:** Regional concept in Geography, merits and limitations for application to regional planning and development; changing concept of the region
- Unit-II:** Indicators of development and disparities - case study of India. Regional development strategies
- Unit- III:** Short- term and long term planning in a national context. Regional development in India - problems and prospects..
- Unit- IV:** Planning process - sectoral, temporal and spatial dimensions, Concept of Multi-level planning : Decentralized planning; Peoples participation in the planning process;

Books Recommended :

1. Abler, R. et.al : Spatial Organisation : The Geographer's View of the World, Prentice Hall, Englewood Cliffs, N.J., 1971
2. Bhat, L.S. : Regional Planning in India, Statistical Publishing Society, Calcutta, 1973
3. Bhat, L.S. : Micro-Level Planning : A Case Study of Karnal Area, Haryana, K.B. Publications, New Delhi, 1976
15
4. Chorley, R.J. & Hagget, P.: Models in Geography, Methuen, London, 1967
5. Christaller, W. : Central Places in Southern Germany, Translated by C.W. Baskin, Prentice Hall, Englewood Cliffs, New Jersey, 1966
6. Friedmann, J. & Alonso, W.: Regional Development Policy - A Case Study of Venezuela, M.I.T. Press Cambridge, Mass, 1966
7. Friedmann, J. & Alonso, W.: Regional Development and Planning - A Reader, M.I.T. Press Cambridge, Mass, 1967
8. Glikson, Arthur : Regional Planning and Development, Netherlands Universities Foundation for International Co-operation, London, 1955
9. Gosal, G.S. & Krishan, G.: Regional Disparities in Levels of Socio-Economic Development in Punjab, Vishal Publications, Kurukshetra, 1984
10. Govt. of India, Planning Commission - Third Five Year Plan, Chapter on Regional Imbalances in Development, New Delhi, 1961
11. Indian Council of Social Science Research - Survey of Research in Geography, Popular Prakashan, Bombay, 1972
12. Johnson, E.A.J. : The Organisation of Space in Developing Countries, Harvard University Press, Cambridge, 1970
13. Kuklinski, A.R. (ed.) : Growth Poles and Growth Centres in Regional Planning, Mouton, The Hague, 1972
14. Kundu, A. & Raza, Moonis: Indian Economy - The Regional Dimension, Spectrum Publishers, New Delhi, 1982
15. Losch, A. : The Economics of Location, University Press, Yale, New Haven, 1954
16. Misra, R.P. : Regional Planning Concepts, Techniques and Policies, University of Mysore, Mysore, 1969

17. Misra, R.P. & Others (eds.): Regional Development Planning in India - A Strategy, Institute of Development Studies, Mysore 1974
18. Mitra, A. : Levels of Regional Development, Census of India, Vol.I, Part 1A (I) and (II) New Delhi 1965
19. Myrdal, G : Economic Theory and under Development Regions Gerold Ducejworth, London, 1957
20. Nangia, Sudesh : Delhi Metropolitan Region, Rajesh Publication, Delhi, 1976
21. Richardson, H.W. : Regional Economics, Weidenfeld and Nicolson, London, 1969
22. Sundaram, K.V. (ed.): Geography and Planning, Essays in Honour of V.L.S. Prakasa Rao, Concept Publishing Co., New Delhi, 1985
23. Tarlok Singh : India's Development Experience, McMillan, New Delhi, India, 1974
24. Raza Moonis (ed.) : Regional Development, Heritage Publishers, Delhi 1988
25. Mishra, R.P. et.al : Multi - Level Planning, Heritage Publishers, Delhi, 1980

PAPER-XVII (GCC 402)

ADVANCED GEOGRAPHY OF INDIA

Unit 1 : Terrain units of India(Northern Mountain Region) and their characteristics; Drainage systems; Origin and Mechanism of Indian Monsoon; Climatic divisions

Unit 2 : Population-growth, distribution and density; Population problems and policies; Agriculture-main characteristic and problems, Agricultural regions; Major Irrigation schemes-Damodar, Bhakra Nagal and Chamal

Unit 3 : Major minerals (Iron-ore, Manganese, Mica and Copper,) and Power Resources (Coal, Petroleum, Hydro-electricity and Nuclear)- their distribution, reserves, production and conservation

Unit 4 : Transportation and trade-different modes and their functional significance; International trade composition and trends; planning regions of India

RECOMMENDED READINGS

Choudhary, M.R. : An Economic Geography of India, Oxford and IBH Publishing Co., New Delhi, 1976

Chouhan, T.S. : Bharat Ka Bhugol, Vigyan Prakashan, Jodhpur, 1997 Nag. Pub. And S. Sengupta : Geography of India, Concept Publishing Co., New Delhi, 1992

Sharma T.C. : and O. Coutinho : Economic and Commercial Geography of India, Vikash Publishing Pvt. Ltd. , New Delhi, 1993

Singh J. : India-A Comprehensive Systematic Geography, Gyanodaya Prakashan, 234, Daudpur, Gorakhpur, 1995

Spate, O.H.K. and A.T.A. Learmouth : India, Pakistan and Ceylon, Methuen & Co., London, 1967

Ramamoory and Gopalkrishan : Geography of India, Jawahar Publishers and Distributors, New Delhi, 1996

Tirtha, R. : Geography of India, Rawat Publication, Jaipur, 1996

Sharma, R.C. : Reading in General Geography and Geography of India, Jawahar Publishers and Distributors, New Delhi, 1992

Mamoria, C.B. : Economic and Commercial Geography of India, Shiva Lap Agarwal & Co., Agra, 1986

Despande, C.D. : India- A Regional Synthesis, New Delhi, 1996

Dutta, R. and K.P., Sundkram : Indian Economy

Tiwari, R.C. : Geography of India, Prayag Pustak Bhawan, Allahabad, 2003

PAPER-XVIII (GEC 403)

(a) CLIMATOLOGY AND METEOROLOGY

Unit 1 : Construction and use of chief meteorological instruments, physical process of atmosphere, radiation and heat balance; condensation, stability and instability

Unit 2 : Origin, Characteristics and transformation of air masses, fronts and cyclones, general circulation of atmosphere, weather forecasting, classification of climates

Unit 3 : Modification of atmosphere by surface features; evidence of climatic changes during geological and historical times and critical assessment of such evidences

Unit 4 : Reaction of man to climatic environment, modification of terrestrial climates by human agency

Recommended Readings

Benstead, C.R. : The Weather Eye

Conard, V. and Plok, L.W. : Methods in Climatology

Finch, V.C., Trewartha, G.T., Shearer and Candler: Elementary Meteorology

Geiger, H. : The Climate Near the Ground

Haynes, B.G. : Techniques of Observing the Weather

Hole, P.X. : The Restless Atmosphere

Kendrew, W.G. : Climatology

Middleton, W.G. : Meteorological Instruments

Miller, A.A. : Climatology

Petterson, S. : Introduction to Meteorology

Petterson, S. : Weather Analysis and Forecasting

Richi, H. : Tropical Meteorology

Saucier, M.J. : Principles of Meteorological Analysis

Sutton, O.G. : Micrometeorology

Tannehill, I.R. : Hurricanes

Trewartha, G.T.: An Introduction to Weather and Climate

Trewartha, G.T.: The Earth's Problem Climate, 1962

Walths, J.E.S. : Equatorial Air

Willett H.C. & Sandars, F. : Descriptive meteorology

Crowe, P.R. : Concepts in Climatology, Longmans, London, 1971

McBoyle, G.(ed.) : Climate in Review, Houghton Mifflin Comp. Boston, 1973

PAPER-XVIII (GEC 403)

(b) FUNDAMENTALS OF NATURAL HAZARDS AND DISASTER MANAGEMENT

UNIT-I: Basic Concept : Hazards, Vulnerability, Risk and Disaster; Classification/Types of Hazards/Disasters; Evolution of Disaster Studies and its Current Status

UNIT-II: Geo-Physical/Tectonic Disasters: Earthquake, Landslide and Avalanche; Hydrological Disasters: Flood, Cloud burst, Drought and desertification, Cyclone; Human Made Disasters: Chemical Disaster, Nuclear Disaster

UNIT-III: Regional Dimension of Hazards/Disasters in India. Earthquakes in India, Landslides in India, Drought in India; Disasters Profile of Rajasthan,

UNIT-IV: Disaster Management: Pre-disaster phase, Emergency phase and Post-disaster phase; Disaster Management Mechanism in India: Disaster Management Agencies

Recommended Readings:

1. Alexander, D. E.: *Natural Disasters*. London: University College London Press and; Dordrecht and Boston: Kluwer Academic Publishers, 1993.
 2. Alexander, D. E.: *Confronting Catastrophe: New Perspectives on Natural Disasters*. Harpenden, U.K: Terra Publishing, 2000.
 3. Allan, S., Adam, B. and Carter, C. (eds): *Environmental Risks and the Media*, Routledge, London, 2000.
 4. Ahmed, Shaik Iftikhar: *Disaster Management in the Wake of a Flood*, Twenty First Century Publications, Patiala, 2008.
 5. Blaikie, P. and Others: *At Risk: Natural Hazards, People's Vulnerability, and Disasters*, Routledge, London, 1994.
 6. Birkmann, J.: *Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies*. US: United Nations University Press, 2006.
 7. Hyndman, D. and D. Hyndman.: *Natural Hazards and Disasters*. 2nd edition. USA, Belmont: Brooks/Cole, 2009.
 8. Burton, I., Kates, R.W. and White, G.F.: *Environment as Hazard*, 2nd edition, Guilford Press, New York, 1993.
- 38 M.A. GEOGRAPHY (SEMESTER SYSTEM)
9. Hewitt, K.: *Regions of Risk: A Geographical Introduction to Disasters*, Longman, London, 1997.
 10. Kasperson, J.X., Kasperson, R.E. and Turner, B. L.: *Regions at Risk: Comparisons of Threatened Environments*, United Nation University Press, Tokyo, 1995.

PAPER- XIX (GEC 404)

(A) ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF JAPAN

Unit I : Physiographic regions, Soil , Natural Vegetation

Unit II: Agriculture Crops: Corn, Cotton, Wheat, Agriculture Belts; Minerals: Iron Ore, and Atomic Minerals

Unit III: Power resources: Coal, Petroleum and Hydroelectricity, Location and distribution of Industries:Iron and Steel, Cotton Textile, Automobile; Transport: Inland Waterways

Unit IV : A detailed study of Major Geographical Regions

RECOMMENDED READINGS

Association of Japanese Geography (Ed) (1980): Geography of Japan. Teikoku Shoin

Dempster Prue (1967) Japan Advances, A Geographical Studies, Mathuen and Co. Ltd.

Woronoff (1993): Japanese Management Mystique, Reality behind the Myth. Neo Pub. Press. New Delhi

Kunio Yoshihara (1972) Japanese Economic Development : A short Introduction, Methuen Co., London

Reischauer E.D (1946): Japan Past and Present. Alfred A Knoph, New York

Trewartha Glenn T. (1965): Japan – A physical Cultural and Regional Geography. Muthuen Co., London

Hall R.B (1970): Japan. Industrial Power of Asia, Pall Mall Press, London

Trewartha Glenn T. (1965) Japan – A physical Cultural and Regional Geography. Muthuen Co., London

PAPER- XIX (GEC 404)

(B) ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF U.S.A.

Unit I : Physiographic regions, Soil , Natural Vegetation

Unit II: Agriculture Crops: Corn, Cotton, Wheat, Agriculture Belts; Minerals: Iron Ore, and Atomic Minerals

Unit III: Power resources: Coal, Petroleum and Hydroelectricity, Location and distribution of Industries:Iron and Steel, Cotton Textile, Automobile; Transport: Inland Waterways

Unit IV : A detailed study of Major Geographical Regions

RECOMMENDED READINGS

Atwood, E. (ed.): The Physiographic Provinces of North America

Fenneman, N.M.: Physiography of Western United States

Green, C.M. : American Agriculture

Loomis, F.B.: Physiography of the United States

Monkhouse, F.J. & H.R. Cair, North America, Longman

Peterson, J.H.: North America, London

White, C.L. and Fosberg, F.J.: Regional Geography of Anglo-America Watson, W.: North America, Methuen, London University Library, London, 1957

Ullman, E.L. : American Geography: Inventory and Prospects, James and C.F. Jones (editors),

Kuhn, T.E. : Public Enterprise, Economic and Transport problems, University of California Press, 1962

Ministry of Transport : Better use of Town Roads, HMSA. London, 1967

Bingham, T. : Transportation – Principles and Problems McGraw Hill, New York,

PAPER-XX (GPC 405) **CARTOGRAPHY AND SOCIO-ECONOMIC SURVEY OF VILLAGE**

Out of 100 marks assigned for geography practical, 30 marks for CCA and 70 marks for ESE . The division of ESE marks will be as - 40 marks are reserved for Laboratory Work Test, and 10 marks for the evaluation of record book and 05 marks for viva on record book. 15 marks for socio-economic survey of a village, (10 marks Survey Report, 05 marks viva on Survey Report).

Syllabus contents:

Unit I: Graphs showing pressure and relative humidity conditions, interpretation of air photos:

Simple photo-interpretation with the help of pocket and mirror stereoscope as applied in identification and analysis of feature of landforms; geographic units, settlements, communication, vegetation and land use

Unit II: Numerical exercises pertaining to the aerial photographs; Calculation of flying height, number of strips of aerial photographs in given area, Fundamentals of digital image processing.

Unit III: Geographic information systems (GIS); Applications of remote sensing in Geography, Digital cartography, mapping organizations and services- survey of India, NATMO, NRSA ,state organizations.

Unit IV: Statistical Techniques: correlation, Spearman's rank correlation and Karl Pearson's product moment correlation, Simple linear, regression, residual from regression, Chi-square test and student 't' Test

SOCIO-ECONOMIC SURVEY OF A VILLAGE

Particular focus will be on population density, distribution, Caste Structure, Literacy Rate, and Creed work force, Land holding ratio, occupation structure, income gap, poverty analysis etc. (For every 15 students one teacher shall accompany the group).

TEXT BOOKS

Monkhouse, F.J. & Wilkerson, H.R. : Maps and Diagrams, Methuen and Co. London

Raisz, E. : General Cartography, McGraw, 1977

Gregory, S. : Statistical Methods and the Geographers, Methuen and Co., 1971

Kanetkar, T.P. : Surveying and Leveling, Parts I and II

RECOMMENDED READINGS

Robinson, A.H. : Elements of Cartography, Chapman and Hall, London

Dickinson, G.C. : Statistical Mapping and the Presentation of Statistics, Edward and Arnold, 1973

Lawrence, G. RY. : Cartographic Methods, Methuen, 1971

Brich, T.W. : Maps Topographical and Statistical

Faith, EA. : Surveying- Theory and Practice

Higgins, A.L. : Elementary Survey

Hinks, A. : Maps and Surveying

Low, J.R.: Plane Table Mapping

Threlfair, H : A Text books of Surveying and Leveling

Lewis, P. : Maps and Statistics, Methuen, 1977

King, L.J. : Statistical Analysis in Geography, Prentice Hall, N.J.

Laeder D.R. : Aerial Photographic Interpretation

Sharma, J.P. : Prayogic Bhoogol, Rastogi & Co. Meerut, 1983

Unwin, D.J. and J.A. Dawson : Computer Programming for Geographers, Longman, 1986

Zuylen LVan : Computer Assistant Cartography, N.Y. , 1985

SKILL COURSE IV (GSC 404): ENVIRONMENTAL DEGRADATION, NATURAL HAZARDS AND THEIR MITIGATION

Objectives : To develop an understanding of environmental degradation, natural hazards and their mitigation

Syllabus content-

Unit I: Environmental issues: Depletion of ozone Layer, Ecological significance of ozone, protection of ozone layer; Acid rain- causes and effects.

Unit II: Global warming: Concept, Causes and effects of global warming

Unit III: Natural Hazards and their Mitigation: Meaning and Types of hazards-Earthquake, cyclones, cloud Burst, Tsunami, Flood, Avalanches and their mitigation Strategies

Unit IV: Environmental pollution: Air pollution, water pollution, soil pollution, noise pollution.

Books Recommended

Singh, Savindra. 2012. *Environmental Geography. Reprinted.* Prayag Pustak Bhawan, Allahabad

Gautam, Alka. 2010. *Environmental Geography.* Sharda Pustak Bhawan, Allahabad, UP.

Shitole, G.Y. 2012. *Environmental Degradation Issues and Challenges. Serials Publications, New Delhi*

Khullar, D.R. 2009. *India: A Comprehensive Geography.* Kalyani Publisher, New Delhi.



DEPARTMENT OF GEOGRAPHY
JAI NARAIAN VYAS UNIVERSITY JODHPUR
(RAJASTHAN)
FACULTY OF ARTS, EDUCATION AND SOCIAL SCIENCES

SYLLABI

FOR

POST GRADUATE DIPLOMA IN REMOTE SENSING, GIS AND GPS

(SEMESTER I AND SEMESTER II) EXAMINATIONS 2022

Guidelines

Duration : One Year (Semester – I & Semester – II)

a) Number of Seats : 40 (Twenty)

b) Eligibility : Graduate preferably from Geography, Geology, Engineering, Business management, Agriculture, Forestry, Life Sciences, Environmental Sciences, Computer Sciences. The Arts graduates with science/Geography background at intermediate (10+2) level are also eligible and other eligibility criteria are as per university rules.

c) Selection Procedure: Candidates having a minimum of 55% marks at graduate level will be eligible for the course and admission will be made on the merit basis which will be based on the scheme adopted by the University for Admission to M.A. courses. The applicants should possess basic computer proficiency with good working knowledge of Microsoft office. The duration of the course is for one academic year.

d) Course fee: Rs. 15000/- (Rs.7,500/- Each Semester) and other examination fee etc. as per University rules.

Outlines of tests, syllabi and courses of reading for one year Postgraduate Diploma in Remote Sensing and geographic information system for the session 2021-2022.

Scheme of Examinations

Course Structure	Semester- I	
	Marks	Time
Paper- I : Photogrammetric and Cartography	100	
(a) Theory	70	3 hrs.
(b) Internal Assessment	30	
Paper- II : Principles of Remote Sensing and Image Interpretation	100	
(a) Theory	70	3 hrs.
(b) Internal Assessment	30	
Paper- III: Digital Image Processing-I	100	
(a) Theory	70	3 hrs.
(b) Internal Assessment	30	
Paper- IV : Practical	70	
Internal Practical Assessment	30	
Paper- IV : Geographical Information Systems and GPS		
(a) Theory	70	3 hrs.

(b) Internal Assessment 30

Practical 100 Marks 4hrs

I Digital Image Processing

(a) Main Practical Exam 35 3 hrs.

(b) Internal Assessment 15

II Geographical Information System & GPS

(a) Main Practical Exam 35 3 hrs.

(b) Internal Assessment 15

Scheme of Examinations

Course Structure

Semester- II

Paper- V : Thematic Applications of Remote sensing & GIS 100

(a) Theory 70 3 hrs.

(b) Internal Assessment 30

Paper- VI : Urban Area Analysis 100

(a) Theory 70 3 hrs.

(b) Internal Assessment 30

Paper- VII : Digital Image Processing- II 100

(a) Theory 70 3 hrs.

(b) Internal Assessment 30

Paper- VII : Urban Mapping & Planning 100

(a) Theory 70 3 hrs.

(b) Internal Assessment 30

Practical 100

III Remote Sensing and GIS Applications

(a) Main Practical Exam	35	3 hrs.
(b) Internal Assessment	15	

Project

(a) Main Project	35	3 hrs.
(b) Internal Assessment	15	

Note : Project work should emphasize the application of Remote Sensing, GIS and GPS.

Grand Total Marks of Diploma: 1000 Mark

Post Graduate Diploma in Remote Sensing and GIS Applications

Semester – I

Paper No.	Title of the Paper/Practical	Credits
I	Photogrammetry and Cartography	4
II	Principles of Remote Sensing and Image Interpretation	4
III	Digital Image Processing-I	4
IV	Geographical Information Systems and GPS	4

Practicals

II	Digital Image Processing	2
II	Geographical Information System & GPS	2

Semester-II

Paper No.	Title of the Paper/Practical	Credits
V	Thematic Applications of Remote sensing & GIS	4
VI	Urban Area Analysis	4
VII	Digital Image Processing II	4
VIII	Urban Mapping & Planning	4

Practicals

III	Remote Sensing and GIS Applications	2
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Project		8
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Paper - I (PGDRS)

Photogrammetry and Cartography

Credits: 4

Unit I: Aerial Photography

Aerial photography – Definition, scope, advantages and limitations; Flight planning; Elements of photographic system – Aerial camera and aerial films; Types and geometry of aerial photographs; Procurement of aerial photographs in India.

Unit II: Stereophotogrammetry

Stereoscopy and stereoscopic parallax; Photogrammetric stereo plotters and mapping instruments; Control extension and aerial triangulation.

Unit III: Basics of Digital Photogrammetry

Analytical and digital photogrammetry; Photogrammetric mapping and mapping accuracy.

Unit IV: Cartography

Defining cartography; Essentials of map making: Scale, coordinate system, map projection, map designing, Types and series of maps; Toposheets numbering system.

Books Recommended

1. American Society of photogrammetry, 1984, *Manual of photogrammetry*, Falls Church, Virginia.
2. American Society of photogrammetry, 1993, *Manual of Remote Sensing*, Falls Church, Virginia.
3. American Society of photogrammetry, 1960, *Manual of Photographic interpretation*, Falls Church, Virginia.
4. Avery, T.E. and GL Berlin, 1985, *Interpretation of Aerial Photographs*, Burgess, Minneapolis.
5. Burnside, C.D; 1979, *Mapping froAerialPhotographs*, Granda, London.
6. Ghosh, S.K., 1979, *Analytical Photogrammetry*, Pergamon, New York.
7. Wolf, Paul R; 1983, *Elements of Photogrammetry*, McGraw-Hill, New York.

Paper – II (PGDRS)

Principles of Remote Sensing & Image Interpretation

Credits: 4

Unit I: Principles of Remote Sensing

Definition, types and scope of remote sensing; Stages in remote sensing data acquisition; Electromagnetic radiation and electromagnetic spectrum; Black body radiation and radiation laws; Interaction of EMR with atmosphere and Earth's surface features.

Unit II: Platforms, Sensors and Data Products

Remote sensing platforms; Types & characteristics of sensors: IRS, LANDSAT, SPOT, IKONOS, Quick Bird; Remote sensing data products.

Unit III: Thermal & Microwave Remote Sensing

Thermal Remote Sensing; Thermal properties of materials: emissivity of materials; thermal inertia of Earth surface features; Thermal data sets: LANDSAT and ASTER; Concept and Principles of microwave remote sensing; Microwave data sets SLAR. LIDAR and SAR; Application of Thermal and Microwave data.

Unit IV: Image Interpretation

Factors affecting image interpretation; Image characteristics and preparation of image interpretation keys; Elements of Image interpretation; Methods and techniques of image interpretation; Multi concepts in image interpretation.

Books Recommended:

1. Curran, Paul J; 1985, Principles of Remote Sensing, Longman, London.
2. Estes, J.E. and LW Senger, 1974, Remote Sensing techniques for environmental Analysis, Hamilton, Santa Barbara, California.
3. Lillesand, Thomas M. and RW Kiefer, 1987, Remote sensing and Image Interpretation, John Wiley & Sons, New York.
4. Lindgren, D.T; 1985, Land use Planning and Remote Sensing, Nijhoff, Dordrecht.
5. Sabins, floyd F, 1986, Remote Sensing: Principles and Interpretation, Freeman, New York.
6. Slater, PN, 1980, Remote Sensing: Optics and Optical System, Addison-Wesley, Reading.

Paper – III (PGDR)

Digital Image Processing –I

Credits: 4

UNIT-I: Fundamental Terms Definitions and Data Formats

Remote Sensing: definition and types; Resolutions: ground, radiometric, spectral and temporal; Images and digital images: definition and types; Image histogram; Digital data formats: band interleaved by pixel, band interleaved by line, band sequential, run length encoded and others.

UNIT-II: Image Pre-processing

Radiometric Errors: Detector's response, scan line banding, scan line offset, line drop outs, atmospheric attenuation, Sun's elevation; Geometric Errors: mirror scan velocity, panoramic distortion, scan skew, earth rotation, space craft velocity, attitude, altitude; Image rectification: Number and selection of ground control points (GCPs); Rectification models; Image re-sampling methods.

UNIT-III: Digital Signal Processing (DSP)

Definition, Digital device, Analogue device, Analogue Vs digital, Controller theory, DSP domains: Time and Space, frequency; Applications of DSP; Techniques of DSP: bilinear transform, discrete Fourier transform, Z-transform, linear time invariant (LTI) system theory

UNIT-IV: Image Enhancement (Contrast Manipulation)

Grey level thresholding; Contrast Stretching; Linear contrast stretching; Non-linear contrast stretching : Square root stretch, cube root stretch, log stretch, arc tangent stretch, exponential stretch, square stretch, cube stretch, histogram equalization, Gaussian stretch, piecewise stretch, density slicing and pseudo coloring.

Books Recommended:

1. American Society of Photogrammetry, 1993, Manual of Remote Sensing, Falls Church, Virginia.
2. American Society of Photogrammetry, 1968, Manual of Color Photogrammetry, Falls Church, Virginia.
3. Curran, P. J., 1985, Principles of Remote Sensing, Longman, London
4. Ekstrom, M.P., 1984, Digital Image Processing Techniques, Academic Press, New York.
5. Ghosh, S.K., 1979, Analytical Photogrammetry, Pergamon, New York.
6. Jensen, J.R., 1986, Introductory Digital Image Processing: A Remote Sensing Perspective Printice Hall, Englewood Cliffs, New York.

7. Hord, R.M., 1982, Digital Image Processing of Remotely Sensed Data, Academic Press, New York.
8. Lillesand, T.M. & Kiefer, R.W., 1987, Remote Sensing and Image Interpretation, John Wiley & Sons, New York.
9. Muller, P.J., 1986, Digital Image Processing in Remote Sensing, Taylor & Francis London.
10. Nag, P. & Kudrat, M., 1996, Digital Remote Sensing, Concept Publishing Company, New Delhi.
11. Pratt, W.K., 1978, Digital Image Processing, John Wiley & Sons, New York.
12. Sabins,F., 1986, Remote Sensing: Principles and Interpretation, Freeman, New York.
13. Siegal,B.S. & Gillespie,A.R., 1980, Remote Sensing in Geology, John Wiley & Sons, New York.
14. Slater, P.N., 1980, Remote Sensing: Optics and Optical Systems, Addison Wesley, Addison-Wesley Publishing Co. Inc, Reading, Massetts.
15. <http://www.wolfram.com/products/applications/digitalimage/>

Paper – IV (PGDRS)

Geographical Information Systems and Global Positioning System

Credits: 4

Unit I: Introduction to GIS

Definition and scope of GIS; Functional requirements of GIS; GIS components; Cartography –GIS interface; Recent trends and applications of GIS; Open source GIS

Unit II: GIS Data base

Geographic data: Spatial and non spatial; Data models: Raster and vector; Database Management System (DBMS); Data Structures: Relational, hierarchical and network; Data input: Digitization of maps and imageries; Coordinate transformation; Attribute data generation.

Unit III: Spatial analysis

Spatial overlay operations, network analysis and proximity analysis; 3D models; TIN, DEM, DTM Query in GIS;

Unit IV: Global Positioning System

Introduction to Global Positioning System; GPS satellites constellations; GPS segments: Space, Control, User; GPS antennas, signals and codes; GPS receivers; Modes of measurements and post processing of data; Accuracy of GPS measurements; Application of GPS.

Books Recommended

1. Burrough, P.A., 1986, *Geographical Information System for land Resources System*, Oxford Univ. Press, UK.
2. Fotheringham, S.; Rogerson, P. (ed.), 1994. *Spatial analysis and GIS*. Taylor and Francis, London, UK.
3. Laurini, Robert and Dierk Thompson, 1992, *Fundamentals of Spatial Information Systems*, Academic Press, ISBN 0-12-438380-7.
4. Maguire, D.J.; Goodchild, M.F.; Rhind, D.W. 1991. *Geographical information System*, Longman, London, UK
5. Siddiqui, M.A.; 2006, *Introduction to Geographical Information System*, Sharda Pustak Bhavan, Allahabad.
6. Siddiqui, M.A.; 2011, *Concepts and Techniques of Geoinformatics*, Sharda Pustak Bhavan, Allahabad.

Practical – I (PGDRS)

Digital Image Processing

Credits: 2

Unit I: Introduction to Image Processing

System Configuration; User interface with DIP software; Loading of digital data into DIP software; Conversion of digital data into image processing software format; Analysis of statistics, projection and datum for newly loaded data.

UNIT II: Data Processing, Image Restoration and Enhancement

Digital images; Sub setting of data; referencing of digital data; Reprojection of digital data; Image enhancement techniques: Histogram equalization; Band rationing; Image filtering; Principal Component Analysis (PCA).

UNIT III: Pattern Recognition and Image Classification

Image classification: Unsupervised classification; Training sets and supervised classification using Maximum likelihood and Minimum to Mean distance methods; Accuracy assessment: User, Producer, Overall accuracies; K-Statistics.

UNIT IV: Programming for Image Processing

Programming on C++; Java and Oracle.

Books Recommended

1. Ekstrom, M.P., 1994, Digital Image Processing Techniques, Academic Press, New York.
2. Hord, R.M., 1992, Digital Image Processing of Remotely Sensed Data, Academic Press, New York
3. Jensen, J.R., 1996, Introductory Digital Image Processing: A Remote Sensing Perspective, Printice Hall, Englewood Cliffs, New York.
4. Lillesand T.M and Keifer R.W. (2000) Remote Sensing and Image Interpretation, IVth Eds. John Wiley and Sons, New York.
5. Muller, P.J., 1996, Digital Image Processing in Remote Sensing, Taylor & Francis, London.
6. Nag, P. & Kudrat, M., 1996, Digital Remote Sensing, Concept Publishing Company, New Delhi.
7. NRSA, 1995. IRS - IC, Data User Handbook, Hyderabad.
8. Sabins, F.F. (2002), *Remote Sensing: Principles and Interpretation*, Freeman, New York
9. Wolf, Paul R., 1993, Elements of Photogrammetry, McGraw - Hill, New York.

Practical – II (PGDRS)
Geographical Information Systems and Global Positioning System

Credits: 2

Unit -I: Introduction to Computers & GIS

Introduction to computers, Basics of operating system: DOS and Windows; Hardware and software requirements of GIS; Graphical user interface of Arc-View and Geo-Media and Arc GIS.

Unit - II: Data Base Creation

Spatial data input and Geo-referencing; Spatial data base creation; Creation of non-spatial data sets into DBF format; Linking of Spatial data with non-Spatial data sets

Unit-III: Spatial Analysis

GIS analysis: Proximity, Thematic mapping and Over lay; 3D modeling: DEM, Slope and Aspect Overlay, buffer and proximity analysis; Output and report generation;

Unit IV: Global Positioning System

Demonstration on GPS; Selection of datum, units and scale; GPS measurement: Collection of GCPs; Mobile mapping; Transfer of GPS data in to GIS software.

Books Recommended

1. Bernhardsen (2003) *Geographic Information Systems: An Introduction*, 3ed, Wiley India Pvt. Ltd., New Delhi.
2. Demers (2004) *Fundamentals of Geographic Information Systems*, 3ed, Wiley India Pvt. Ltd., New Delhi.
3. Joseph George (2003) *Fundamentals of Remote Sensing*, University Press. Hyderabad
4. Lillesand T.M and Keifer R.W. (2000) *Remote Sensing and Image Interpretation*, IVth Eds. John Wiley and Sons, New York.
5. Lo C.P. & Yeung A.K.W., (2004). *Concepts and Techniques of GIS*, Prentice-Hall of India, New Delhi
6. LO & YEUNG (2009) *Concepts and Techniques of Geographic Information Systems*, 2nd ed., PHI Learning Pvt. Ltd, New Delhi.
7. Laurini, Robert and Direk Thompson, 1992, *Fundamentals of Spatial Information Systems*, Academic Press.
8. Maguire, D.J.; Goodchild, M.F.; Rhind, D.W. 1991. *Geographical Information Systems*, Longman, London, UK,
9. N.K. Agarwal (2004), *Essentials of GPS*, Spatial Network Pvt. Ltd.

Paper – V (PGDRS)

Thematic Applications of Remote Sensing and GIS

Credits: 4

Unit I: Remote Sensing Applications in Human Settlement and Urban Analysis

Remote sensing and GIS in urban and regional planning; Application of remote sensing and GIS in facilities mapping; Land transformation and urban sprawl; Solid waste management using remote sensing and GIS; Urban Information System.

Unit II: Remote Sensing Application in Geosciences

Elements of interpretation; Principles of geomorphologic analysis; Genetic landforms and their identification; Applied geomorphology; Identification and mapping of various rock types and structural elements; Applied aspects of geological mapping.

Unit III: Remote Sensing Application in Agriculture and Soil

Importance of remote sensing in agriculture; Principles and approaches of crop inventory and crop production forecasting; Soil classification as per soil taxonomy; Kind of soil survey; Physiographic - soil relationship: Approaches and methods of mapping; Watershed characterization; Prioritization of watershed based on SYI model; Principles of land evaluation.

Unit IV: Remote Sensing Applications in Hydrology & Water Resources Management

Hydrological cycle - Types of precipitation and the analysis of precipitation data; Thiessen polygon method of estimating average rainfall using GIS; Evapotranspiration; Runoff estimation using modified SCS method; Methods of estimating evapotranspiration and soil moisture; Water balance computation using Thornthwait and Mather model; Role of remote sensing and GIS in watershed management.

Books Recommended :

1. Lillesand T.M and Keifer R.W. (2000) Remote Sensing and Image Interpretation, IVth Eds. John Wiley and Sons, New York.
2. Sokhi,B.S. and SM Rashid, 1999, Remote Sensing of Urban Environment, Manak Publishers, New Delhi.
3. Siegal, B.S. and AR Gillespie, 1980, Remote Sensing in Geology, Wiley, New York.
4. Way,D; 1978, Terrain Analysis: A Guide to Site Selection using Aerial Photointerpretation,Dowden, Hutchinson & Ross, Stroudsburg

Paper – VI (PGDR)

Urban Area Analysis

Credit: 4

Unit I: Urban Area Interpretation

Urban land use/ land cover classification system; Residential area classification; Principle and unit of sub-divisions; Urban sprawl; Residential environment; Growth of slums and squatter settlements; Suitability analysis for urban development.

Unit II: Aerial Photo and Census Mapping

Census operation in India; Principles of population estimation using remote sensing; Inter - census population estimation and updating of population data.

Unit III: Urban Utility and Services Mapping

Traffic and parking surveys; Traffic volume; Role of remote sensing in transport planning; Utility mapping.

Unit IV: Urban Hazard and Risk Management

Types and mapping of urban hazards; Land use planning and risk assessment; Remote sensing and GIS applications in urban hazard mapping and micro - zonation.

Books Recommended:

1. Bernhardsen (2003) *Geographic Information Systems: An Introduction*, 3ed, Wiley India Pvt. Ltd., New Delhi.
2. Demers (2004) *Fundamentals of Geographic Information Systems*, 3ed, Wiley India Pvt. Ltd., New Delhi.
3. Estes, J. E. and LW Senger, 1994, *Remote Sensing Techniques for Environmental Analysis*, Hamilton, Santa Barbara, California
4. Joseph George (2003) *Fundamentals of Remote Sensing*, University Press. Hyderabad
5. Laurini, Robert and Direk Thompson, 1992, *Fundamental of Spatial Information Systems*, Academic Press.
6. Lo, C.P.and Yeung AKW. (2004),*Concepts and Techniques of GIS*, Prentice - Hall of India, New Delhi.
7. LO & YEUNG (2009) *Concepts and Techniques of Geographic Information Systems*, 2nd ed., PHI Learning Pvt. Ltd, New Delhi.
8. Lo, C.P.and Yeung AKW. (2004)*Concepts and Techniques of GIS*, Prentice – Hall of India, New Delhi.

9. Sokhi, B.S. and SM Rashid, 1999, Remote Sensing of Urban Environment, Manak Publishers, New Delhi
10. Maguire, D.J.; Goodchild, M.F.; Rhind, D.W. 1991.
11. Geographical Information Systems, Longman, London UK.
12. NRSA, 1995. IRS - IC Data User Handbook, Hyderabad.
13. N.K.Agarwal (2004), Essentials of GPS, Spatial Network Pvt. Ltd.

Paper – VII (PGDRS)

Digital Image Processing II

Credit: 4

UNIT-I: Image Enhancement (Spatial Feature Manipulation)

Spatial domain and frequency domain filtering; High pass and low pass filters; Band pass filters; Gradient filters; Mean filters, Median filter, Mode filter, Linear edge enhancement filter: Laplacian filter; Non linear edge enhancement filter: Roberts filter, Sobel's filter.

UNIT-II: Image Enhancement (Multi Image Manipulation)

Multi Image Manipulation: Band rationing, Principal and canonical transformations; Vegetation Indices: Perpendicular vegetation index, Simple vegetation index, Ratioed vegetation index, normalized differential vegetation index, Soil adjusted vegetation index, Intensity hue saturation (IHS) transform.

UNIT-III: Image Classification

Image classification schemes, Thematic information extraction, Spatial pattern recognition, Image classification types: Supervised, unsupervised; Training site selection and analysis: graphical, quantitative and self classification of training data; Supervised image classifiers : Minimum distance to mean classifier, Parallelepiped classifier, Gaussian maximum likelihood classifier, Unsupervised image classifiers: Histogram based classification, Sequential clustering, Isodata clustering; Fuzzy classification, Neural network classification.

UNIT-IV: Statistics Generation and Classification Accuracy Assessment

Definition and necessity; Classification Accuracies: Producer accuracy, User accuracy, overall accuracy and K statistics, Thematic accuracy, Locational accuracy, Accuracy test.

Books Recommended:

1. American Society of Photogrammetry, 1993, Manual of Remote Sensing, Falls Church, Virginia.
2. American Society of Photogrammetry, 1968, Manual of Color Photogrammetry, Falls Church, Virginia.
3. Curran, P. J., 1985, Principles of Remote Sensing, Longman, London.
4. Ekstrom, M.P., 1984, Digital Image Processing Techniques, Academic Press, New York.
5. Ghosh, S.K., 1979, Analytical Photogrammetry, Pergamon, New York.
6. Jensen, J.R., 1986, Introductory Digital Image Processing: A Remote Sensing Perspective, Prentice Hall, Englewood Cliffs, New York.
7. Hord, R.M., 1982, Digital Image Processing of Remotely Sensed Data, Academic Press, New York.

8. Lillesand, T.M. & Kiefer, R.W., 1987, Remote Sensing and Image Interpretation John Wiley & Sons, New York.
9. Muller, P.J., 1986, Digital Image Processing in Remote Sensing, Taylor & Francis, London.
10. Nag, P. & Kudrat, M., 1996, Digital Remote Sensing, Concept Publishing Company, New Delhi.
11. Pratt, W.K., 1978, Digital Image Processing, John Wiley & Sons, New York.
12. Sabins,F., 1986, Remote Sensing: Principles and Interpretation, Freeman, New York.
13. Siegal,B.S. & Gillespie,A.R., 1980, Remote Sensing in Geology, John Wiley & Sons, New York.
14. Slater, P.N., 1980, Remote Sensing: Optics and Optical Systems, Addison Wesley, Addison-Wesley Publishing Co. Inc, Reading, Mass.
15. <http://www.wolfram.com/products/applications/digitalimage/>

Paper – VIII (PGDRS)

Urban Mapping and Planning

Credit: 4

Unit I: Land Use Planning and Space Use

Issues in land use planning and land use policy in India; Land use/land cover classification system; Land use change detection and monitoring; Mapping of urban sprawl; Space use classification system; NIROV system of classification of space use; Making of inventories.

Unit II: Preparation of Photomap for Base Mapping and Cadastral Mapping

Characteristics and scale of base maps, Role of base maps in regional/district planning; Preparation of Photomap, Orthophotomap; Cadastral mapping.

Unit III: Aspects of Physical Planning

Town planning in the developing countries with special reference to India; Norms in town planning; Location and distribution of facilities; Urban services and utility planning; Urban housing; Planning for urban extension.

Unit IV: Urban and Regional Planning

Remote sensing data products; Availability of remote sensing data products in India; Applications of various remotely sensed data products in urban and regional studies; Multi - concepts and their applications in urban and regional studies - Multi - date, multi-stage, multi-sensor, multi-resolution.

Books Recommended :

1. Bernhardsen (2003) Geographic Information Systems: An Introduction, 3ed, Wiley India Pvt. Ltd., New Delhi.
2. Demers (2004) Fundamentals of Geographic Information Systems, 3ed, Wiley India Pvt. Ltd., New Delhi.
3. Estes, J. E. and LW Senger, 1994, Remote Sensing Techniques for Environmental Analysis, Hamilton, Santa Barbara, California
4. Elangovan, K (2006) "GIS: Fundamentals, Applications and Implementations", New India Publishing Agency, New Delhi" 208pp.
5. Joseph George (2003) Fundamentals of Remote Sensing, University Press. Hyderabad
6. Lo, C.P. and Yeung AKW. (2004) Concepts and Techniques of GIS, Prentice - Hall of India, New Delhi.

7. LO & YEUNG (2009) Concepts and Techniques of Geographic Information Systems, 2nd ed., PHI Learning Pvt. Ltd, New Delhi.
8. NRSA, 1995. IRS - IC, Data User Handbook, Hyderabad.
9. Sokhi, B.S. and SM Rashid, 1999, Remote Sensing of Urban Environment, Manak Publishers, New Delhi

Practical – III (PGDRS)

Remote Sensing and GIS Applications

Credits: 2

Unit I: Land use/ Land Cover Mapping

Land use/Land cover classification system; Multi – level classification; Land use/land cover mapping using vertical aerial photographs and satellite imageries.

Unit II: Urban Land Use Mapping

Urban land use classification system; Urban land use mapping and change detection; Interpretation of residential land use and the measurement of net residential areas; Urban population estimation.

Unit III: Geomorphic Mapping

Physiographic analysis; Photo/image sample study for understanding basic elements of interpretation in terrain evaluation; Remote sensing data in identification, delineation and mapping of various landforms and their significance; Identification and delineation of different rock types and geologic structures.

Unit IV: Agricultural Crop Inventory and Mapping

Spectral characteristics of crops using Spectroradiometer; Land use/land cover mapping using visual interpretation methods; Agricultural land use mapping using digital techniques; Crop identification and crop acreage estimation; Creation of spatial and non – spatial data for land use change detection and crop inventory analysis.

Books Recommended :

1. American Society of Photogrammetry, 1993, Manual of Remote Sensing falls Church, Virginia.
2. Bernhardsen (2003) *Geographic Information Systems: An Introduction*, 3ed, Wiley India Pvt. Ltd., New Delhi.
3. Curran, Paul J., 1995, Principles of Remote Sensing, Longman, London
4. Demers (2004) *Fundamentals of Geographic Information Systems*, 3ed, Wiley India Pvt. Ltd., New Delhi.
5. Fotheringham, S.; Rogerson, P. (ed.). 1994. Spatial analysis and GIS. Taylor and Francis, London, UK.
6. J. R. Jenson (2000) Remote Sensing of Environment, Pearson Education, New Delhi.
7. Joseph George (2003), Fundamentals of Remote Sensing, University Press,

Hyderabad.

8. Lillesand T.M and Keifer R.W. (2000) Remote Sensing and Image Interpretation, IVth Eds. John Wiley and Sons, New York.
9. Lo, C.P.and Yeung AKW.(2004) *Concepts and Techniques of GIS*, Prentice Hall of India, New Delhi.
10. NRSA, 1995. IRS - IC, Data User Handbook, Hyderabad.
11. Rashid, S.M. and MMA Khan, 1993, Dictionary of Remote Sensing, Manak Pub. Pvt. Ltd, New Delhi.
12. Sabins, Floyd F, 1996, Remote Sensing : Principles and Interpretation, Freeman, New York.
13. Sabins,F.F.(2002), *Remote Sensing: Principles and Interpretation*, Freeman, New York
14. NRSA, 1995. IRS - IC, Data User Handbook, Hyderabad.

7. LO & YEUNG (2009) Concepts and Techniques of Geographic Information Systems, 2nd ed., PHI Learning Pvt. Ltd, New Delhi.
8. NRSA, 1995. IRS - IC, Data User Handbook, Hyderabad.
9. Sokhi, B.S. and SM Rashid, 1999, Remote Sensing of Urban Environment, Manak Publishers, New Delhi

Project

Credit: 8

POST GRADUATE DIPLOMA IN METEOROLOGY

EXAMINATION 2022

Department of Geography, JNV University, Jodhpur

Course details and credit system

About this Program

The main objective is to create National capacity for the provision of professional Meteorologists and Atmospheric scientists to staff Meteorological Institutions as well as other many other sectors like Agriculture, Water Development, Environment, Tourism, etc. where meteorological expertise is needed. Secondary objectives include the strengthening of the National research capability in fields of applied Meteorology as well as atmospheric sciences so as to adequately handle Ugandan issues of climatic variability/change, climatic impacts, Agricultural Meteorology, Hydrometeorology, and short, medium to long range forecasting. Applicants must possess a good Bachelor of science or Bachelor of arts degree and should have undertaken one of the following options at undergraduate level:

Course code : PGDM

Course duration : 1 year (Semester – I & Semester – II)

Number of Seats : 20 (Twenty)

Course fee: Rs. 15000/- (Rs.7,500/- Each Semester) and other examination fee etc. as per University rules.

Eligibility:

The following shall be eligible for admission:

the candidate must have any of the following background qualifications at degree level:

1. Geography
2. Mathematics and Physics,
3. Mathematics and Physics done in the First Year,
4. Mathematics, Chemistry and Physics done in the First Year,
5. Physics and Chemistry,
6. Applied Mathematics with any other science subject
7. Agricultural engineering, Civil Engineering, Electrical Engineering, or Mechanical Engineering.
8. Computer Science

SEMESTER I		
Course Code	Title	Credits
PGDM 01	General Meteorology And Climatology	
PGDM 02	Synoptic Meteorology Theory & forecasting	
PGDM 03	Project and practical	
SEMESTER II		
Course Code	Title	Credits
PGDM 04	Tropical Meteorology & weather prediction	
PGDM 05	Agricultural Meteorology	
PGDM 06	Project and practical	
	Total	

SYLLABUS

PGDM 01: General Meteorology And Climatology

Dynamic Meteorology

Basic concepts regarding coriolis force. Pressure gradient force, Centrifugal force, gravity and gravitation. Equation of motion in component form. explanation (without derivation) of all the terms and their significance. Balanced motion- Geostrophic, Gradient and Cyclostrophic winds. Ageostrophic wind, Thermal wind- uses of thermal Wind and calculation of thermal wind by the graphical method with examples. Kinematics of wind and pressure field: lows, highs, trough, ridge and col. Hydrostatic balance,. Divergence and vorticity in natural coordinates: Illustration by typical cases on synoptic charts.

Physical Meteorology

Thermodynamics , Dry adiabatic lapse rate. Moisture in the atmosphere, vapour pressure. Saturation vapour pressure, relative humidity, Mixing ratio, virtual temperature . Dew point and wet bulb temperature, changes in saturation vapour pressure with temperature. Moist adiabatic lapse rate, Statement of Normand's theorem, equivalent potential temperature. Geo-potential, pressure- height curve, barometric altimetry, standard atmosphere. T- Φ gram and its uses. Computation of height of pressure surface moisture variables. Study, of stability by parcel method. Radiation , Radiative equilibrium. Solar radiation, direct and diffuse and their measurements. Solar constant. Albedo. Terrestrial radiation, Green house effect. Simpson's diagram, Heat balance of the earth and atmosphere, Minimum and maximum temperature.

Climatology

Elementary ideas of general circulation of the atmosphere over the globe. Distribution of pressure and temperature over the surface of the earth. Climatic zones. Climate. Climate elements such as pressure, temperature and rainfall and climatic controls. Indian climatology Division of Indian climatologically : Winter season – western disturbance and Easterly waves and weather associated with them, Fog cold wave.

Thunderstorm and hail. Pre- monsoon or hot weather season. Heat wave – Cyclonic storms in the Indian seas: western disturbances with associated induced lows: factors affecting visibility in India: Fog dust storm, dust raising winds. Thunderstorms, hail storms. Norwester, Andhi, Southwest monsoon season, onset and advance of southwest monsoon: Semi permanent systems of monsoon: Strong and weak monsoon: break monsoon, Factors affecting distribution of monsoon rainfall, synoptic systems in monsoon particularly monsoon depression.

Retreating southwest monsoon season – withdrawal of S.W Monsoon: Cyclonic storms in the Indian seas: Northeast monsoon, western disturbances. NOTE Climatologically aspects of various phenomena in India occurring in the above mentioned seasons are to be covered including a special study of mean upper wind and temperature charts.

Suggested Books:

1. Byers: General Meteorology IV edition
2. Cole : Introduction to Meteorology
3. Pettersen: Introduction to Meteorology
4. Banerjee & Upadhyay: Mausam Vigyan
5. Lutgens & Tarbuck: the atmosphere: An Introduction to Meteorology
6. Rama Sastry: Weather and Weather Forecasting
7. Das: the Monsoons
8. Wallace and Hobbs: Meteorology and Introductory Survey
9. Sellers: Physical Climatology
1. Trewartha: Introduction to Climates
2. Haurwitz & Austin: Climatology
3. I.M.D. Forecasting Manuals
4. Lockwood: World Climatology

PGDM 02: Synoptic Meteorology Theory & forecasting

Air masses and fronts;

Production and transformation of air masses; conservational properties, the exchange properties and formation of air masses; air masses sources in winter and summer; Classification of air masses; types of transformation Fronts and frontogenesis – surfaces of discontinuity, typical structure of fronts, slope of frontal surfaces, classification of fronts, kinematic and dynamic boundary conditions, frontogenesis and frontolysis, frontogenetical fields; Principal frontal zones.

The structure of extratropical cyclones and anticyclones – cyclone model; life cycle of cyclones; Fronts and weather; Occlusions; thermal structure of cyclones; cyclone family; theory of cyclone development; a forecasting guides; example of cyclone development; anticyclones; cut off cyclones and anticyclones; Blocking; index cycle.

Tropical Cyclones – life cycle; surface and upper air structure; pressure; temperature, wind, humidity and cloud fields; Energy aspects, formation of tropical storms, theories of formation, intensification and movement of tropical storms

The Jet –streams – polar front jet stream – subtropical jet stream, polar night jet stream, Easterly jet stream, Characteristics features of the various Jet Streams, theories of formation, weather development, cloud and clear air turbulence.

weather

Winter season – Western disturbances, cold waves, fog and jet streams, disturbance from the east, fronts in the Indian region

Hot weather season – Norwesters; Dust storms and dust raising winds, thunderstorms, hail storms, tornadoes, heat waves, Jet streams, cyclonic depression and storms in the Indian seas

The southwest monsoon season: - Monsoon onset, strong monsoon, weak monsoon, revival of the monsoon, monsoon depressions, heavy rainfall, easterly jet stream, influence of extra tropical systems, Chinese weather systems, effect of typhoons and other systems from the east, withdrawal of the monsoon The northeast monsoon season – strong and weak northeast monsoon, depressions and storms in the Indian seas, forecasting their information, movement, recurvature, jet streams.

Forecasting

Organization of the IMD World Meteorological Organization (WMO), structure and functions. Synoptic weather, aviation and ship codes, terms and definitions. Surface weather charts. Pilot balloon measurements. Radiosonde and radar-wind measurements. Analysis of meteogram and thermodynamic diagrams. Analysis of the middle and high latitude disturbances. Regional tropical synoptic weather systems. Forecasting for aviators, agriculturalists, hydrologists and other users. Satellite application in synoptic meteorology. Meteorological organization for aviation in India

Forecasting techniques: development, interpretation of numerical forecasts and computer simulations. Streamline analysis. Confluence and diffluence: computation of vorticity and divergence. Analysis, identification and forecasting of synoptic and meso-scale systems. Use of climatology in forecasting. Daily, monthly and seasonal dominant synoptic and regional systems

Suggested Books:

1. Hess: Introduction to Theoretical Meteorology
2. Pisharoty: Thermodynamic Diagram and some of Their Uses (IMD Tech. Note)
3. Gordon: Introduction to Dynamic Meteorology
4. Holton: An Introduction to Dynamic Meteorology
5. Haltiner: Numerical Weather Prediction
6. Haltiner & Martin : Physical and Dynamic Meteorology
7. Haltiner & William: Numerical Weather Prediction and Dynamic Meteorology
8. Astel & Wiin-Nielsen: Compendium of Meteorology, Vol. I. Dynamic Meteorology, W.M.O. No. 364

PGDM 03: Project and practical

1. Basic analysis of global distribution of mean climatic parameters.
2. Computation of weighted and running means of a time series.
3. Computation of rainfall variabilities and coefficient of variation.
4. Computation of mean wind, resultant wind, prevailing wind and persistence.
5. Computation of climatic types according to Koeppen and Thornthwaite.
6. Exercise in curve fitting, least square, correlation and regression.

chart reading: Plotting of constant pressure charts direct from teletype messages: Techniques of analysis.

Climatological charts: surfaces charts: upper wind charts: constant pressure charts. Analysis of surface and upper air charts typical of the 4 seasons. Analysis of a few days charts each of tropical cyclones. Monsoon depression, Western disturbances and Jet- stream for surface. 850 hpa. 700 hpa 500 hpa and 200 hpa. Time section and cross section analysis. Preparation of flight forecast, two for each season. Preparation of TREND forecast for deterioration and improvement in respect of each element. Formats and elements in different types of forecasts/ warning (both aviation and non aviation)

PGDM 04: Climate Science & weather prediction

Differences between the tropics and extra-tropics. Tropical general circulation. Angular momentum balance and maintenance of temperature field. Inter-tropical convergence zone. Monsoons and the associated weather with particular reference to Asia and south and South-East Asia. Tropical jet-streams and their relationship to thermal wind: subtropical, tropical easterly, low level jets, easterly waves, major Asian anti-cyclones. Seasonal location, intensity and structure of the systems which control weather over Asia with reference to south west and south east asia. The tropical boundary layer processes. Tropical cyclones, their causes and observational aspects, numerical modelling and prediction: survey of tropical wave disturbances, cloud clusters, squall lines, scale interactions between tropical weather systems; forcing mechanisms for

tropical disturbances. Observed temporal variability in the tropics. The tropical stratosphere and mesosphere; interactions between land-atmosphere-ocean, East-West circulations; El-Nino-Southern Oscillation (ENSO). Modelling and prediction of the tropical atmosphere, Long-term variations and tropical weather anomalies

Extra-tropical – Air mass climatology - January and July; Geographical distribution of Fronts, Frontal zones - Extra-tropical cyclones – frequency, regions of blocking and cyclogenesis. • Climates of other regions in brief . Asia, Africa, North America, South America, Europe, Australia, Arctic and Antarctic. • Angular momentum cycle • Water Cycle • Energetics and the Ocean-Atmosphere Heat Engine • Variability in the climate system - Interannual and interdecadal variability - Monsoon (southwest and northeast) Variability, diurnal, intraseasonal, Interannual, decadal, long term trends, Teleconnection patterns - El Nino/ Southern Oscillation, Climatology, Dynamics and prediction, links with global climate - North Atlantic Oscillation, North Pacific Oscillations, NH Teleconnection Patterns - Indian Ocean Dipole, statistics, dynamics and links with global climate •

Numerical weather prediction Theory

. Theoretical aspects of NWP: History of NWP, with special reference to Indian context. Hierarchy of NWP models. Climate modeling and prediction : Mathematical simulation of climate, model simulations of mean climate, Fundamentals and methods of long range forecasting, IMD's long range forecast models, Dynamical models for long range forecasts, Skill of long range forecasts • Science of Climate Change : Basics of Climate Change (science), Climate Feedbacks (water vapour, cloud, oceans, snow and ice), Observed climate change over India and globe, Future climate projections, IPCC report result

Satellite Meteorology Theory: • Remote Sensing, Principles of Remote Sensing, Application in Meteorology, Introduction to Satellite Meteorology including Orbital Mechanic. • Meteorological Satellites, Polar Orbiting, Geostationary satellites, Current and future meteorological satellites of the world. Payloads on Meteorological Satellites, NOAA, INSAT -3D, Metop. . • Processing of data from Imagers, INSAT Meteorological Data Processing System (IMDPS). Generation of images in various channels. Retrievals of meteorological products from the imager data including water vapor.

. PGDM 05: Agricultural Meteorology

1. Meaning and scope of agricultural meteorology, Intent and extent of agricultural meteorology, plant physiology, long term and short term modifications of growth process, avoidable and unavoidable dangers.
2. Agrometeorological observations: Air, surface and soil temperature, air and soil humidity, wind, precipitation, sunshine, radiation intensity and microclimatic measurements.
3. Solar Radiation and Plants: Reflection, transmission and absorption, incoming, outgoing and net radiation, Spectral distribution of solar radiation and physiological response to plants, Light distribution in canopy, Phototropism and Photoperiodism: Meteorological factors in photosynthesis.
4. Environmental Temperature and Plants: Effect of low and high ambient temperature, growing degree days and other heat indices, soil temperature and factors affecting them, thermal properties of soil, Cardinal

temperatures, soil moisture and its measurement, weekly water balance, water use and plant growth, evaporation and evapotranspiration, wind effect on evapotranspiration, wind damage to plants, transportation of pollen disease and insects by winds, wind profile near ground.

5. Climatic Requirements of Important Crops: Rice, wheat, cotton, soyabean and sugarcane, pearl millet, groundnut and mustard.
 6. Plant and Crop Diseases: The effect of weather on pathogenic agents- Insects, Fungi, Bacteria, Bacilli and Virus, combating plant diseases, natural and artificial methods, the integrated campaign, insect against insects, Bacteria and Bacilli against insect, Virus against Insects, effect of weather on the host.
 7. Meteorological Hazards and Agriculture: Frost and frost fighting methods, hail damage and hail modification method, wind damage and wind breakers, Agricultural drought, its severity and management, flood, flood damage and flood fighting.
 8. Soils: Composition, structure and physical properties of soils, simple classification of soils, soil air, soil erosion, soil improvement devices and drainage.
 9. Agrometeorological forecasts systems, short, medium and long range forecasts, yield forecasts model, system stimulation its concept, application and importance.
10. A brief outline of remote sensing in agriculture.

Suggested Books:

1. Smith: Methods in Agricultural Meteorology
2. Seemann et. al.: Agrometeorology
3. Vitchewich: Agrometeorology
4. WMO Compendium of lecture notes
5. Mavi: Introduction to Agrometeorology

PGDM 06: Project and practical

1. To study the Agro meteorological instruments used for observations.
2. Forecasting of crop yield on the basis of weather parameters using crop growth models.
3. Crop phenological changes and heat units requirement of the crops.
4. Prediction of minimum temperature and frost under western Rajasthan condition.
5. Medium range weather forecast and preparation of agro meteorological advisory bulletins for farmers.
6. Inspection of observatories including barometer comparison: analysis of Tephigram. Computation of height of pressure surface: location of tropopause and inversion: estimation of height of base and top of clouds: study of the instability of the atmosphere (parcel method) - Elementary concepts of thermodynamic parameters. Decoding of flight. Route and ijb aerodrome forecasts on relevant forms. Statistical exercise and computation

Project Description

.Students will undertake research projects in specific fields of Meteorology or Meteorological Applications under supervision by academic member(s) of staff. The students are required to consult with the relevant supervisor(s) at least once every two weeks for guidance. The students will be guided on how to prepare a project proposal in their areas of choice. The Project work runs throughout the academic year and is presented orally before a panel of examiners including the External Examiner. Students should submit type-written project reports dully signed by their respective supervisor(s).

JAI NRAIN VYAS UNIVERSITY, JODHPUR
DEPARTMENT OF GEOGRAPHY

Course name:

UNDER GRADUTE DIPLOMA IN TOURISM STUDIES EXAMINATION 2022

SYLLABUS:

SEMESTER I

Paper I : INTRODUCTION TO TOURISM

Paper II: TOURISM GEOGRAPHY

Paper III: TOURIST RESOURCES OF INDIA

PAPER IV: PRACTICAL

SEMESTER II

Paper IV: TOURIST RESOURCES OF RAJASTHAN

Paper V: TOURS & TRAVEL AGENCY MANAGEMENT

Paper VI: GUIDING SKILL & PERSONALITY DEVELOPMENT

PAPER IV: PRACTICAL

PAPER I

INTRODUCTION TO TOURISM

Unit I

INTRODUCTION TO TOURISM – Nature, scope, Significance. Types and Forms of Tourism: Inter-regional and intra-regional tourism, inbound and outbound tourism, domestic, international tourism. Forms of Tourism: religious, historical, social, adventure, health, business, conferences, conventions, incentives, sports and adventure, senior tourism, special interest tourism like culture or nature oriented, ethnic or ‘roots’ tourism ,Components of Tourism.

Unit II

TOURISM DEVELOPMENT THROUGH THE TIMES - Growth and Development of Tourism, History of Travel, Travel in the 19th and 20th Century, Recent Trends.

Unit III

IMPACTS OF TOURISM – Economic, Social, Cultural, Environmental impact.

Unit IV

BASIC INFRASTRUCTURE FOR THE TOURISM TRANSPORT – forms of transport, Transport network. Tourist Transportation: Air transportation: The airline industry present policies, practices. Functioning of Indian carriers. Air Corporation Act, Air charters. Surface Transport: Rent-a-car Scheme and Coach-Bus Tour, Fare Calculation. Transport & Insurance documents, All-India Permits Rail Transport: Major Railway Systems of World, (Euro Rail and Amtrak) General information about Indian Railways, Types of rail tours in India:, Place-on-Wheels and Royal Orient, Deccan Odessy, Toy Trains. Indian rail Pass. Water Transport: Historical past, cruise ships, ferries, hovercrafts, river and canal boats, Fly-cruise. Accommodation, Types of Accommodation Prescribed application form for approval of Hotel Projects. Regulatory conditions and Guide lines for approval of Hotel Projects. Star categorisation,

sources of Finance, Incentives and subsidy extended to Hotels in Tourist areas, and Tourist Backward areas. Hotel Related technical words, other infrastructure & catering –Basic tourists requirements and types.

REFERENCES

Bhatia A. K.: International Tourism Fundamental & Practices, Sterling Publishers, New Delhi, 1995. 2. Bhatia A. K: Tourism Development: Principles, Practices & Philosophy Sterling Publishers, New Delhi, 1995. 3. Douglas Pearce: Tourism Today: A Geographical Analysis, Longman Scientific Technical, New York, 1987. 4. Douglas Pearce: Topics in Applied Geography, Tourism Development, Longman Scientific Technical, New York, 1995. 5. Negi J. M. S.: Tourism & Travel Concepts and Principles, Gitanjali Publishing House, New Delhi. 6. Robinson H.: A Geography of Tourism, Mac Donald & Evans London, 1978. 7. Selvam M.: Tourism Industry in India, Himalayan Publishing House, Bombay, 1989. -----

PAPER II TOURISM GEOGRAPHY

Unit-I

FUNDAMENTALS OF GEOGRAPHY, Importance of Geography in tourism, Climatic variations, climatic regions of world, study of maps, longitude & latitude, international date line, time variations, time difference.

Unit-II

FACTORS OF TOURISM DEVELOPMENT i. Physical Factors :i) Relief ii) Climate iii) Vegetation iv) wildlife v) Water Bodies. II. Sociocultural factors :i) Religion ii) Historical iii) Sports iv) Settlements etc.iii. Economic factors : i) Transportation ii) Industry.

Unit-III

POLITICAL AND PHYSICAL FEATURES OF WORLD GEOGRAPHY. Destinations in North America (United States of America: New York, Washington, Los Angeles, San Francisco, Orlando, Dallas. Canada: Ottawa, Montreal, Vancouver, Mexico). Central America (Costa Rica, Panama, Belize etc) Europe: France, Spain, Italy, United Kingdom, Moscow, Germany, Austria, Greece Switzerland, The Netherlands.

Unit-IV

AFRICA & OTHER: South Africa, Mauritius, Kenya. Middle East: Egypt, Morocco, Saudi Arabia, United Arab Emirates, Mecca-Madina. North & East Asia/ Pacific: China, Malaysia, Thailand, Singapore, Australia, Japan. South Asia : SAARC Countries.

REFERENCES

Ahmed Aizaz: General Geography of India, NCERT, New Delhi. 2. Douglas Pearce: Topics in Applied Geography, Tourism Development, Longman Scientific Technical, New York, 1995. 3. Robinson H.: A Geography of Tourism, Mac Donald & Evans London, 1978. 4. Rosemary Burton: Travel Geography, Longman, England, 1995. 5. Singh R. L. (ed): India A Regional Geography, National Geographical Society of Varanasi, 1989. 6. Spate D. K.: India & Pakistan, A General Geography. -----

PAPER III
TOURIST RESOURCES OF INDIA

Unit – I

NATURAL RESOURCES: Wildlife Sanctuaries, National Parks and Natural Reserves in India (Jim Corbett Tiger Reserve, Bharatpur Bird Sanctuary, Valley of Flowers, Kanha, Kaziranga, Sasan Gir, Dachigam, Ranthambhore and Keoladeo Ghana) Hill Stations: Study of Hill Station attractions and their environs with case studies of Mussoorie, Nainital, Munnar and Ooty. Beaches and Islands: Beaches in Goa, Kerala, Orissa. Andaman Nicobar & Lakshadweep islands.

Unit –II

POPULAR TOURIST RESOURCES- Delhi, Agra, Jaipur, Khajuraho, Varanasi, Mumbai, Kolkata, Chennai, Bangalore, Hyderabad, Mahabalipuram, Madurai, Tanjore, Hampi, Ellora, Elephanta, Konark and Fatehpur Sikri Monuments- Qutub Minar, Atala Mosque (Jaunpur), Kirtistambha (Chittor), Sher Shah Suri's Tomb, Sikandara, Red Fort (Delhi), Taj Mahal, Golden Temple (Amritsar), Hawa Mahal (Jaipur), Bara Imambara (Lucknow).

Unit-III

PILGRIMAGE DESTINATIONS: Hindu- Charo Dham Yatra, Jyotirlinga Yatra, Devi Yatra Vindhyachal (U.P.) Kamakhya (Assam), Vaishnavadevi, Kashi, Prayag, Gaya, Ayodhya, Mathura– Vrindavana, Allahabad, Ujjain, Hardwar, Nasik, Gangasagar. Buddhist: Lumbini, Bodhgaya, Sarnath, Kushinagar, Sharavasti, Sankisa, Vaishali, Rajgriha, Kapilvastu, Nalanda, Sanchi, Ajanta. Jain: Kashi, Pavapuri, Shatrunjaya, Girnar, Mt. Abu, Sharavanbelgola, Palitana Muslim: Ajmer Sharif, Nizamuddin (Delhi), Fatehpur Sikri, and some important Mazars. Sikh: Patna, Nanded, Guru-ka-Tal (Agra), Amritsar. Saint: Kabir, Tulasi, Raidas, Sankaracharya.

Unit – IV

FAIRS AND FESTIVALS: Kumbha, Pushkar, Sonapur, Dadari, Tarnetar, Chhatha, Pongal/Makar-Sankranti, Baishakhi, Meenakshi Kalyanam, Holi, Gangaur, Onam, Durga Puja, Ramalila, Diwali, Kartik Purnima (Dev Deepawali, Guru Parb), Dashahara (Kullu), Rathayatra, Nag Nathaiya (Varanasi), Bhrawafat, Id-ul-Fitr, Easter, Christmas, Carnival (Goa), Burhawa Mangal (Varanasi), Ganga Mahotsava, Taj Mahotsava, Khajuraho Mahotsava and Desert Festival. Handicrafts and Handlooms. History of Dance Styles and main Gharanas of North Indian Music. History of Drama in India and its present scenario.

REFERNCES

• Gupta, SP, Lal, K, Bhattacharya, M. Cultural Tourism in India (DK Print 2002) • Dixit, M and Sheela, C. Tourism Products (New Royal Book, 2001) • Oki Morihiro, Fairs and Festivals, World Friendship Association, Tokyo, 1988. • Mitra, Devla, Buddhist Architecture, Calcutta. • Michell, George, Monuments of India, Vol. 1. London. • Davies, Philip, Monuments of India, Vol. II., London. • Brown Percy, Indian Architecture (Buddhist and Hindu), Bombay. • Brown Percy, Indian Architecture (Islamic period), Bombay. • Hawkins. R.E., Encyclopaedia of Indian Natural History. • Vatsayana, Kapila, Indian Classical Dance, New Delhi. • Swami, Prayaganand, History of Indian Music. • Jain, Jyotindra & Arti, Aggrawala : National Handicrafts and Handlooms Museum. • Mode. H. & Chandra.S. : Indian Folk Art, Bombay. • Mehta. R. J. : Handicrafts & Industrial Arts of India, New York. • Grewal, Bikram (ed) : Indian Wildlife. -----

PAPER IV
TOURIST RESOURCES OF RAJASTHAN

Unit – I

NATURAL RESOURCES: Wildlife Sanctuaries, National Parks and Natural Reserves in Rajasthan Eco tourism in Rajasthan Hill Stations: Study of Hill Station attractions and their environs with case studies of Mt. Abu . Desert tourism , type of sand dunes , desert triangles, Indira Gandhi Canal project, international boundary, introduction of RTDC and its work

Unit –II

POPULAR TOURIST RESOURCES- Jaipur, Jodhpur, Jaisalmer, Udaipur, Ajmer, Bikaner main tourist hub of Rajasthan, other region: Nagaur, Sekhawati region, Rajsamand, Alwar, Bharatpur, Sawai Madhopur, Dausa, Hadauti region, Kanthal Mewal, Tribal region of Rajasthan, Desert and Rural tourism.

Unit-III

PILGRIMAGE DESTINATIONS: Hindu- Pushkar, Nathdwara, Shri Mahaveer Ji, Deshnok, Salasar, Ramdeora, . Buddhist: Berath, Mt. Abu, Muslim: Ajmer Sharif, Nagaur Sufi Hamidudeen Dargah, Galiyakot, and some important Mazars. Other religious spot of Rajasthan. Saint: Dadudayal, Redas, Dhanna,.

Unit – IV

FAIRS AND FESTIVALS all fairs of Rajasthan and RTDC fair Desert Festival. Handicrafts and Handlooms. History of Dance Styles and main Gharanas focal music and dance. History and Art culture of Rajasthan.

Folk art culture of Rajasthan- literature, art, music etc.

REFERENCES

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PAPER V
TOURS & TRAVEL AGENCY MANAGEMENT

Unit – I

TRAVEL FORMALITIES: Travel Formalities: Passport, Visa, Health requirements, taxes, customs, currency, travel insurance, baggage and airport information. Travel Agency and Tour Operation Business: History, Growth, and present status of Travel Agency. Definition of Travel Agency and differentiation between Travel Agency and Tour Operation business. Travel Agency and Tour Operators: Linkages and arrangements with hotels, airlines and transport agencies and other segments of tourism sector. Approval of Travel Agents and Tour Operators: Approval by Department of Tourism, Government of India. IATA rules and regulations for approval of a travel agency, Approval by Airlines and Railways. Study of various Fiscal and Non – Fiscal incentives available to Travel agencies and Tour Operations business.

Unit-II

FUNCTIONS OF A TOUR & TRAVEL AGENT: Understanding the functions of a travel agency - travel information and counseling to the tourists, Itinerary preparation, reservation, ticketing, preparation

and marketing of Tour packages, handling business/corporate clients including conference and conventions. Sources of income: Commission, Service Charges. Travel Terminology: Current and popular travel trade abbreviations and other terms used in preparing itineraries. Functions of a Tour Operator: Market research and tour package formulation, assembling, processing and disseminating information on destinations, Liaisoning with principles, preparation of Itineraries, tour operation and post tour Management. Sources of income for tour operation. Event Management: Role of events for promotion of tourism, Types of Events-Cultural, festivals, religious, business etc. Need of event management, key factors for best event management. Case study of some cultural events (Ganga Mahotsava, Lucknow mahotsava and Taj Mahotsava) Concept of MICE. Introduction of meetings, incentives, conference/conventions, and exhibitions. Definition of conference and the components of the conference market. The nature of conference markets and demand for conference facilities. The impact of conventions on local and national communities. Unit-III PUBLIC AND PRIVATE SECTOR IN TRAVEL AGENCY BUSINESS AND TOUR OPERATION BUSINESS: Organisational Structure and various Departments of a Travel Agency. Case study of ITDC. Case study of SITA, Cox & Kings, TCI and Thomas Cook. The Indian Travel Agents and Tour Operators – an overview. National Trade Associations: IATO and TAAI.

Unit IV

LEGAL ISSUES AND TOURISM RELATED LAWS: Principles and practices in Business ethics. Ethical and legal responsibilities of Travel Agencies. A study of laws relating to accommodation, Travel Agency, Airways, and Surface Transport. Consumer Protection Act, 1986; A study of laws related to Ancient Monuments Preservation Act, 1904; Ancient Monuments & Archaeological site and Remains Act, 1972 A study of laws relating to foreigners Act, 1946; Foreign Exchange Regulation Act, 1973, Passport Act, 1967 and Wildlife Protection act, 1972. REFERENCES: • Holloway, J.C., (1983), The Business of Tourism, McDonald and Evans, Plymouth. • Syrratt Gwenda, (1995). Manual of Travel Agency Practice, Butterworth Heinmann, London • Stevens Laurence, (1990). Guide to Starting and Operating Successful Travel Agency, Delmar Publishers Inc., New York. • Chand, Mohinder, Travel Agency Management, Anmol Publication • Seth, P. N., (1992), Successful Tourism Management Vol. 1 & 2, Sterling Publications, Delhi • Foster, Douglas (1983), Travel and Tourism Management, McMillan, London

PAPER VI

GUIDING SKILL & PERSONALITY DEVELOPMENT

Unit – I

GUIDING CONCEPT: Meaning, Concepts and Types of Guides: Conceptual meaning of Tourist Guide, duties and responsibilities, How guides are appointed in tour. Worlds most popular languages, language ability

Unit – II

RESPONSIBILITIES OF GUIDES: Preparation of a tour : Review of itinerary, Participant list, accuracy, timings and practicality, Identifying the group or individual traveller's special needs, Checking Vehicle, Locating Vehicle and contacting driver; standard of dress and personal grooming; Greeting participants and introducing self; Leading the participant: Skills in leading the group, General instruction to Participants at monuments, sacred places and crowded areas, Giving Commentary, answering Questions, concluding a tour. Interpreting Sites: Characteristics of natural, historical, and

urban sites; potential of public and private agencies, interpretation of specific groups, especially the young.

Unit – III

CO-ORDINATION: Co-ordinating with the main office, Conducting Various types of Tours, ability to deliver all information imaginatively and accurately relevant to the client's needs; establishing good security measures.

Unit – IV

PERSONALITY DEVELOPMENT: Introduction Meaning of Personality, Personality Factors- external, internal. Effective or winning personality, developing a selling personality. Communication skills. Personality grooming, physical fitness, dressing sense, formal and informal clothing, behaviour with male and female clients, behaviour in office.

REFERNCES:

• Goddy B. & Parkin I., Urban Interpretation : Vol. I, Issues and Settings; Vol. II Techniques and Opportunities, Working Papers, School of Planning, Oxford Polytechnic, 1991. • Pond K.L., The professional Guide: Dynamic of Tour Guiding, Van Nostrand Reinhold, New York, 1993. • Trade wings Manual for Personality Development

PRACTICAL PAPER I

Indoor Practical

Unit – I

COMPUTER AND INFORMATION SYSTEM Internet: Management information systems, Office automation, E-mail and electronic highway, Internet, Web Page Designing. Computer Presentation: Introduction to a statistical package (SPSS), Presentation Graphic Tools. Multimedia technology. Role of Computers in Travel and Tourism.

Unit II

MAP WORK: Preparation of Tour maps. Maps and Toposheet Reading. Use of GPS. Calculating distance on map. Preparation of Charts of the Countries Information.

Unit III

PROMOTION AND ADVERTISEMENT: Preparation of Brouchers and Advertisements for different tours. **Unit IV**

PREPARATION OF ITINERARY: 10 itinerary of different regions and different seasons.

Unit V

TICKETING : Rail Ticket Procedure, Air Ticketing Computer Networking: What is CRS, How it functions. CRS for Rail Transport, Hotel Bookings, Airlines: Different packages used: Abacus, Fantasia, Amadeus, Apollo-Galileo, Sabre etc. Use dummy of one for the CRS packages (if available). Mixed Class Journeys, Special Fares (Excursion, Students & Seaman), Passenger Ticket & Baggage check (with issuance of ticket with itineraries – One way (OW), Return (RT), Circle Trip (CT), Mixed Class Special Fares, Passengers Expenses en route, Credit Cards, Universal Air Travel Plan (UATP), Baggage Rules.

Unit VI

COMMUNICATION SKILL AND ENGLISH SPEAKING Essay Writings, Passage Translation, letters Writing, Passage Explanation, Grammar : Change of Sentences from Active Voice into Passive Voice, Direct – Indirect Narration, Comparison of Adjectives.

Unit VII

PROCEDURE FOR DOMESTIC AND INTERNATIONAL HOTEL RESERVATIONS.

Documentation related with Hotel Reservation/Configuration/Cancellation, Preparation of Hotel and Other Service Vouchers, Procedure and documents involved in informing Sub-Agents for services; Procedure of checking and passing the bills of the transport/hotels and Guide/escorts, RBI guidelines/Rules regarding the foreign exchange transactions. Unit VIII PASSPORT & VISA: Document Required for Passport and Visa, Types of Visa, Procedure of Passport and Visa.

PRACTICAL PAPER II

Outdoor practical

Unit I

INTERNSHIP The Training is based upon the 6-8 weeks practical training with any recognised Travel Agency/Tour Operating Company/Hotel. During the organisational work (training period), each student is required to prepare practical report of day to day activities to be submitted for evaluation.

Unit II

RESEARCH PROJECT Report Each student is required to prepared a research project report based on field study related to tourism industry.

Unit III

EXCURSION TOUR Each student is required to participate in about a Two weeks Field Study tour. The Tour will be arranged by the Department contributing the train and other conveyance charges. The objectives behind the field tour are to provide practical knowledge of tourist resources of the country and to analyse the existing infrastructure and amenities of tourism development and to examine future prospects of tourism promotion. Each candidate has to meet his expenditure towards local travel, boarding, lodging etc. After the completion of the study tour each student is required to submit Field Study Tour Report for evaluation at least 30 days before the commencement of the examination.

Unit IV

VISITS TO DIFFERENT SECTORS – Travel, Advertisement agencies & other sectors of Tourism Industry. Prepare a report on it.

Unit V

STUDY OF FAIRS AND FESTIVALS and Report on it (any One)

Unit VI

PROJECT FOR GUIDE - Student should prepared one project as a guide and he should demonstrate and submit.

Unit VII

Still Photography, Video shooting

Appendix I Nature of question paper:

(A) Theory: 80 marks for final exam and 20 marks are internal total 100 marks. Each theory paper will be of 80 marks comprising seven questions; of which students have to solve five questions-(16X5)=80 as below: Q. No. 1 : compulsory of shot answers (8 Questions of 2 marks)16 marks Q. No. 2: Q. No. 3: Essay type questions Solve any three 16 X 3 =48 marks Q. No. 4: Q. No. 5: Q. No. 6: Q. No. 7 Short

Notes any two short notes 16 marks Total 80marks. Internal 20 marks: 10 marks seminar 10 marks for internal test. (B) Practical : Out of 200 Marks SCHEME OF EVALUATION: (A) For practical paper I, each project: 10 marks (8 X 10 = 80 marks) tests: 40 marks viva voce : 40 marks written exam : 40 marks Total 200marks (B)For practical paper- II surprise test: 20 Marks evaluation of Dissertation : 50 marks Written test: 40- Marks Viva-Voce: 40 Marks each project: each 10 Marks.(5 X 10 =50 marks) Total 200marks Total exam is of 1000 marks.

MPET- GEOGRAPHY

Examination 2021-22

SYLLABUS

Unit – I

Teaching Aptitude : Teaching - Nature, Objectives, Characteristics and basic requirements; Learner's characteristics ; Factors affecting teaching ; Methods of teaching ; Teaching aids ; Evaluation systems.

Research Aptitude: Research – Meaning, Characteristics and types; Steps of research; Methods of research; Research Ethics; Paper, article, workshop, seminar, conference and symposium; Thesis writing – its characteristics and format.

Comprehension and Communication: A passage to be set with questions to be answered; Communication – Nature, Characteristics, types, barriers and effective classroom communication.

Higher Education System: Structure of the institutions for higher learning and research in India, formal and distance education, professional/ technical and general education, value education, governance, polity and administration, concept, institutions and their interactions.

Unit- II

Statistical methods: Data Interpretation - Sources, acquisition and interpretation of data; Quantitative and qualitative data; Graphical representation and mapping of data Measures of central tendency; Standard deviation; Correlation; Measures of dispersion.

Information and communication Technology (ICT): Meaning, advantages, disadvantages and uses; General abbreviations and terminology; Basics of internet and e-mailing.

Reasoning: Number series, letter series, codes, Relationships, classification.

Cartography: Types of maps, Techniques for the study of spatial patterns of distribution; Choropleth; Isopleth and chorochromatic maps and pie diagrams; Projections and profiles.

Unit- III

Concise account of the evolution of geography .Geography in ancient period, Ancient Indian and Chinese Geography Contribution of Greeks, Arab Geographers, Dark age in Geography, Renaissance in geography in medieval period.

Early foundation of modern scientific geography-varenius, hommayer kant, Humblt, Ritter and Ratzel.

School of Geography: German, French, Russian, British, American and Indian.

Changing paradigms: Man and Environment, determinism and possibilism .Quantitative Revolution; Impact of positivism, humanism, radicalism, and Behaviouralism in geography.

Unit- iv

Geomorphology: Endogenetic and Exogenesis forces, Denudation and weathering, Geosynclines, continental drift and plate tectonics.

Climatology and Oceanography: Composition and structure of the atmosphere, monsoon and jet stream, tropical and temperate cyclones, Temperature of ocean water, salinity of oceans, Ocean deposits, coral reefs, tides and ocean currents.

Environment Geography : Environmental hazards and problems of pollution; Ozone depletion, El- Nino, global warming and climate change, disaster management- types, components and role of people.

Unit – V

Human and Economic Geography : Influence of major land forms, climate and water bodies on human activities, Primary, Secondary, tertiary and quaternary sectors of economy; Location Theories - Von Thunen's , weber's and losch's . Walter cristaller's central place Theory, and K-Hirachy of chritaller.

Population Geography : Population – Growth , distribution and density, in the world, migration theories, census of India with special reference to Rajasthan. Heart Land and rimland Theories of Political Geography.

Urbanization – Growth and causes , Principal Agglomerations of world , Slums and associated problems with reference to India, Problems of Urbanization.

Ph.D COURSE WORK (M.P.E.T) 2021-22

Paper-III

History of Geographical Thought

Unit 1 : Geography in ancient period: Contribution of Greeks and Arab geographers; Dark age in Geography

Unit 2 : Geography in the 18th and 19th centuries with special reference to the contribution of Kant, Humboldt, Ritter and Ratzel ; Recent trends in Geography

Unit 3 : Schools of Geographic thought: German, French and American School of Geography

Unit 4 : Concept of Areal Differentiation and landscape, Quantitative Revolution, Behaviouralism

Unit 5 : Environmental Determinism, Possibilism , Neo-determinism, Human ecology, Theories in Geography

Paper-IV

Specific Subject (Cultural, Tourism and Regional Geography)

Unit 1 : Analysis of world population in terms of ethnic, religious and language groups; World pattern of Literacy

Unit 2 : Concept of Dry World, Oriental World, African World and Pacific World

Unit 3 : Cultural tourism, Problems and facilities of Tourism, Economic and social significance of tourism, Role of Indian Tourism Development Corporation

Unit 4 : Tourism in Rajasthan : Salient Features of desert and wild life of Rajasthan, Cultural Heritage of Rajasthan, Fairs and Festivals

Unit 5 : Concept of Region and Planning Regions, Formal regions, Functional Regions, Regional Imbalances and Inequalities in India

SYLLABUS FOR FOUR YEAR INTEGRATED B.A./B.Sc. B.Ed. COURSE

GEOGRAPHY



JAI NARAIN VYAS UNIVERSITY JODHPUR

Note :- There will be two theory papers carrying 75 marks each, and practical of 50 marks. Candidate will have to pass in theory and practical separately.

GEOGRAPHY THEORY PAPER (EXTERNAL) EXAM. SCHEME

NOTE:- Each theory paper (External) is divided in three parts i.e. section-A, Section – B, Section- C

Section A : Will consist of 10 compulsory questions. There will be two questions from each unit and answer of each question shall be limited up to 30 words. Each question will carry of 1 Mark.

Section-B : Will consist of 10 questions. Each unit will be having two questions; students will answer one question from each Unit. Answer of each question shall be limited up to 250 words. Each question will carry of 4 Marks.

Section-C : Will consist of 5 questions. Each unit will be having one question; students will answer any three questions. Answer of each question shall be limited up to 500 words. Each question will carry of 10 Marks.

B.A./B.Sc. B.Ed. (Geography) I Year 2022

PHYSICAL GEOGRAPHY

Paper I

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

Unit : 1 Origin of the Earth; Interior of the earth; Theory of Isostasy; Earth movement; Folds and faults (their types only); Rocks and their classification.

Unit : 2 Earthquake and Volcanoes; Major land forms: mountains, Plains, plateaus and lakes.

Unit : 3 Weathering and Denudation: Normal cycle of erosion; work of rivers; glaciers, ground water and winds.

Unit : 4 Atmosphere: Composition and structure; Insolation and Temperature; Atmospheric Pressure and winds, Humidity and precipitation, cyclones.

Unit : 5 Hydrosphere- Temperature of Ocean water, Salinity, Ocean deposits, Ocean Tides and currents.

Suggested Readings:

- 1. Dayal, P.A – Text book of Geomorphology, Shukla Book depot, Patna, 1996.**
- 2. Dury, G.H – The Face of the Earth, Penguins, 1980.**
- 3. Ernst, W.G – Earth systems – Process and Issues, Cambridge University Press, 2000.**
- 4. ICSSR – A Survey of Research in Physical Geography, Concept, New Delhi, 1983.**
- 5. Kale V and Gupta, A – Element of Geomorphology, Oxford University Press, Calcutta, 2001.**
- 6. Monkhouse, F.J – Principles of Physical Geography, Hodder and Stoughton, London, 1960.**
- 7. Pitty. A – Introduction to Geomorphology, Methuen, London, 1974.**
- 8. Sharma, H.S – Tropical Geomorphology, Concept, New Delhi, 1987.**
- 9. Singh, S – Geomorphology, Prayag Pustakalaya, Allahabad, 1998.**

Paper II

GEOGRAPHY OF INDIA

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

- Unit - 1 A Study of India with reference to its physiography - Drainage, climate and climate divisions; Soils and their problem; Natural Vegetation: types and distribution; forest resources and their conservation.
- Unit - 2 Principal Minerals: Iron ore, manganese, mica, power resources: coal, Petroleum and Hydroelectricity; major Industries: Iron and steel, Cotton textile, Sugar, cement, Pulp and paper.
- Unit – 3 Agriculture: Main characteristics and Problems of Indian agriculture; Principal agriculture crops: wheat, rice, sugarcane, tea and cotton: Irrigation-irrigation sources, their distribution and major Irrigation Project of India: Bhakra Nangal Project, Damodar Valley corporation.
- Unit – 4 Population: Growth, Distribution and Density: Transport: Rail, Road, Water and Airways; India's foreign trade composition and trends.
- Unit – 5 Regional Geography of Kashmir valley, chhota Nagpur plateau, Malabar Coastal region and middle Ganga Plain.

Suggested Readings:

1. Deshpande C.D – India-A Regional Interpretation Northern Book Centre, New Delhi.1992.
2. Farmer, B.H – An Introduction to South Asia, Methuen, London, 1983.
3. Govt. of India- India – Annual Reports, 2001 Pub. Div, New Delhi, 2001.
4. Govt. of India- National Atlas of India, NATMO Publication, Calcutta.
5. Govt. of India- The Gazetteer of India. Vol I & III Publication Division, New Delhi, 1965.
6. Tiwari. R.C - Geography of India, Pravalika Publication Allahabad,
7. Husain M – Geography of India, Ravat Publication, Jaipur.

8. Deshpande C.D. – India- A Regional Interpretation, Northern Book Centre, New Delhi, 1992.
9. Singh R.L. – India – A Regional Geography, National Geographical Society, India. Varanasi, 1971.
10. Spate; O.H.K. and Leammonth, A.T.A. – India and Pakistan – Land People and Economy, Methuen & Co., London, 1967.
11. Wadia, D.N. – Geology of India, McMillan & Co., London, 1967.
12. Dr. Khullar – India (A Comprehensive Geography) Kalyani Publication, New Delhi.
13. Negi – Geography of India.
14. Govt. of India – Five Year Plans of India.
15. Indian Year Book (Latest Edition)- Publication Division, Delhi.
16. Irrigation Atlas of India.

GEOGRAPHY PRACTICAL SCHEME

Cartography and Surveying I

Duration: 6 Hrs.

Max. Marks 50

Unit – 1 Scales: plain, comparative, Time and Diagonal; methods of enlargement and reduction of maps with square methods.

Unit – 2 Knowledge and use of meteorological instruments: Maximum and minimum Thermometer, thermograph, Stevenson's screen, Aneroid Barometer, barograph, Rain Gauge, wind Vane. Anemometer, Dry and wet Bulb Thermometer; Study and interpretation of Indian weather maps (January and July)

Unit – 3 Climatic graphs showing (i) maximum, minimum and mean temperature (ii) monthly rainfall (iii) monthly temperatures, rainfall and relative humidity (iv) Rain fall Variability (v) Histogram of rain fall (vi) Hythergraph, (vii) Climograph and (viii) Wind rose diagram.

Unit – 4 Chain and Tape survey

Suggested Readings:

1. जे. पी. षर्मा – प्रायोगिक भूगोल, रस्तोगी प्रकाषन, मेरठ।
2. एम. एस. जैन, – प्रायोगिक भूगोल, साहित्य भवन, आगरा।
3. Singh R.L. – Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. Monk House, F.J. and Wilkinson, H.R. – Map and Diagrams, Methuen, London 1994.
5. Steers, J.K. – Map Projections, University of London Press, London.
6. Robinson, A.H. – Elements of Cartography, John Wiley & Sons, New York.

B.A. B.Ed. (Geography) II Year 2023

Paper I

HUMAN GEOGRAPHY

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

Unit - 1 Definition, Scope and principles of human; its relationship with others. Social sciences, schools of human geography; Environmentalism, possibilism and neo - determinism.

Unit – 2 Geographic environment and man - Influence of major land forms, climate and water bodies on human activities: Forms of adaptation to environment human life in principal environments: Equatorial regions. Tropical deserts, monsoon lands, Temperate grasslands, Mediterranean lands and polar region.

Unite -3 Races of mankind: Criteria for classification; classification scheme of Krober, Haddon and G. Taylor; population: growth, distribution and density in the world.

Unite -4 Human settlement- Site forms and types; house types with special reference to India

Unite -5 Urbanization: Meaning, growth and trends of urbanization: Principal agglomeration of world, functional classification of Indian cities; slums and associated problems with reference to India, Problems of urbanization and remedies.

Suggested Readings:

1. Bergwan, Edward E - Human Geography; Culture, Connectin and Land Scape, Prentice-Hall, New Jersey. 1995,
2. Carr, M – Patterns, Process and change in Human Geography, Me Millan Education London, 1987.

3. Gellman, 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. डॉ. कौषिक – मानव भूगोल के सरल सिद्धान्त, रस्तोगी एण्ड कम्पनी, मेरठ।
6. विष्वनाथ द्विवेदी एण्ड कनोजिया – मानव भूगोल के सिद्धान्त, किताब महल, इलाहाबाद।
7. माजिद हुसैन – मानव भूगोल, रावत पब्लिकेणन्स, जयपुर।
8. कांस्वा – मानव एवं पर्यावरण।
- 9.

Paper II

GEOGRAPHY OF RAJASTHAN

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

Unit -1 Physiography and physiographic division, climate, soil, Natural Vegetation.

Unit -2 Population - Growth, distribution and density; Tribal population distribution, principal tribes: Bhil, Meena and Garasiya; Rural settlements: growth-pattern, types and building material: tourism in Rajasthan geographical perspective.

Unit - 3 Mineral resources: Distribution and reserves of important minerals; Industry: Localization factors and spatial pattern; Transportation: railways and roads, their pattern and accessibility.

Unit - 4 Agriculture: Agriculture land use, Principal crops: wheat, Maize, Bajara, oil-seeds and cotton; irrigation sources, spatial aspects of development of groundwater; principal irrigation Project - Indira Gandhi canal, Chambal valley project and Mahi Bajaj sagar; Animal Husbandry: Number, spatial pattern and principal breeds

Unit - 5 A detailed study of Marusthali, Aravalli region, Eastern Agro Industrial region and Hadauti region.

Suggested Readings:

1. चौहान, टी. एस. राजस्थान का भूगोल, विज्ञान प्रकाशन, जोधपुर।
2. भल्ला, एल.आर., राजस्थान का भूगोल, कुलदीप प्रकाशन, अजमेर।
3. एच.एम. सक्सेना, राजस्थान का भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर।
4. डि. सी. शर्मा व पी. शर्मा, राजस्थान आज तक।
5. एच.एस. शर्मा, राजस्थान का भूगोल, पंचशील प्रकाशन, जयपुर।
6. Mishra, V.C. – Geography of Rajasthan, N.B.T. Delhi.
7. Sharma, H.S. & Sharma, M.L. – Geography Facts of Rajasthan.

GEOGRAPHY PRACTICAL SCHEME

Cartography and Surveying II

Duration: 6 Hrs.

Max. Marks 50

- Unit-1 Methods of Depiction of relief: spot height. Hachures, formlines and contours. Interpolation of contours, Intervisibility By Drawing section with a knowledge of Dead Ground. Scale of Slope of contours and section drawing: Slopes, Conical Hill, Ridge 'V' shape valley, gorge, pass. Waterfall, saddle, plateau, Escarpment, sand dune, 'U' shaped valley, Hanging valley, cliff and lake
- Unit-2 Representation of socio- cultural and economic data by diagrams and diagrammatic maps: (I) Bar simple and compound (ii) Rectangular (iii) square (iv) Block pile (v) Wheel (vi) Circle and scale of square root and cube root
- Unit-3 Representation of socio- cultural and economic data by distribution maps- choroschematic, choro-pleth, Isopleth and Dot methods
- Unit -4 Plane Table Survey

Suggested Readings:

7. जे. पी. शर्मा – प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।

8. एम. एस. जैन, – प्रायोगिक भूगोल, साहित्य भवन, आगरा।
9. Singh R.L. – Elements of Practical Geography, Kalyani Publishers, New Delhi.
10. Monk House, F.J. and Wilkinson, H.R. – Map and Diagrams, Methuen, London 1994.
11. Steers, J.K. – Map Projections, University of London Press, London.
12. Robinson, A.H. – Elements of Cartography, John Wiley & Sons, New York.

B.A. B.Ed. (Geography) III Year 2024

Paper I

ECONOMIC GEOGRAPHY

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

Unit-1 Nature, scope and methods of economic geography; economic resources their classification and conservation; fundamental occupations of man; fishing and livestock raising.

Unit- 2 Agriculture: Subsistence, intensive commercial grain farming, plantation agriculture and mixed farming, dairying; principal agricultural crops: wheat, rice, Maize, Tea, Coffee, Rubber, Cotton, Sugarcane and sugar beet.

Unit- 3 Minerals: Iron ore, manganese and copper ore; sources of power: coal, Petroleum, Hydroelectricity and Nuclear.

Unit-4 Industries: Iron and steel, cotton Textile, pulp and paper, Major Industrial regions: The lake region of U.S.A., Ruhr basin of Germany and manufacturing belts of Japan.

Unit- 5 Transportation: Rail, Water-major ocean routes and inland waterways of Europe, former USSR; Air factors affecting air transportation, principal air-routes of the world; International trade; Bases of International trade; barriers of trade and pattern of world trade.

Suggested Readings:

1. Berry, J.B.L., Cooking, E.C. & Ray, D.M. – Economic Geography, Prentice Hall, 1987.
2. Alexander, J.W. and Gibson – Economic Geography, Prentice Hall of India, New Delhi, 1988.
3. Thoman & Corbin – The Geography of Economic Activity, McGraw Hill, N.Y.
4. Lloyd Perter E. and Peter Dicken – Location in Space- A Theoretical Approach to Economic Geography, Harper and Row, London and N.Y.
5. Janaki, V.A. – Economic Geography, Concept Publishing Co., New Delhi, 1985.
6. Robinson, H. – Economic Geography, Mac Donald and Evans, 1979.

7. Jarret, H.R. – A Geography of Manufacturing, MacDonal and Evans, 1977.
8. Singh, K.N. – Artbik Bhugol ke Mool Tatva, 1993.
9. Chapman, J.D. – Geography and Energy, Longman, London, 1989.

Paper II

GEOGRAPHY OF WORLD - I
(NORTHERN CONTINENTS)

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

- Unit - 1 physiography, climate and Natural vegetation of Asia continent.
- Unit – 2 Spatial distribution of population and Economic development of Asia
Continent.
- Unit - 3 Physiography, Climate and Natural vegetation of Europe continent.
- Unit – 4 Major Power Resources, Location and distribution of Important Industries,
Industrial Regions of Europe continent.
- Unit – 5 Physiography, Climate, Natural vegetations and agricultural regions of
North America.

Suggested Readings:

1. Cole, J. – A Geography of the World's Major Regios, Routledge, London, 1996.
2. Deblij, H.J. – Geography: Regions and concepts, John Willey, New York 1994.
3. Jackson, R.H. and Hudman, L.E. – World Regional Geography: Issues for Today
John Willey, New York, 1991.
4. Minshull, G.N. – Western Europe, Hoddard & Stoughton, New York, 1984.
5. Patterson, J.H. – Geography of Canada and the United States. Oxford University
Press, 1985.
6. Shaw E.B. – Anglo American – A Regional Geography.
7. Minshull Roger – Regional Geography.
8. James P.E. – Latin America cas sed and co. London.
9. Minshull Roger – The changing nature of Geography.

10. James P.E. – Latin America, Cassed and Co., London.
11. C.B. Crassey - Geography of China.
12. Trewarth G.T. – Japan's Natural Resources.
13. बनवारी लाल – उत्तरी अमेरिका का भूगोल।
14. एम.एस.डी. कौषिक – भौगोलिक विचारधाराएँ एवं विधि तंत्र।

GEOGRAPHY PRACTICAL SCHEME

Cartography and Surveying III

Duration: 6 Hrs.

Max. Marks 50

- Unit- 1 Study and interpretation of topographical sheets of typical areas of India; scheme of Indian topographical sheets with a complete Knowledge of their latest version
- Unit- 2 Profile drawing: serial, super-imposed, composite and projected; Knowledge of vertical exaggeration.
- Unit- 3 Geographical construction of following map projections: cylindrical projection; simple cylindrical (Equidistant), cylindrical equal area, Mercator; conical projection: one Standard parallel, Two standard parallel, Bonne, Poly conic, Zenithal projection (Polar case only): Equidistant, equal area, Gnomonic, Stereographic, orthographic.
- Unit- 4 Measure of central Tendency: mean, median, mode and Standard Deviation.
Prismatic compass survey: Corrections of Bearings and closing of errors by Bowditch method.

Suggested Readings:

1. जे. पी. शर्मा – प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।
2. एम. एस. जैन, – प्रायोगिक भूगोल, साहित्य भवन, आगरा।
3. Singh R.L. – Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. Monk House, F.J. and Wilkinson, H.R. – Map and Diagrams, Methuen, London 1994.
5. Steers, J.K. – Map Projections, University of London Press, London.
6. Robinson, A.H. – Elements of Cartography, John Wiley & Sons, New York.

B.A. B.Ed. (Geography) IV Year 2025

Paper I

ENVIRONMENTAL GEOGRAPHY

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

- Unit-1 Definition and scope of Environmental Geography: its relationship with other subjects of environment; man environment relationship, percipient and quality of environment.
- Unit-2 Ecology: definition, scopes and types; ecosystem; meaning, types; components, functioning, productivity and stability; geo-biochemical cycles: water, carbon, Nitrogen and oxygen.
- Unit-3 Environments problems: Causes, population increase; urbanization, industrialization, transportation, pesticides and wars; environmental pollution; air, water, soil and noise, measure for control.
- Unit- 4 Environmental hazards; ozone depletion, green house effect, El-Nino, Global warming, acid rain, floods, droughts, volcanoes, earthquakes, landslides, collapse of big dames, health hazards and energy crisis.
- Unit- 5 Ecological basis of environmental management: sustainability of human ecosystem; conservation of Natural resources: soil, water, forests, minerals and energy; National and International efforts on environmental management; environmental education.

Suggested Readings:

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Lte. Bikaner.
2. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380013, Inida,
3. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw
4. Cunningham, W.P. Copper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmentl Encyclopedia, Jaico Publ. House, Mumavai, 1196p
5. Gleick, H.P. 1993. Water in crises, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford University. Press. 473p

6. Jadhav, H & Bhosale, V.M. 1995. Environmental Protection Laws. Himalaya Pub. House, Delhi 284p.

Paper II

GEOGRAPHY OF WORLD – II
(SOUTHERN CONTINENTS & AFRICA)

Duration: 3 Hrs.

Max. Marks 75

(External 60 + Internal 15)

- Unit – 1 Terrain Pattern, drainage, climate, Natural vegetation and regional development of Africa continent.
- Unit – 2 Terrain Pattern, drainage, climate, Natural vegetation and regional development of South America.
- Unit – 3 Terrain Pattern, drainage, climate, Natural vegetation and regional development of Australia.
- Unit – 4 Antarctica Continent and Its importance in Research programmes with spl. Ref to its topography, climate, minerals and Life.
- Unit – 5 Contemporary issues in World Geography: Globalization, W.T.O., U.N. Environment Programme (UNEP), U.N. Development Programme (UNDP), Environment and sustainable development.

Suggested Readings:

15. Cole, J. – A Geography of the World's Major Regions, Routledge, London, 1996.
16. Deblij, H.J. – Geography: Regions and concepts, John Willey, New York 1994.
17. Jackson, R.H. and Hudman, L.E. – World Regional Geography: Issues for Today John Willey, New York, 1991.
18. Minshull, G.N. – Western Europe, Hodder & Stoughton, New York, 1984.
19. Patterson, J.H. – Geography of Canada and the United States. Oxford University Press, 1985.
20. Shaw E.B. – Anglo American – A Regional Geography.
21. Minshull Roger – Regional Geography.

22. James P.E. – Latin America case studies and co. London.
23. Minshull Roger – The changing nature of Geography.
24. Jarrot H.Q. – Africa
25. James P.E. – Latin America, Cassed and Co., London.
26. Stamp L.D. – Africa, John Willey & Sons, New York.
27. Butland G.J. – South Africa.
28. डॉ. जगदीश सिंह एवं डॉ. वी.पी. राव. – तीन दक्षिणी महाद्वीप, वसुन्धरा प्रकाशन, गोरखपुर।
29. निगम एस.एन. – तीन दक्षिणी महाद्वीप।
30. एम.एस.डी. कौषिक – भौगोलिक विचारधाराएँ एवं विधि तंत्र।

GEOGRAPHY PRACTICAL SCHEME

Cartography and Surveying IV

Duration: 6 Hrs.

Max. Marks 50

- Unit – 1 Indian clinometer - Its parts, methods and determination the height of distant Points.
- Unit – 2 Mathematical construction of following map projections: cylindrical projection; simple cylindrical (Equidistant), cylindrical equal area, Mercator; conical projection: one Standard parallel, Two standard parallel, Bonne, Poly conic, Zenithal projection (Polar case only): Equidistant, equal area, Gnomonic, Stereographic, orthographic.
- Unit – 3 Statistical Methods: Measures of dispersion (Quartiles mean deviation and standard deviation), Variability indices, Correlation, Spearman's rank correlation and Karl Pearsons Product moment correlation, simple linear. Regression, residual from regression.
- Unit – 4 Socio Economic Survey - Caste Structure, Literacy rate, Creed work force, land holding ratio, occupational structure, income Gape, acute poverty analysis etc. (For every 20 students one teacher shall accompany the party).

Suggested Readings:

1. जे. पी. शर्मा – प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ।

2. एम. एस. जैन, – प्रायोगिक भूगोल, साहित्य भवन, आगरा।
3. Singh R.L. – Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. Monk House, F.J. and Wilkinson, H.R. – Map and Diagrams, Methuen, London 1994.
5. Steers, J.K. – Map Projections, University of London Press, London.

Robinson, A.H. – Elements of Cartography, John Wiley & Sons, New York.

SYLLABUS

GEOGRAPHY

M.A. (Previous) Examination, 2022

M.A. (Final) Examination, 2023

JAI NARAIN VYAS UNIVERSITY

JODHPUR

IMPORTANT

With a view to bring about greater reliability, validity and objectivity in the examination system and also for closer integration of teaching, learning and evaluation.

- (1) The syllabus has been divided into units. Questions will be set from each unit with provision for internal choice.
- (2) In order to ensure that the students do not leave out the important portion of the syllabus, examiners shall be free to repeat the questions set in the previous examinations.

(Ref. Resolution No. 21(c) of Academic Council dated 9-2-84)

The examinees be permitted to use their personal transistorized pocket battery operated calculators in the examinations. The Calculator to be used by the candidates in the examinations should not have more than 12 digits, 6 function and 2 memories and should be noiseless and cordless. A calculator belonging to one candidate shall not be allowed to be used by another candidate. The superintendent of the centre will have complete discretion to disallow the use of a calculator which does not confirm to the above specification.

(Ref. Res. No. 6/90 of Academic Council dated 20th July, 1990)

In Engineering and any other examinations where the use of calculators is already permitted; it shall remain undisturbed.

NOTIFICATION

In compliance of decision of the Hon'ble High Court all students are required to fulfil 75% attendance rule in each subject and there must be 75% attendance of the student before he/she could be permitted to appear in the examination.

REGISTER

(Academic)

SYLLABUS

GEOGRAPHY

M.A. (Previous) Examination, 2022

M.A. (Final) Examination, 2023

JAI NARAIN VYAS UNIVERSITY

JODHPUR

Contents

GENERAL INFORMATION FOR STUDENTS	1
M.A. PREVIOUS	4
M.A. FINAL	14

FACULTY OF ARTS, EDUCATION AND SOCIAL SCIENCES

Academic Members of the Geography Department

Head of the Department

Prof. Jai Singh

Professor

Prof. Rajendra Parihar

Prof. Irfan Mehar

Assistant Professor

Dr. Arjun Lal Meena

Dr. Asha Rathore

Mr. Govind Singh

Dr. Lalit Singh Jhala

Dr. Omprakash

Dr. Gaurav Kumar Jain

Dr. Ashwani Arya

Dr. Anamika Poonia

FACULTY OF ARTS, EDUCATION & SOCIAL SCIENCES

MASTER OF ARTS

GENERAL INFORMATION FOR STUDENTS

The examination for the degree of Master of Arts, Education and Social Sciences shall consist of two parts : (i) The Previous Examination and (ii) The Final Examination

The examination will be through theory papers/practical/viva. Pass marks for the previous and final examination are 36% of the aggregate marks in all the theory papers and viva/practical's and not less than 25% marks in the individual theory paper /viva /practical. A candidate is required to pass in the written and the practical/viva examination separately.

Successful candidates will be placed in the following divisions on the basis of the total marks obtained in previous and final examinations taken together:

First division 60% , second division 48% and third division 36% no students will be permitted to register himself simultaneously for more than one post-graduate course.

ATTENDANCE

1. For all regular candidates in the faculties of arts, education and social sciences, science, law, commerce and engineering, the minimum attendance requirement shall be that a candidate should have attended at least 75% of the lectures delivered and tutorials held taken together as well as 75% of practical and sectionals from the date of his/her admission.

2. Condonation of shortage of attendance:

The shortage of attendance up to the limits specified below may be condoned on valid reasons:

- i) Up to 6% each subject plus 5 attendance in all the aggregate subject/papers may be condoned by the Vice-Chancellor on the recommendation of the Dean/Director/principal for undergraduate students and on the recommendation of the Head of the Department for the post-graduate classes.
- ii) The N.C.C./N.S.S. cadets sent out to parades and camps and such students who are deputed by the University to take part in games, athletic or cultural activities may, for purpose of attendance, be treated, as present for the days of their absence in connection with the aforesaid activities and that period shall be added to their subject wise attendance.

Note: 1. The attendance for supplementary will be counted from the date of their admission

2. In the Faculty of Engineering the attendance requirement will apply to each semester.

However, in case of practical where examination is not held at the end of the first semester but the end of the second semester, attendance will be counted at the end of the second semester taking into account attendance put in both the semesters (i.e., first and second) taken together.

MEDIUM

Candidates are not allowed to use any medium except Hindi or English for answering question papers.

For answering papers in the subjects of English/Hindi the medium will be corresponding language only.

For answering question papers in the subject of Sanskrit the candidates are allowed to use Sanskrit, Hindi or English unless specified otherwise.

GEOGRAPHY

M.A. (Previous) Examination 2022

M.A. (previous) examination will consist of 500 marks. There will be four theory papers of 100 marks each and a practical of 100 marks.

Candidates will be required to pass separately in theory and practical examinations.

Candidate's choice among the optional papers and groups would be restricted only to those paper or groups for which regular teaching is provided in the department.

Use of map stencils (political outline only). Log tables and calculators are allowed in the examination.

Paper I advanced physical geography

Paper II economic geography

Paper III evolution of geographical thought

Available (IV-1 or 2) others are not available

Paper IV

1. Geography of Arid Lands

Or

2. Advance and systematic and Regional Geography of U.S.A

3. Japan

4. Monsoon Asia (except India)

5. Western Europe

6. South-western Asia

7. Three southern Continents

8. Neighboring countries of India

Paper V Cartography and Project/ Instrumental Survey of A Reputed Institute/ Geographical

Tour

M.A. (Final) Examination 2023

M.A.(Final) Examination, will consist of 500 marks, there will be four theory papers of 100 marks each or three theory paper of 100 marks each and a dissertation of 100 marks on an approved topic-evaluation of dissertation will be done by two external examiners and average marks will be a awarded. There will be no viva-voce examination. There will also be a practical examination of 100 marks.

Candidates will be required to pass separately in theory and practical examination.

Candidate's choice among the optional papers and groups would be restricted to the papers or groups for which regular-teaching is provided in the department.

Use of map, stencils (political outline only), log tables and calculators are allowed in the examination.

Paper VI Research methodology

- Paper VII Geography of India
Paper VIII Geography of tourism

These are not available

1. Advanced Geomorphology
2. Bio-Geography
3. Applied Geography and Regional Planning
4. Pedology
5. Climatology and Meteorology
6. Quantitative Methods in Geography
7. Aerial Photo-Interpretation and Remote Sensing

Available (IX-1 or 2) others are not available

Paper- IX

1. Urban Geography
or
2. Geography of Population
3. Geography of land use
4. Political Geography
5. Cultural Geography
6. Industrial Geography
7. Transportation Geography
8. Geography of Rural Development

Paper- X Cartography, Surveying (Practical) and Socio- Economic Survey of Village

M.A. (Previous) Examination 2022

Note: Each theory paper is divided in three parts i.e. Section-A, Section-B, and Section-C.

Section-A: Will consist of 08 compulsory questions. There will be two questions from each unit and answer of each question shall be limited up to 30 words. Each question will carry of 2 marks.

Section-B: Will consist of 08 questions. Each unit will be having two questions; students will answer one question from each unit. Answer of each question shall be limited up to 250 words. Each question will carry 6 marks.

Section-C: Will consist of total 04 questions having one questions from each unit. Students will answer any 03 question and answer of each question shall be limited up to 500 words. Each question will carry 20 marks.

PAPER I

ADVANCED PHYSICAL GEOGRAPHY

Unit 1 : Interior of the earth, Isostasy, distribution of continents and ocean basins;

Continental drift; Revival of continental drift theory and plate tectonics, Earth movements, folding and faulting; mountain building, earthquakes

Unit 2 : Work of sub-aerial denudation: Erosional and depositional work of rivers, winds, glaciers, marine erosion; Karst topography; Geomorphic cycle

Unit 3 : Isolation, heat balance of the earth and distribution of temperature, distribution of atmospheric pressure and winds; Forces controlling the atmospheric circulation, Jet streams; characteristics,

types and origin of air masses and fronts; Atmospheric disturbances, climatic classification-
Koppen Thronthwaite and Trewartha; modified Koppen's classification

Unit4 : Oceanography : Ocean bottom relief, salinity, temperature and density of
water masses, ocean currents, coral reefs, tides, ocean deposits.

RECOMMENDED READINGS

Critchfield : General climatology

Davis, WM, : Geographical Essays: 2nd ed.

Jeffereys, H. : The earth

Jenkins, J.T. : A Text-Book of Oceanography

Miller, A.A. : Climatology

Monkhouse, F.J. : The principal of Physical Geography

Murray, J. : The ocean

Patterson, S. : Introduction to meteorology

Seeman, A. : Physical Geography

Stress, J. : The Unstable Earth

Strahler, A.N.: Modern Physical Geography

Thornbury, W.D.: Principles of Geomorphology

Worcester, P.G.: A text-book of Geomorphology

Wooldrigan & Morgan: A text book of Geomorphology

Kaushik, S.D. : Bhu-Akriti-Vigyan, Rustogi. & Co., Meerut, 1983

Savindra Singh : Bhu-Akriti-Vigyan, Tara Publication, Varanasi, 1976

Dayal, P. : Bhu- Akriti Vigyan, Shukla Book Depot, Patan, 1982

PAPER II

ECONOMIC GEOGRAPHY

Unit 1. : Economic geography: scope, content and recent trends; relation with allied
social sciences; approaches and its study; decision making; natural resources
classification and conservation

Unit 2 : Agriculture: spatial distribution of major food and cash crops; world's major
agricultural systems; Von Thunen's' theory of agricultural location; Whittlesey's agricultural
regions; world food problem
Industries: Iron and Steel, Cotton textile and Chemicals; Industrial regions, Lake regions
(U.S.A.), Ruhr (West Germany) and manufacturing belts of Japan

Unit 3 : Minerals: Iron-ore, Copper and Bauxite-distribution, production and supply
problems
Energy resources: Coal, Hydro-electricity, Petrol and Nuclear; Non-Conventional sources of
energy; energy crisis

Unit-4. : World trade: determinants, barriers, composition and changing trends;
globalization
Transport : Major oceanic and inland waterways; transportation costs and location of economic
activities; role of market centers in trade development

RECOMMENDED READINGS

Berry, J.B.L. Cooking, E.C. & Ray, D.M. : Economic Geography, Prentice Hall, 1987

Alexander, J.W. and Gibson: Economic Geography, Prentice Hall of India, New Delhi, 1988

Thoman & Corbin: The Geography of Economic Activity, McGraw Hill, N.Y.

- Lloyd Perter E. and Peter Dicken : Location in Space- A Theoretical Approach to Economic Geography, Harper and Row, London and N.Y.
- Janaki, V.A. : Economic Geography, Concept Publishing Co., New Delhi, 1985
- Robinson, H. : Economic Geography, Mac Donald and Evans, 1979
- Jarret, H.R. : A Geography of Manufacturing, MacDonald and Evans, 1977
- Singh, K.N. : Arthik Bhugol Ke Mool Tatva, 1993
- Boesch, H. : A Geography of World Economy, D. Van Nostrand Co., New York, 1964
- Chapman, J.D. : Geography and Energy, Longman, London, 1989
- Griggs, DB. : The Agricultural Systems of the World, Cambridge University Press, New York, 1974
- Hartshorne, T.N. and Alexander, J.W.: Economic Geography, Prentice Hall, New York, 1988
- Millar, E. : Geography of Manufacturing, Prentice Hall, New York, 1962
- Thomas, R.S. : The Geography of Economic Activities, McGraw Hill, New York, 1962

PAPER III

EVOLUTION OF GEOGRAPHICAL THOUGHT

- Unit 1 : Geography in ancient period: Contribution of Greeks and Arab geographers;
Dark age in Geography, Renaissance in Geography
- Unit 2 : Geography in pre-modern and modern classical period; Geography in the 18th
and 19th centuries with special reference to the contribution of Kant,
Humboldt, Ritter and Ratzel ; Recent trends in Geography
- Unit 3 : Schools of Geographic thought: German, French and Russian School of Geography; Dichotomies
in Geography, Physical vs. Human, Regional vs. Systematic, Historical vs. Contemporary,
Development of Geography in India
- Unit 4 : Concept of Areal Differentiation and landscape; Regional and Systematic methods,
Environmental Determinism, Possibilism and Human ecology: General Ideas of Hypotheses,
Theories in Geography

RECOMMENDED READINGS

- Ali, S.M.: Geograhy of Puranas
- Bunbury, E.H. : A History of Ancient Geography, 1955 (in two volumes)
- Chatterjee S.P. : 50 years of Science in India, Development of Geography, Indian Science Congress Association, 1964.
- Dickinson: Makers of Modern Geography, 1970
- Dickson and Howarth : The Makers of Geography
- East and Wooldridge : The Sprit and purpose of Geography
- Freeman: A Hundred years of Geography
- James , P.E. : American Geography- Inventory and Prospect
- James, P.E. : All possible World – A study of Geographical ideas, Indian Edition, Sachin Publication, Delhi 1980
- Sykes, P. : A History of Exploration, routledge and Kegan Paul, London, 1954
- Tylor, G. (ed.) : Geography in the 29 Century Wooldridge: Geographers as a Scientist
- I.C.S.S.R. : A survey of Research in Geography, Popular Prakashan, Bombay, 1972
- Board, C. Chorley, R., Hagget, P. and Stoddort, D.R.(ed.): Progress in Geography, Arnold, London, 1969-1993
- Dovisi, Wayne, K.D.(ed.) : Conceptual Revolution in Geography, University of London Press, 1972
- UNESCO : Source Book of Geography, Thompson press, UNESCO, Paris, 1965
- Rex Welford : Game in Geography, Logmans, 1972

Harvey David: Explanations in Geography

O.H.K. Spate : Let us enjoy geography

Kaushik, S.D. : Bhaugolik Vichardharayan avam Vidhi Tantra, Rastogi Pub., meerut, 1982

Haggett. : Geography – Modern Synthesis, Harper, 1983(Third Edition)

PAPER IV

1. GEOGRAPHY OF ARID LANDS

Unit 1 : Meaning and causes of aridity; Indices of Aridity; Delimitation of Arid lands of the world on the basis of Indices; Climate; Topography, Soils, Water resources and Minerals of the Arid lands of the world

Unit 2 : Desertification : Extent of desertification in the world; causes of desertification: parameters of desertification measures to control desertification

Unit 3 : Detailed study of arid regions of Israel, Egypt and the western arid interior of the U.S.A. with reference to Physiography, Soil, Agriculture, Irrigation and land reclamation

Unit 4 : Great Indian Desert: Origin, Physiography, Climate, Agriculture, Irrigation, Livestock raising and population

RECOMMENDED READINGS

Amiran, D.H.K. & Wilson, A.W. (ed.) : Coastal Deserts- Their Natural and Human Environments, The University of Arizona Press, Tucson, 1973

Arnon, I : Crop Production in Dry Regions; Vols. I & II, Leond and Hill, London, 1972

Bhandari, M.M.: Flora of the Indian Desert, Scientific Publishers, Jodhpur, 1978

Biswas, M.R. & Biswas, AX. : Desertification, Pergamon Press, New York, 1982

Chouhan, T.S. : Desertification in the World and its Control, Scientific Publishers, Jdhpur, 1997

Drenge, H.E. : Desertification of Arid Lands, Harwood Academic Publishers, 1983

Goudie, A. & J. Wilkinson: The Warm Desert Environment, Cambridge University Press, Cambridge, 1977

Hills, E.S.(ed.): Arid Lands, UNESCO. London, 1966

Hillel, D. : Negev Land, Water and Life in a Desert Environment, praegar, N.Y. . 1982

Heathecote: Arid Lands- Their Uses and Abuses, Longmans, 1964

ICAR: Desertification and its Control, New Delhi, 1977

Jeans, D.N. : Australia-A Geography, rouledge and Keganpaul, London, 1978

Mann, H.S. (ed.) : Arid Zone Research and Development, Scientific Publishers, Jodhpur, 1980

Matlook, W.G.: Realistic Planning for Arid Lands, Harwood Academic Pub. 1981

Mann, H.S.(ed.) Scientific Reviews on Arid Zone Research, Scientific Publishers, Jodhpur, 1981

Meginnies, W.G., B.J. Godman and P. Paylore : Deserts of the World University of Arizona Press, 1968

Ministry of Food and Agriculture: Proceedings of the symposium on the Problems of Indian Arid Zone, New Delhi, 1967

Mishra, V.C.: Geography of Rajasthan, NBT, New Delhi, 1967

National committee for Geography Symposium on Arid Zone, Calcutta, 1968

Nirdov: The Semi-Arid World: Man in the Fringe of the Desert ; Longmans, London, 1974

Omi, B. & E. Efrat: Geography of Israel, Israel Translation, Jerusalem, N.P. Lydolph, P.A.: Geography of U.S.S.R.

Proceedings of the Symposium on the Rajputana Desert, Bull, 1. National Institute of Sciences, New Delhi, 1952

Proceedings of the symposium on the Problems of Indian Arid Zone Ministry of Food and Agriculture, New Delhi, 1971

Roonwal, M.L. : Natural Resources of Rajasthan, Vol. I and II. The University of Jodhpur, 1977

Sharma, R.C. : Settlement Geogrpahy of Indian Desert, New Delhi, 1970
 Sharma, R.C. (ed.) Resource Management in Dry Lands (Rajasthan a example) Rajesh Publication, Delhi
 Singh R.L.(ed.) : A Regional Geography of India, National Geographical Society, Varanasi, 1977
 Stamp, LD.: Africa, John Wiley & Sons, London UNESCO Publications:
 A History of Land use in Arid Regions(ed. By L.D. Stamp) Vol. XVII
 Problems of the Arid Zone, Proceedings of the Paris Symposium, Vol. VII
 Walton, K: The Arid Zones, Hutchinson Univ. Library, London, 1969
 White, G.E. (ed.) : The future of Arid lands, Publication no. 43, M.A. Associ. Adv. Scin., Washington, 1956.

2. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY U.S.A.

Unit 1 : Physiography; Physiographic regions, Climate; Climatic regions, Soil-Soil
 Groups, Natural Vegetation.
 Unit 2 : Agriculture Crops: Corn, Cotton, Wheat, Tobacco, Agriculture Belts;
 Minerals: Iron Ore, Copper, Manganese and Atomic Minerals
 Unit 3 : Power resources: Coal, Petroleum and Hydroelectricity, Location and
 distribution of Industries: Iron and Steel, Ship Building, Cotton Textile,
 Automobile and Chemical Industries, Transport: Rail and Inland Waterways
 Unit 4 : A detailed study of Major Geographical Regions

RECOMMENDED READINGS

Atwood,E(ed.): The Physiographic Provinces of North America
 Fenneman, N.M.: Physiography of Wstern United States
 Green, C.M. : American Agriculture
 Loomix, F.B.: Physiography of the United States
 Monkhouse, FJ & H.R. Cair, North America, Longman
 Peterson, J.H.: North America, London
 White, C.L. and Foscuie, F.J.: Regional Geography of Anglo-America Watson, W.: North America, Methuen,
 London

3. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY JAPAN

Unit 1 : Physiography: Climate, Soil and Natural Vegetation
 Unit 2 : Major Agricultural produce, Agricultural regions, Important minerals
 Unit 3 : Major power resources; Locations and distribution of important
 industries, Industrial regions; Transportation
 Unit 4 : Detailed study of major geographical regions.

RECOMMENDED READINGS

Trewatha, GT : Japan Physical, Cultural and Regional Geography, 1953
 Prue Dempster : Japan Advances, Methuen and Co., London
 Keob: East Asia
 Ackerman, E.A. : Japan's Natural Resources

4. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY

MONSOON ASIA (EXCEPT INDIA)

Unit 1 : Meaning and Delimitation of Monsoon Asia, Physiography, Climate, Soil and Natural vegetation

- Unit 2 : Major Agricultural Crops of Monsoon Asia: Rice, Tea, Coffee, Rubber, Coconut; Agricultural regions of China
- Unit 3 : Important Minerals of Monsoon Asia: Coal, Tin and Petroleum; Industrial development and important industries of Japan : Iron and Steel, Cotton Textile and Automobile
- Unit 4 : Major Geographical regions of China and Japan

RECOMMENDED READINGS

- Cressey, G.B. : Land of 500 Million- A Geography of china
 Cressey, G.B. : Asia's Land and Peoples
 East, W.G. and Spate, O.H.K. : The changing Map of Asia
 Peterson, A.D.C. : The Far East
 Spencer, J.E. : Asia , East by South
 Stamp, L.D. : Asia
 Trewartha, G.T. : Japan – Physical, Cultural and Regional Geography, 1953
 Robinson : Monsoon Asia
 Dubby, E.H.G. : Monsoon Asia
 Fisher, C.A. : South East Asia-Social, economic And Political Geography
 Ginsburg, N. : The pattern of Asia
 Rawson, R.R. : Monsoon Asia
 Robequain, C. : M.alaya, Indonesia, Borneo and Philippines
 Nigam M.N. and
 Garg B.L. : Monsoon Asia
 Kashi Nath Singh And Jagdish Singh : Monsoon Asia

5. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF WESTERN EUROPE

- Unit 1 : Physiography, Climate, Soil and natural vegetation
- Unit 2 : Major agricultural produce, Agricultural regions; Important Minerals
- Unit 3 : major power resources; Location and distribution of important industries, Industrial regions; Transportation
- Unit 4 : Detailed study of major geographical regions

BOOKS RECOMMENDED

- Cole, J.A. : Italy, 1964
 Demangeon, A. : the British Isles.
 Dickinson, R.f. : The Regions of Germany
 Elkin, T.N. : Germany
 Freeman, T.V. : Ireland
 Houston, J.M. : A Social Geography of Europe
 Hoffman, G.w. : A geography

Labrode, E.D. : Western Europe, 1955
Moratone, e. : Geographical Regions of France
Mead, WR. : An Economic Geography of Scandinavia and Finland
Milward, Roy: Scandinavia Lands, 1960
Monkhouse, F.J.: Western Europe
More jesper: F.J.: The Land of Italy
Newbiggin, M.I. : Southern Europe
Siegfried, A : Switzerland-A Regional Geography
Shackleton, M.R. : Europe
Smaith, : An Economic Geography of Britain
Stamp, L.D. and Beaver, S.S.H. : the British Isles
Stamp, L.D.: The land Of Britain Its use And Misuse

6. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF SOUTH WEST ASIA

Unit 1: Physiography; Climate, Soil and Natural vegetation

Unit 2: Major agricultural produce, Agricultural regions, Important minerals

Unit 3: Major power resources; Location and distribution of important industries; Industrial regions;
Transportation

Unit 4: Detailed study of major geographical regions

RECOMMENDED READINGS

Beaumont, P.G.H., Blake, H. and Wagstaff: The Middle- East Geographical. Study, John Wiley
London, 1977

Fisher, W.A.: Middle East, Methuen, London

Stamp, L.D. : Asia, Methuen, London

7. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF THREE SOUTHERN CONTINENTS

Unit 1: Physiography; Climate, Soil and Natural vegetation

Unit 2: Major agricultural produce, Agricultural regions, Important minerals

Unit 3: Major power resources; Location and distribution of important industries; Industrial
regions; Transportation

Unit 4: Detailed study of major geographical regions

RECOMMENDED READINGS

Carlosn: Latin America

Colin Legum: Africa-A Hand-book of the Continent, Asia Publishing House, Bombay

Fitzgerald, W. : Africa

Stamp, L.D. : Africa – Study in Tropical Development, Jonh Wiley and Sons, New York

Siley, A. : Africa – Social Geography, Gerald Duckworth and Co. Ltd. , London

Shanhan : South Amrica – An Economic And Regional Geography, Methuen

8. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF NEIGHBOURING COUNTRIES OF INDIA

- Unit 1 : Physiographic and climate of Pakistan and China, Soil and Natural vegetation of Bangladesh and SriLanka
- Unit 2 : Major agricultural production and agricultural regions of China And Pakistan, Population of Bangladesh
- Unit 3 : Important minerals of China, Important Industries of China And Pakistan, Industrial regions of China and Bangladesh
- Unit 4: Detailed study of major geographical regions of China, Pakistan, Bangladesh and SriLanka

RECOMMENDED READINGS

- Stamp, L.D. : Asia
- Spate, O.H.K. : India and Pakistan
- Rasid, M. : Bangladesh
- Robinson: Monsoon Asia

PAPER V

CARTOGRAPHY AND PROJECT /INSTRUMENTAL SURVEY OF AN REPUTED INSTITUTE/ GEOGRAPHICAL TOUR (PRACTICAL)

Teaching in Geography Practical shall be imparted in groups of 15 students.

Out of 100 marks assigned for geography practical, 60 marks are reserved for Laboratory Work Test, 10 marks for Project report & 10 marks for viva on project report *OR* instrumental survey of a reputed institute *OR* Geographical Tour (For every 15 students one teacher shall accompany the party), 10 marks for the evaluation of record book and 10 marks for viva on record book.

Laboratory Test: Scheme and nomenclature of Survey of India topographical maps, interpretation of topographical sheets of typical regions, interpolation of contours, methods of determination of intervisibility

Profiles: Serial, Superimposed, composite, projected, transverse and longitudinal; usefulness of profile in studying landforms spatial and temporal angles

Methods of slope analysis of C.K. Wentworth, G. H. Smith and Henry and Raisz, Area-height diagram, Hypsometric curves, Drainage density, orders and confluences

Map Projections; Projections and their classification; simple conical equal area (Lambert's Projection), Bonne's Projection, Polyconic, International Mercators, Gall's Stereographic, Gnomonic Zenithal (Polar and Equatorial cases), Orthographic Zenithal(Polar and Equatorial cases) Sinusoidal (Normal and Interrupted), Mollweide (Normal and Interrupted), Choice of Projections

Statistical Methods: Classification and Tabulation of Statistical data, Frequency Distribution and graphs, Measures of Central tendency (Arithmetic mean, geometric mean, median and mode; Measures of dispersion (Quartiles mean deviation and standard deviation), Variability Indices

RECOMMENDED READINGS

Monkhouse, FJ and Wilkinson, H.R. : Maps and Diagrams, Methuen & Co., London
Raisze, E. : General Cartography, McGraw Hill, New York, 1960
Strees, J.A. : Maps Projections
Gregory, S : Statistical Methods and the Geographers, Methuen & Co., London, 1971
Singh R.L. : Elements of Practical Geography, Kalyani Publishers, New Delhi, 1979
Robinson, A.H. : Elements of Cartography, Chapman and Hall, London
Lawrence, G.R.P. : Cartographic methods, Methuen & Co., London 1971
Singh R. and Kanujia, L.R.S. : Map Work and Practical Geography, Allahabad
J. Kellaway : Map Projections

PROJECT REPORT /GEOGRAPHICAL TOUR

The project will be selected by candidates in consultation with the Head of the Department and the study report, duly approved by the teacher(s) concerned, is to be submitted along with the Practical Record.

The geographical tour and study and field tour or execution of typical areas with particular attention to anyone of the following aspects : Structure, terrain and geomorphology; Drainage and river valley development; Vegetation forms, Agricultural Industrial land use; Communication, Regional synthesis and analysis of physical and cultural landscape

M.A. (Final) Examination 2023

Note: Each theory paper is divided in three parts i.e. Section-A, Section-B, and Section-C.

Section-A: Will consist of 08 compulsory questions. There will be two questions from each unit and answer of each question shall be limited up to 30 words. Each question will carry of 2 marks.

Section-B: Will consist of 08 questions. Each unit will be having two questions; students will answer one question from each unit. Answer of each question shall be limited up to 250 words. Each question will carry 6 marks.

Section-C: Will consist of total 04 questions having one question from each unit. Students will answer any 03 question and answer of each question shall be limited up to 500 words. Each question will carry 20 marks.

PAPER VI

Research Methodology

Unit 1: Meaning, objectives, types, significance and ethic of research, Problems of geographical research, Identification of problematic areas, Sources and natures of data to be used, Preparation of questioner, Basic techniques of collecting primary data through interviews, Hypothesis and Preparation of research projects and writing of reports, Preparation of field reports, How to write thesis

- Unit 2: Spatial data classification and sampling problems; Need for sampling, types of sampling, sample size and sampling area, Selected techniques of spatial analysis, methods of measuring concentration and dispersal of economic activities, Nearest Neighbour analysis, Regional interaction analysis.
- Unit 3: Gravity potential, Inter-regional flow-analysis, Methods of Delimiting Regions, Economic Regions, Industrial Regions, Planning Regions, Agricultural Regions, Regional Population Analysis, Population Projection, Population Migration, Network Analysis, Techniques of Urban Analysis with reference to land use
- Unit 4: Population and Hinterland relationship, delimiting sphere of city influence, determining of core and marginal areas, Techniques of Map Analysis, Morphometric analysis, Drainage basin analysis, Slope analysis, Analysis of Biogeochemical cycles, Integrated Area Development Planning, Fundamentals of Computers:- Operating Systems, Use of Software(MS office/Auto CAD),Internet uses

Books Recommended:

1. Worthing ten and Gant: Techniques of Map Analysis.
2. King, C.A.M.: Techniques of Geomorphology.
3. Hoyle,B.S.(Ed.):Spatial Aspects of Development.
4. Misra,R.P.,(Ed.):Regional Planning, Concepts, Techniques, Policies and Case Studies,1969.
5. Isard and Cumberland: National Economic Planning 1961.
6. Mukerjee,R.K.: Planning the country side.
7. Stamp,L.D.: Applied Geography.
8. Stampe,L.D.: Our Development World.
9. Freeman: Geography and Planning.
10. Prakasa Rao: Regional Planning.
11. Chapin,F.S.: Urban Land Use Planning.
12. Graham,F.H.Natural Principles of Land Use.
13. Hagget Peter: Geography A Modern Synthesi.
14. Hagget and Chorely: Models in Geography
15. Kerlinger Fred. N. : Foundations of Behavioral Research
16. K.L. Narasimha Murthy : Geographical Research
17. Najma Khan: Quantative methods in Geographical Research
18. Young, P.V. : Scientific Social Survey and Research.

PAPER VII

GEOGRAPHY OF INDIA

- Unit 1 : Major terrain units of India and their characteristics; Drainage systems; Origin and Mechanism of Indian Monsoon; Climatic divisions; Soil and forests-their types, distribution and conservation
- Unit 2 : Population-growth, distribution and density; Population problems and policies; Urbanization-growth trends and causes; Population resource regions of India
- Agriculture-main characteristic and problems, Agricultural regions; Major Irrigation schemes-Damodar, Bhakra Nagal and Chamal
- Unit 3 : Major minerals (Iron-ore, Manganese, Mica and Copper,) and Power

Resources (Coal, Petroleum, Hydro-electricity and Nuclear)- their distribution, reserves, production and conservation
Major Industries (Iron and Steel, Cotton Textile, Sugar, Cement and Paper) -their localization factors, spatial patterns and problems, Industrial regions

Unit 4 : Transportation and trade-different modes and their functional significance;
International trade composition and trends; planning regions of India

RECOMMENDED READINGS

Choudhary, M.R. : An Economic Geography of India, Oxford and IBH Publishing Co., New Delhi, 1976
Chouhan, T.S. : Bharat Ka Bhugol, Vigyan Prakashan, Jodhpur, 1997 Nag. Pub. And S. Sengupta : Geography of India, Concept Publishing Co., New Delhi, 1992
Sharma T.C. : and O. Coutinho : Economic and Commercial Geography of India, Vikash Publishing Pvt. Ltd. , New Delhi, 1993
Singh J. : India-A Comprehensive Systematic Geography, Gyanodaya Prakashan, 234, Daudpur, Gorakhpur, 1995
Spate, O.H.K. and A.T.A. Learmouth : India, Pakistan and Ceylon, Methuen & Co., London, 1967
Ramamoory and Gopalkrishan : Geography of India, Jawahar Publishers and Distributors, New Delhi, 1996
Tirtha, R. : Geography of India, Rawat Publication, Jaipur, 1996
Sharma, R.C. : Reading in General Geography and Geography of India, Jawahar Publishers and Distributors, New Delhi, 1992
Mamoria, C.B. : Economic and Commercial Geography of India, Shiva Lal Agarwal & Co., Agra, 1986
Despande, C.D. : India- A Regional Synthesis, New Delhi, 1996
Dutta, R. and K.P., Sundkram : Indian Economy
Tiwari, R.C. : Geography of India, Prayag Pustak Bhawan, Allahabad, 2003

PAPER VIII

GEOGRAPHY OF TOURISM

Unit 1 : Tourism : Growth of travel through the ages, growth and development of modern tourism International organizations and tourism
Unit 2 : Elements of Tourism : Economic and social significance of tourism, Domestic and Foreign tourism, Tourism transport and accommodation
Unit 3 : Tourism in India : A land for all seasons; places of tourist interest, Cultural tourism, Problems and facilities, Role of Indian Tourism Development Corporation
Unit 4 : Tourism in Rajasthan : Salient Features of desert and wild life of Rajasthan, Survey of the places of tourist interest; Cultural Heritage of Rajasthan, Fairs and Festivals, A study of internal and foreign tourist influx

RECOMMENDED READINGS

Robinson, J.H. : A Geography of Tourism, Macdonald and Evans Ltd.
Bhatia, A.K. : Tourism Development: Principles and Practices, Sterling Publishers, New Delhi(1982)
Nagi, J.N. : Tourism and Hostelling: A worldwide Industry, Gitanjali Publishing House, New Dehli
Robinson, H. : Geography and Tourism, Macdonald and Evans, New York(1976)
Bhatia, A.K. : Tourism in India-History and Development, Sterling Publishers, New Delhi
Ram Acharya : Tourism in India, National Publishers, New Delhi
Dass Manoj : India- A Tourist Paradise, Sterling Publishers, New Delhi
Crowthor, Geoff Raj Prakash and Wheeler Tony : India- A Travel- Survival Kit Lonely Plant Publications, Australia

Dharampal : Idia- The Land People, National Book Trust, New Delhi
Rathore, G.S. : Marwar Ki Sanskratic Dharohar, Sudha Prakashan, Jodhpur
Seth, D.N. : Successful Tourism Management, Sterling Pub. Pvt. Ltd., New Delhi
Kaul, R.N. : Dybaminsm DfTourism, Vol, 1,2,3, Sterling Pub. Pvt. Ltd., New Delhi

PAPER VIII

(1) ADVANCED GEOMORPHOLOGY

- Unit 1 : Earth as a member of the solar system; main theories regarding the origin of the Earth Surface of the earth, distribution of land and sea; Isostasy and its bearing on surface configuration, Materials of the earth's crust: Minerals and rocks, tow fold classification, Knowledge of the more important rock forming minerals like quartz, feldspar, amphiboles, pyroxene, carbonates, uiro-noxide in as far as they lead to better understanding of the rocks; Model of formation and structure associated with rock science, features of important rock types.
- Unit 2 : Geological structure : Dip, Strike, Folds, formation of the earth's crust, joints, faults, tensional and compressional forces and topographic effects
Geographical time scale: Basis of division, standard time scale and the Indian equivalence, elementary knowledge of Indian stratigraphy : main divisions, geological distribution and economic importance
- Unit 3 : Landforms : Classification into first, second and third order, constructional and destructional land forms and Geomorphic process : weatering, rivers, gournwater, wind, glacier, waves, currents and organisms; Geomorphic unit: simple structures-plateaus and karsts, complex structures-domes, fold mountains, faulted block mountains, shields and their structures.
- Unit 4 : Cycle concept in geography- development of the fluvial cycle in young and old lands, dome and fold structures, interruptions of the fluvial cycle and their consequences, Davisian and Walter Penck system; Geomorphic cycle in deserts, limestone area, glaciated lands, volcanic plains and platueaus, domes and mountains; Evolution of relief in volcanic areas, Coastal formserosional and, constructional progradation and retrogradation, mountains: origin, development, dissection and destruction

RECOMMENDED READINGS

Branson, Tarr And Koller : Introduction to Geology
Cotton, C.A. : Geomorphology
Davis, C. : Coral Reefs
Englein Von, O.D. : Geomorphology,
Henderson, j. : Geology and its Relation to Landscape

Holmes, A. : Principles of Physical Geology
 Geikie, J. : Earth Sculpture
 Jefferys, H. : The Earth
 Kuenen, P.H. : Marine Geology
 Lobeck, A.K. and Amounts, S.M. : Geomorphology
 Stone, D.B. : Earth Science- the Earth We Live in
 Penck, W. : Morphological Analysis of Land Forms
 Steers, J. : The Unstable Earth
 Thornbury, W.D. and Umbgrove, J. : The Pulse of the Earth
 Wooldridge, S.W. and Morgan, R.S. : An Introduction to Geomorphology
 Door Kamp, J.C. and King, C.A.M. : Numerical, Analysis in Geomorphology, Arnold, 1973

PAPER VIII

(2) BIO-GEOGRAPHY

- Unit 1: Introduction: Characteristics of plants and animals, and their classification
 General bio-geography : Reproduction of plants animals, Dispersal, Struggle for existence, survival of the fittest, evaluation, Different theories
- Unit 2: Environment : Habitat Factor; origin and classification of soils, major soil groups of the world, water, salt and organic matter; climate factors, effect on plant life, world climatic, xerophytes, hydrophytes and epiphytes
- Unit 3: Animals : Environment, its effect on development and habitat;
 Habitat-terrestrial, Aquatic, arboreal; vertical distribution of animals in the sea, corals and coral reef; Zoo - geography regions of the world – oges
 (Australian, Malayan, Polynesian and Hawaiian regions), Actogecca (Ethiopian, African and Oriental with reference of India)
- Unit 4: Palaeographic distribution: Geological areas and their subdivision with special reference to the dominant plant and animal forms, present and past distribution and land connections Vegetation and floral regions, zoo-geographical belt of India, economic importance, Economic aspect of plants, animals and fauna with reference to food-stuffs, raw materials, domesticated animals

RECOMMENDED READINGS

Anderson, M.R. : Geography of Living Things
 Clark, G.R. : The study of Soils in the field
 Densereau, P. : Biogeography and Ecological Perspective
 Hall, A.D. & Russel, P.J. : Social Conditions and plant Growth
 Robinson, G.W. : Soils
 Jones, R.L. : Biogeography-Structure, Process, Pattern and Change within the- Biosphere,
 Hulton Educational Publication Ltd., Amersham, Bucks

PAPER VIII

(3) APPLIED GEOGRAPHY AND REGIONAL PLANNING

- Unit 1 : Definition, nature and content of geography; its emergence, evolution and

- recent trends; training, Problems in applied geography
- Unit 2 : Geographical applications of aerial photographic, remote sensing and field techniques; applied geomorphology, applied climatology; oceanography
- Unit 3 : Geographer's role in regional planning; growth of regional concept with particular reference to France, U.S.A. and U.K. ; Planning regions-delimitation and hierarchy; planning regions of India
- Unit 4 : River basin planning; Landuse planning; resource conservation; agricultural regionalization of India with emphasis on planning and problems

CORE BOOKS

- Jain, J.K. & Bohra, D.M. : Vyavharik Bhougol, Rajasthan Hindi Granth Academy, Jaipur, 1989
- Sadasyuk Galina & P. Sen Gupta: Economic Regionalisation, 1968, Government of India, Census, 1961

BOOKS RECOMMENDED

- Balchin, W.G.V. (ed.) : Geography – An outline for the Intending Student, Routledge and Kegan Paul, London, 1970
- Christanis (ed.) : Colloque International de Geographie Appliquee 3me Reunions de la Commission de Geographie Appliquee. D L' Union Geographic International (Liege Sept. 7-10-1967
- Dziewonski, K. et al. : Problems of Applied Geography, Polish Academy of Science, Geographical Studies No. 25, PWN-polish Scientific Publishers, Warszawa, 1961
- Daysh, C.H. et al. ; Studies in Regional Planning
- Dickinson, R.E. : City And Regional- A Geographical Interpretation, Routledge and Kegan Paul Ltd. , London, 1964
- Griffiths, J.F. : Applied Climatology, O.U.P. , 1968
- Gupta, R.K. : Planning Natural Resources, Navayug Traders, New Delhi, 1971
- Glikson : Regional Planning and Development
- Israd, W. : Methods of Regional Analysis, John Wiley & Sons, Inc. ; New York, 1960
- James, P.E. & Jones, C.F. : American Geography: Inventory and prospect, Assoc. Ame. Geogra, Syracuse University Press, 1964
- Keebie : Principles and Practice of Regional Planning
- Institute of British Geographers: Land Use and Resources studies in Applied Geography, Institute of British Geographers, London, Special Publication No. 1, 1968
- Leszki, L. et al. (ed.) : Problems Applied Geography II, Geographia Polonica, 3PWN-Polish Scientific Publishers, Warszawa, 1964
- Michel, A. Aloys and Nash, P.H. (ed.) : Proceedings of the Second International Meeting, Commission on Applied Geography, International Geographical Union, University of Rhode Island, Kingston, Rhode Island, 1966
- Nat. Inst. Sc. India : Role of River Valley Project in National Planning, Nat. Inst. Sc. India, New Delhi, Bull 40, 1969
- Strres, J.A. (ed.) : Field Studies in the British Isles, Nelson, London, 1965
- Steel, R.W. & R. Lawton (Ed.) : Liverpool Essays in Geography, Longmans Green & Co. Ltd. , London. 1967
- Stamp, L.D. : Applied Geography, J Penguin Books, A-449, Middlesex, 1963
- Stamp, L.D. : The Land of Britain – its Use and Misuse, Longmans, Green & Co. Ltd., London, 1962
- Stamp, L.D. : Geography of Life and death
- Singh, R.L. (ed.) : Applied Geography, Proc. Summer School (1966), Deptt. Geog., B.H.U., N.G.S.I., Varanasi-5 1968
- Stride, M. (ed.) : La Geographie Appliquee Dans Le Monde, Applied Geography in the World, Proc Prague Meeting (1966)
- I.G.U. : Commission on Applied Geography, Czechoslovak Academy of Science, Prague, 1969
- Sarfalvi, B. : Research Problems in Hungarian Applied Geography, Academia Kiado, Budapest, 1969

SELECTED JOURNALS

Applied Science and Development (Published under the revised title Applied Geography and Development since Vol. 18(1980), Institute for Scientific Co-operation, Tubingen, Federal Republic of Germany ,
Bainnual Journal Beginning with Vol/ I, 1973
Geoforum : Journal of Physical, Human and Regional Geography, Pergamon press ltd. , Oxford.,, A quarterly journal beginning with Vol. I, 1970
National Geography : Vol. 5, Special Issue, Geography and Planning, Department of Geograh, University of Allahabad, Allahabad, 1962

PAPER VIII

(4) PEDOLOGY

- Unit 1 : Formation of soil, inorganic, organic and geographic factors in soil formation, climate and soil formation, time factor in soil formation
Unit 2 : Process of soil formation: soil description, classification and nomenclature
Unit 3 : Soil Groups of the world; Soils of India; problems of soil erosion, with special reference to India, conservation of soil
Unit 4 : Detailed study of the soils of Rajasthan

RECOMMENDED READINGS

Bun ing. B.T. : The Geography of Soil, Hutchinson University Library, London , 1969
Joffe, J.S.C. : Pedology, New Brunswick, 2nd Edition, 1949
Moge, S. : Rajasthan Ki Mrida, Rajasthan Hindi Granth Academic, Jaipur, 1981
Ramann, C. : The Evolution aand Classification of Soils, Trans, C.L. Ohitilers Cambridge, 1928
Robinson,G.W. : soils- The Origin, Constitution and Classification, Mury, 1949
Lyon, T.L. and Associates : Nature and Properties of Soils, 1960
Jany, H : Factors of Soil Formation- A system of Quantitative Pedology, Mc Graw Hill, New York, 1941
Raychoudhuri : Soils of India, I.C.A.R., New Delhi, 1963 Rama Rao, H.S.V. : Soil Conservation in India, I.C.A.R. , New Delhi, 1962

PAPER VIII

(5) CLIMATOLOGY AND METEOROLOGY

- Unit 1 : Construction and use of chief meteorological instruments, physical process of atmosphere, radiation and head balance; condensation, stability and instability
Unit 2 : Origin, Characteristics and transformation of airmasses, fronts and cyclones, general circulation of atmosphere, weather forecasting, application of general principles of elementary physical, dynamical and synoptic meteorology to the study and classification of climates.
Unit 3 : Modification of atmosphere by surface feathers; evidence of climatic changes during geological and historical times and critical assessment of such evidences.
Use of field evidence to provide quantitative estimates of the extent and character of such chances, theories of causation of such changes.
Unit 4 : Reaction of man to climatic environment, modification of terrestrial climates by human agency

RECOMMENDED READINGS

Benstead, C.R. : The Weather Eve

Conard, V. and Plok, L.W. : Methods in Climatology
 Finch. V.C., Trewartha, G.T., Shearer and Candle: Eklementary Meteorology
 Geiger, H. : The Climate Near the Ground
 Haynes, B.G. : Techniques of Observing the Weather
 Hole, P.X. : The Restless Atmosphere
 Kendrew, W.G. : Climatology
 Middleton, W.G. : Meteorological Instruments
 Miller, A.A. : Climatology
 Petterson, S. : Introduction to Meteorology
 Petterson, S. : Weather Analysis and Forecasting
 Richi, H. : Tropical Meteorology
 Saucier , M.J. : Principles of Meteorological Analysis
 Sutton, O.G. : Micrometeorology
 Tannehill, I.R. : Hurricanes
 Trewartha, G.T.: An Introduction to Weather and Climate
 Trewartha, G.T.: The Earth's Problem Climate, 1962
 Walths, J.E.S. : Equatorial Air
 Willett H.C. & Sandars, F. : Descriptive meteorology
 Crowe, P.R. : Concepts in Climatology, Longmans, London, 1971
 McBoyle, G.(ed.) : Climate in Review, Houghton Mifflin Comp. Boston, 1973

PAPER VIII

(6) QUANTITATIVE METHODS IN GEOGRAPHY

- Unit 1 : Use of quantitative methods in Geography, Classification and tabulation of statistical data; Frequency distribution and graphs; Lorenz curve, Measures of central tendency and measures of dispersion .
- Unit 2 : simple and multiple correlation: Linear and nonlinear regression; Residuals from regression: Significance tests; Chi-square test; students 't' test and snedecotr's F-test
- Unit 3 : Sampling and its objective; Sampling techniques and their application to geographical problems; Estimates from sample, theory of probability and normal frequency distribution.
- Unit 4 : Multivariate analysis: Principal component analysis.

RECOMMENDED READINGS

Bunge, W. : Theoretical Geography and Studies in Geography, Ser, C. General and Mathematical Geography, No. 1, Department of Geography, University of Lund, C.W.K. Glerup, Lund, 1973
 Cole, J.P. and Kin, C.A.M. : Quantitative Geography, Wiley, 1968
 Dalton, R. and others: Correlation Techniques in Geography, George Phillip & Sons Ltd. London,1972
 Dixon, C. and B. Lech: sampling Methods for Geographical Research, CAMOG 17, Geo Abstracts, University of East Angila, Norwich, U.K., 1978
 Duncan, O.D. : Statistical Geography- Problems in Analysing Areal Data. 1961
 Elhance, D.N. : fundamentals of Statistics, Kitab Mahal, Allahabad, 1962
 Fesguon, R. : Linear Regression in Geography, CATMOG, 15, Geo Abstract University of East Angila, 1981`

Gregory, S. : Statistical Methods and the Geographers, Longman, London, 1978
 King, L.J. : statistical Analysis n Geography, Prentice Hall, 1960
 Monkhouse, F.J. and Wilkson, H.R. : Maps and Diagrams, B.I. Publication, Bombay, 1980
 Toyne, P. and Peter, T. Newby: Techniques in Human Geography, Macmillan, London, 1976
 Yeastes, M. : An Introduction to Quantitative Anlysis in Human Geography, MacGraw hill Book Company , New York, 1974
 Mohammed, A. : Statistical Methods in Geography, Rajesh Publications, New Delhi, 1977
 David Ebon: Statistics in Geogrpahy- A Practical Approach, 1980

PAPER VIII

(7) AERIAL PHOTO-INTERPRETATION AND REMOTE SENSING

- Unit 1 : Fundamental of aerial photography system : types of photography, types of stereoscopes; coverage and vision; geometry of aerial photographs, photographic resolution, parallax equation, flight planning, stereoscopic parallax
- Unit 2 : Development of air photo interpretation techniques elements interpretation
 Identification and mapping of natural and cultural land scape
- Unit 3 : Remote sensing techniques: meaning and scope, development; types of imagery; Elements of interpretation
- Unit 4 : Fundamental of digital image processing; geographic information system;
 Application of remote sensing in geography

RECOMMENDED READINGS

Burrough; P.A. : Principles of Geographical Information Systems for Land Resources Assessment, Oxford University, Clarendon Press, 1986
 Chouhan, T.S. and K.N. Joshi : Applied Remote Sensing and Photo-Interpretation, Vigyan Prakashan, Jodhpur, 1955
 Colwell, Robert, N. : Manual of Remote Sensing, I & II editions, Vol. I & II, American Society of Photogrammetry, 1983
 Jensen, J.R. : Introductory Digital Image Precessing : A Remote Sensing Perspective, Prentice Hall, new Jersey, 1986
 Lillesand, T.M. and Kiefer, R.W. : Remote Sensing and Image Interpretation, II edition, John Wiley and sons, 1987
 Wolf, Paul, K. : Elements of Photogrammetry(with air photo-interpretation an remote sensing) McGraw Hill Book co., 1974
 Karani, P.J. : Remote Sensing, ELBS. London, 1985
 Gautam, N.C. : SPGU Technology of Geography, NRSA, Hyderabad, 1994
 Survey of India: Photogrammetry : Chapter Twelve, S.O.I., Dehradun, 1972
 Singh. S. : Remote Sensing Technology, Scientific Publishers, Jodhpur, 1996

PAPER IX

(1) URBAN GEOGRAPHY

- Unit-1. : Meaning, scope and methods of approach in urban geography, origin and growth of cities from the earliest to the modern times, forces and processes of urban growth, Theories of urban structure
- Unit-2. : Urban morphology and land use pattern, City retail structure and delimitation of CBD, Residential land use, Urban population, Characteristics, Functional Classification of towns
- Unit-3. Location, spacing and size of towns, urban hierarchy; The Central Place

Theory, Rank-size rule, Growth Pole Theory

Unit-4. : Urban sphere of Influence- Methods and criteria of delimitation, Rural- urban fringe, Elements and principles of town planning, Law of Garden City.

RECOMMENDED READINGS

- Abercombie, P. : Town and Country Planning, Oxford University Press, London, 1961
- Alam, S.M. : Hyderabad-Secunderabad(Twin-cities) – A Study in Urban Geography, Allied Publishers, Bombay, 1965
- Bartholomew, H. : Urban Landuse, Harward University Press, Harward, 1932
- Berry B.J. L. & A. Pred : Central Place Studies-Bibliography of Theory Applications, Regional Science Research Institute, Philadelphia 1961
- Chorley, R.J. & P. Hagget : Socio-Economic Models in Geography(Part II and III or Models in Geography) Methuen, London, 1968
- Dickinson, R.E. : The West European City, Rutledge and Kegan Paul, London, 1964
- Gallion, A.B. & S.E. Isner : The Urban Pattern, City Planning and Design, D. Van Nostrand, Princeton, New Jersey, 1965
- Garnier, B.J. & G. Chabot : Urban Geography, Longmans Green and Co. Ltd., London, 1967
- Ghose, M. : Calcutta – A study in Urban Growth Dynamics, 1972
- Jackson, J.N. : Surveys for Town and Country Planning, Hutchinson University Press, Syracuse, N.Y. , 1954
- Jonson, J.N. : Urban Geogrphahy- An Introductory Analysis, Pergamon Press, 1967
- Mayer, H.M. and Kohn, O.P.(ed.) : Readings in Urban Geography, University of Chicago Press, Chicago, 1959
- Humford, L. : The city in History, Pehcan: 1966
- Murphy, R.S. : The American City an Urban Geography, McGraw Hill, N.Y. 1966
- King, I.J. & Golledge, R.G. : Cities, Space, and Behavior- The elements of
- Norgorg, K (ed.) : Proceedings of the I.G.U. Symposium on Urban Geography, John Wiley & Sons, 1975
- Putnom, R.G. FJ – Taylor and P.G. Kettle (ed.) : A Geography of Urban Places, Methuen, London, 1970
- Robson, B.T. : Urban Growth, Methuen, London, 1963
- Singh, R.L. : Banaras – A Study in Urban Geography, Nand Kishore & Sons, Banaras, 1965
- Singh O.P. : Urban Geography (in Hindi), Tara Publishers, Varanasi, 1979
- Smailes, A.E. : The Geography of Town, Hutchinson University Press, London, 1961
- Taneja, K.L. : Morphology of Indian Cities, 1971
- Taylor, T. : Urban Geography, Methuen, London, 1961
- Toyne, JP. And Peter Newby : Techniques in Human Geography; Macmillan, 1971
- Turner; R. (ed.) Indian’s Urban future, Oxford University Press, Bombay, 1962

PAPER IX

(2) GEOGRAPHY OF POPULATION

- Unit 1 : Nature and Scope of population geography; World population growth, distribution and density; Major population theories
- Unit 2 : Components of population growth, Trends and factor affecting fertility, mortality and migration in the world; Laws of Migration and Theories
- Unit 3 : Population structure of India and its characteristics; Sex and age structure, fertility and mortality; distribution, density and growth of population in India; Population problems and policies
- Unit 4 : Population Geography of Rajasthan: Distribution and density of population;

Sex-ratio; Rural and Urban population; Study of Scheduled Castes and Scheduled Tribes population of Rajasthan with Special reference to their distribution, literacy and welfare programmers

RECOMMENDED READINGS

Asha, A. Bhide and Mrs. Tara Kimitkar, : Principles of Population Studies; Himalaya Publishing House, Girgaon, Bombay
Ashish Bose & D. Gupta : Population Studies in India, Vikas Publishing House, Ansari Road, New Delhi
Agarwal, S.N. : India's Population Problems, Tata McGraw Hill, New Delhi
Chandra Shekar : Infant Mortality, Population Growth and Family Planning in India, London
Mamoria, C.B. : India's Population Problems, Ktab Mahal, Allahabad
Mehta, B.C. : Regional Population Growth : A Case Study of Rajasthan, Research Books, Tilak Nagar, Jaipur
Lal, S.K. & Nahar, U.R. : Higher Education of SC & ST in Rajasthan, Jain Sons, Publication, New Delhi
Purohit B.D.&S.D.Hand Book of reservation for SC& ST, jain sons publication,New Delhi
Singh,munshi hardaya: the castes of manivar, census report of 1891, book treasure, Sojati gate jodhpur

PAPER IX **(3) GEOGRAPHY OF LAND USE**

- Unit 1 : Influence of physical factors on land use, Study of soil with special reference to the physical and chemical properties of soil fertility and problems of soil erosion and soil conservation.
- Unit 2 : Climatic factors in Agriculture, variations and variability of climate, average and median rainfall in relation to Crop production
- Unit 3 : Social and institutional factors in land use, crop combination regions, agricultural regions.
- Unit 4 : Land use and land capability surveys in Britain, China, India and U.S.A.; Techniques of land use surveys in India and International Commission for World land Use. Surveys. Land use analysis and planning.

RECOMMENDED READINGS

Baker, G.E. and others : Agriculture in Modern Life
Buck, J.L.: Land Utilization in Chicago, 1937
Bennet, N.H. : Elements of Soil Conservation, New York, 1933
Clarke, G.R. : A Study of Soils in Field, London, 1961
Duckhan, A.N. : The Fabric of Farming
Garham, E.H. : Natural Principals of Land Use, New York, 1944
Klegez, K.H.W. : Ecological Crop Geography
Ranta Rao, M.S.V. : Soil conservation in India, J.C.A.R. 1962
Mighall, R.L. and Black, J.D. : International Competition in Agriculture
Raychoudhuri : Soil of India, Delhi, 1963
Russel, J. : World Population and food Resources, London, 1954
Shafi, M. : Land Utilization in Eastern Uttar Pradesh, Aligarh, 1960
Stamp, L.D. : The Land of Britian-Its Use and Misuse London, 1960
Tempony, H.and Crist, D.H.: An Introduction to Tropical Agriculture
Thirumalia, S.: Agricultural Problems and Policies, Bombay, 1955
Found, W.C.: A Theoretical Approach to Rural Land Use Patterns, Arnold London, 1973
Gautam, N.C. : Urban Land Use in Bikaner, Minaxi, 1978

PAPER IX
(4) POLITICAL GEOGRAPHY

- Unit 1 : Definition and scope of political geography : Development of political geography- Concept of Mackinder, Housofe Meinnin, Spykmen Hooson, and de Ceversky; political geography and geopolitics ; various approaches to the study of political geography functional approach, unified field theory, system analysis models
- Unit 2 : Elements of political geography- physical, economic and human The State emergence and structuring of state; unitary and federal states; elements of state-territory, population, organization and power, capital cities, ethnographic and racial problems, colonialism and nationalism
- Unit 3 : The nature, function and impact of frontiers and boundaries land locked states, electrol geography, contents and methods
- Unit 4 : Factor of power hood; world power; emergence of third world politics, geographical study of India and its neighbouring countires; the Middle East

BOOKS RECOMMENDED

- Weight, A.W. et al. : Principles of Political Geography, Appleton Century Craft, Inc., New York.
Crove ; Background to Political Geography.
H.Joe Bliz : Systematic Political Geography, John Wiley and Sons, New York Percy, jC.E. and Fifield, R.H.:
World Political Geography, Thomas V. Crowell Co., N.Y.
Horradin; J.F. : An Outline of Political Geography, Autree A. Knob., N.Y.
Sukhwal, B.L. ; Political Geography of India
Carson ; Geography and World Politics
Cohen, Saul, B., : Geography and Politics in a Divided World
Kasperson and Minghi : The Structure of Political Geography
Moodie, A.E., Geography Behind Politics
Prescot, J.R.V. : Political Geography

PAPER IX
(5) CULTURAL GEOGRAPHY

- Unit 1 : Nature, scope and contents M cultural geography; Evolution of cultural geography; Environment, culture and resources; Techniques and methods in cultural geography; Man's role as socio-cultural agent; Furture tasks for cultural geography
- Unit 2 : Analysis of world population in terms of ethnic, religious and language groups; World pattern of literacy
- Unit 3 : Cultural regionalization of the world : A Study of the Culture, World with special reference to new world revolution – Polar World; European Worlds, American World
- Unit 4 : Dry World, Oriental World, African World and Pacific World

RECOMMENDED READINGS

- Carter, G.F. : Man and Land – A Cultural Geography, Holt, Rinehart and Winstom, Inc. New York, 1968
De Blij, Harm, J. : Man Shapes the Earth – Topical Geography, Hamilton Publication Company, Santa Barbara, California, 1974
De Blij, Harm, J. : Human Geography- Culture, Society and Space, John Wiley and Sons, Inc., New York, 1977

- Dicken, S.N. and Pitts, F.R. : Introduction to Cultural Geography- A Study of Man and His Environment, Exrox College Publishing, Waltham, Massachusetts, 1970
- Dohrs, F.E. : Cultural Geography – Selected Readings, Dun-Donnelly Publishing Corporation, New York, 1967
- Eidt. R.C., Singhj K.N. and Rana, P.B. Singh (ed.) : Man Culture and Settlement, Kalyani Publishers, New York, 1977
- Haggett, P. : Geography A Modern Synthesis, Harper and Row, New York, 1975
- Jones E. (ed.) : Readings in Social Geography, Oxford University Press, London, 1975
- Jordon, T.G. and Rowtree, L. : The Human Mosaic – A Thematic Introduction in Cultural Geography7, Canfield Press, Harper and Row, New York, 1976
- Kariel H.G. and Kariel, P.F. : Explorations in Social Geography, Addison-Wesley Publishing Company, Inc. Reading, Massachusetts, 1972
- Kotars, John, F., and John, D. Nysteen ; Geography The Study of Location, Cultural and Enviornment, jMcGraw Hill Book Company, New York, 1974
- Phillbrick, A.K. :- The Human World, John Wiley and Sons. Inc., New York, 1967
- Raitz, Kari, B. : Cultural Geography on Topographic Maps, Hamilton Publishing Company, Santa Barbara, California, 1975
- Rolstung, F. : Outline of Cultural Geography, California Book Company, Berkely, California, 1963
- Russel, R.J.F.B. Kniffen and E.L. Pruitt ; Culture Worlds, the Max Million Company Ltd., London, 1969
- Saure, Carl O. : Agricultural Origins and Dispersal, The Domestication of Animals and Foods Stuffs, The M.L.T. Press, Massachuseets, 1970
- Sopher, David E. : Geography of Religions : Foundations of Cultural Geography Series, Prentice Hall Inc., Englewool Cliffs, New Jersey, 1967
- Spencer, E; & W.L. Thomas: Asia, East by South – A Cultural Geography Jon Wiley & Sons, Inc. New York, 1971
- Wagner, P.L. & M.W. Mikesell : Readings in Cultural Geography, The University of Chic age Press, Chicago, 1962
- Wagner, P.L. : The Human Use of Earth, The Free Press, New York, 1964.
- जैन, जे.के. एवं बोहरा, डी.एम. : विष्व का सांस्कृतिक भूगोल, ऐकेडेमिक पब्लिषर्स, जयपुर, 1983
- Prakasa Rao, V.L.S. : Urbanization in India, Spatial Dimensions concept Publishers, 1983

PAPER IX

(6) INDUSTRIAL GEOGRAPHY

- Unit 1 : Contents and scope of industrial geography: Locations of Industry: Factors of industrial location, Theories and concepts of industrial location- the least cost school, the market area school, the marginal location school and the behavioural school
- Unit 2 : The location pattern of selected industries: iron and steel, cotton textile, pulp and paper industry, petroleum refining, machinery and machine tools
- Unit 3 : The Locations pattern of selected industries: automobile industry, ship building industry, cement industry, aluminum industry
- Unit 4 : Manufacturing in selected regions: Kwanto plain, the Ural Region, the ruhr Basin, the New England Region, Bengal Bihar Industrial Belt

TEXT BOOKS

Reley R.C. : Industrial Geography, Charto and Winpuls, London
Smith, Daird, M. : Industrial Location, Wiley and Sons, New York
Miller, E.W. : A geography of Manufacturing Prentice Hall, New Jersey

RECOMMENDED READINGS

Jorred, A.R.: A Geography of Manufacturing, MacDonal and Evans Ltd. , London
Hunter, H.L. and Writght, A.J. : Factors of Industrial Location in Ohio, Columbus, 1969
Choudhary, M.R. : Indian Industries Development and Location, Calcutta, 197
Jarret, H.R. : Geography Manufacturing, MacDonal and Evans Ltd. London, 1964
Pounds, N.I.G. : The Geography of Iron and Steel
Smith W. : Geography of Location of Industry, Liverpool
Thoman, R.S. and Paltoh, D.H. : Focus on Geographic Activity, New York, 1964
Mountjoy, A.C. : Industrialization and Underdeveloped Counties, London, 1963
Howver, E.M. : The Location of Economic Activity, London, 1948
Alexander, J.W. : Economic Geography, Prentice Hall, New Jersey, 1963
Alexanderson, G. : Geography of Manufacturing, Prentice Hall, New Jersey, 1967
Bos, H.C.: Spatial Dispersion Activity, University Press, Rootterdam, 1965
Greenhert, M.L. : Plant Location in Theory and Practice University of North Caroline Press, Chapal Hill, 1956
Isard, W. : Location and Space Economy, MIT Press, Cambridge Mass, 1965
Losch, A. : The Economics of Location, Yale University Press, New Hevan, 1954
Eshail, LC.: Plant Location, American Research Council, New York, 1956
Estant, R.O. and Buchana, R.D. : Industrial Activity and Economic Geography Hutchinson & Co. Ltd., London, 1964
Ghose, B.C. : Industrial Location.
Britto Jh, H.H. : Regional Analysis and Economic Geography, G. Belland Sons, London,
Carlson, A.S.: Economic Geography of The Industrial Material, Rhid Shell Pub. Corp. New York, 1965
Mastin, J.S. : Greater London- An Industrial Geography, G. Bell and Sons, London
Sinha, B.N. : Industrial geography of India, World Press, Calcutta Weber, Alfre: theory of Location of Industries, English edition, University of Chicago, 1929
Aiderfer, E.B. and Midal, H.E. : Economic of American Industry, New York, 1957
Hunder, H.L. and Wright, A.J. : Factors of Industrial Location in Ohio, Columbus, 1969
Florence, P. Sargant : Industrial Investment, Location and Size of Plant, Cambridge, 1949
Wilber Zelinsky : “A Method of Measuring Chage in Distribution of Manufacturing Activity”
Economic Geography, April, 1958, pp- 94-126
Alexander, J.W. and Linberg, James B. : Measurement of Manufacturing: Coefficients of Correlation, Journal of Regional Science, Vol. 3 1961 Pp. 71-81
Thomson, Hohn, H. : A New Method of Measuring Manufacturing Annals of Association of American Geographers, Vol- 45, 1955, PP. 416-35
Elliot Frncis, E. : Location Factors Affecting Industrial Plant, Economic Geography, Vol, 24, 1941m pp. 283-85

PAPER IX

(7) TRANSPORTATION GEOGRAPHY

- Unit 1 : Geographic study of transportation: Definition, nature of contents : Theory of transportation geography as spatial interaction. Evolution and recent trends in transportation geography in the world: Reasons for a separate subject Geography as discipline in distance
- Unit 2 : Application of geographical methods; Population –and accessibility, Physical and relative accessibility by the modern transport system-accessibility case studies

- Unit 3: Flow analysis: Concepts and methods: Competition and coordination; Concept of urban and rural transportation; Economic, Political and social functions of transportation
- Unit 4: Transport and development: transport expansion in underdeveloped countries; Transportation problems and planning

REFERENCE READING

- Hurst, Michale, Eloit : Transportation Geography; Comments and Readings. McGraw Hill Book Co., New York
- Appleton, J.H. : The Geography of Communication in Britain, London, 1962
- Thomas, B.E. : Methods and Objective in Transportation Geography, Professional Geographer, Vol. 8, 1956
- Bheekmon, M. Mc. Gurie, C.B. and Winsten, C.B. ; Studies in the Economic of Tansportation, Yale University Press, 1956
- O'Dell, A.C. and Richards, T.S. : Railways and Geography, Hutchinson University Library, London, 1971
- Sealv, K.R. : The Geography of Air Transport, Hutchinson University Library, London, 1957
- Ullman, E.L. : American Geography: Inventory and Prospects, James and C.F. Jones (editors),
- Kuhn, T.E. : Public Enerprise, Economic and Transport problems, University of California Press, 1962
- Ministry of Transport : Batter use of Town Roads, HMSA. London, 1967
- Bingham, T. : Transportation – Principles and Problems McGraw Hill, New York, 1964

PAPER IX

(8) GEOGRAPHY OF RURAL DEVELOPMENT

- Unit 1 : Geography and rural development; Agricultural Geography and rural development; Agricultural location theory, Rural land use; Agricultural, pastoral and forestry landuse competition. Land use and landscape, Approaches to rural development, growth centre approach, infrastructure reformist
- Unit 2 : Rural settlement, Housing, population and employment, rural transport, service provision, derivation, recreation, health nutrition
- Unit 3 : Rural planning and land management; Resource development and integrated rural development; Crop and soil management, livestock range and management; Water management, Ecological management, desertification – monitoring and control
- Unit 4 : Rural development in Rajasthan; Major tools and techniques, Rural development schemes – Irrigation and land development schemes; Drought prone areas schemes, Desert Development programme ; integrated rural development in Rajasthan, Tribal areas development: Watershed development

REFERENCE READING

- Giig, A. W. : An Introduction to Rural Geogaphy, Edward Arnold, 1985 Association of country Councils: Rural Deprivation London, Acc, 1979
- Allan J.A. ; Remote Sensing in Landuse Studies, Geography 65, 1980
- Tewari, A.K. : (ed.) : Desertification : Monitoring and Control, Scientific Pubs., Jodhpur, 1988
- Anderson, J.R.L.J. : Hardarkar: Agricultural Decision Analysis, Ames: Iowa State University Press, 1977
- Andrease, B. Farming Development and Space – World Agricultural Geography, New York: Water Gryter, 1981
- Morgan, W.B. and R.J.G. Munom : Agricultural Geography, Methuen, London, 1971
- Pacione, M.: Rural Geography, Parpur Clarks, (Ed.) and Row 1984- Register of Research in Rural Geography, Licster : Rural Geography Study Group, 1981

BOWIER, I.R. : Agricultural Geography – Profess in Human Geography-8, 1987
Newbury, P.A.R.P. : Geography of Agriculture Machonald and Evans, plymouth, 1980
Grigg, D.B. : The Agricultural Systems of the World, Cambridge university Press, 1974
Grigg, D.B. : An Introduction of Agricultural Geography, Hutchinson, London, 1984
Jones, A : Rural Housing – The Agricultural Tied College, Bell, London, 1975
Lasey, W.R. : Planning in Rural Environment, Mc Graw hill, New York,1973
Lavety, P. (ed.) ; Recreational Geography, David and Charles, Newton Abbot, 1974
Leasdale, R. Settlement Systems in Sparsely Populate
Regions and Homes (ed.), Oxford, Pergamon, 1981
Menab, A. : Integrated Rural Development, Gloucester Collage of Arts, 1984

DISSERTATION

On an approved topic in Lieu of either paper VIII or IX, Dissertation of around 100 pages, typed on thesis size paper with double spacing, complete with maps and diagrams, must be submitted, in duplicate, to the Head of the Department before the commencement of theory examination of the session. The topic and the supervisor of the dissertation will be selected by the candidates securing 55% or above marks in M.A. (Pervious) Geography will be eligible for offering the paper of dissertation. Evaluation of dissertation will be done by two external examiners and average marks will be a awarded. There will be no Viva- voce examination.

PAPER X

CARTOGRAPHY, SURVEYING (PRACTICAL) AND SCIO-ECONOMIC SURVEY OF VILLAGE

Out of 100 marks assigned for geography practical, 50 marks are reserved for Laboratory Work Test, 8 marks for the field survey/plotting and 7 marks for viva on field survey/plotting, 8 marks for the evaluation of record book and 7 marks for viva on record book and 20 marks for socio-economic survey of a village,(10 marks Survey Report, 10 marks viva on Survey Report) Particular focus on population density, distribution SC and ST population, Caste Structure, Literacy Rate, Creed work force, land holding ratio, occupation structure, income gap, acute poverty analysis etc. (For every 15 students one teacher shall accompany the party).

Representation of geographical data by means of Graphs (Simple, Compound, Smoothed, Cumulative, Frequency and Triangular)

Diagrams (Bar and Pie diagrams; Proportional bars, Circles, Spheres and Cubes) and maps (Choroschematic, Choropleth and Isopleths maps, Dot maps; Accessibility maps), Interpretation and construction of Climatic Maps; Isopleth and Choropleth Maps showing rainfall distribution; variability, intensity and duration, Isopleth maps showing temperature conditions, Climatic graph, hytheograph, rainfall dispersion diagrams, rainfall intensity, duration variability graphs; Wind direction diagram

Graphs showing pressure and relative humidity conditions, interpretation of air photos: Simple photo-interpretation with the help of pocket and mirror stereoscope as applied in identification and analysis of feature of landforms; geographic units, settlements, communication, vegetation and land use, Numerical exercises pertaining to the aerial photographs ; Calculation of flying height, number of strips of aerial photographs in given area,Fundamentals of digital image processing; geographic information systems (GIS); Applications of remote sensing in Geography

Statistical Techniques: correlation, Spearman's rank correlation and Karl Pearson's product moment correlation, Simple linear, regression, residual from regression, Chi-square test and student 't' Test

Surveying: Small Geographical surveys of given areas by Theodolite (vernier scale), Plane table and Prismatic compass. Leveling; Principles and method; Contouring of small areas through Dumpy level and Clinometers (Indian pattern)

TEXT BOOKS

Monkhouse, F.J. & Wilkerson, H.R. : Maps and Diagrams, Methuen and Co. London

Raisz, E. : General Cartography, McGraw, 1977

Gregory, S. : Statistical Methods and the Geographers, Methuen and Co., 1971

Kanetkar, T.P. : Surveying and Leveling, Parts I and II

RECOMMENDED READINGS

Robinson, A.H. : Elements of Cartography, Chapman and Hall, London

Dickinson, G.C. : Statistical Mapping and the Presentation of Statistics, Edward and Arnold, 1973

Lawrence, G. R.Y. : Cartographic Methods, Methuen, 1971

Brich, T.W. : Maps Topographical and Statistical

Faith, E.A. : Surveying- Theory and Practice

Higgins, A.L. : Elementary Survey

Hinks, A. : Maps and Surveying

Low, J.R.: Plane Table Mapping

Threlfair, H : A Text books of Surveying and Leveling

Lewis, P. : Maps and Statistics, Methuen, 1977

King, L.J. : Statistical Analysis in Geography, Prentice Hall, N.J.

Laeder D.R. : Aerial Photographic Interpretation

Sharma, J.P. : Prayogic Bhoogol, Rastogi & Co. Meerut, 1983

Unwin, D.J. and J.A. Dawson : Computer Programming for Geographers, Longman, 1986

Zuylen L.Van : Computer Assistant Cartography, N.Y. , 1985