UNIVERSITY OF KOTA

SCHEME OF EXAMINATION

AND

COURSES OF STUDY

Session- 2016-17

Department of Social Sciences

Faculty of Social Science

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

First /Third Semester Examination, December

Second/Fourth Semester Examination, May

UNIVERSITY OF KOTA

MBS Marg, Near Kabir Circle, KOTA (Rajasthan)-324 005

INDIA

Edition: 2016-17

M.A./M. Sc. Geography:

The M.A. /M. Sc. Geography is a two years full time course. The course has been organized in IV semesters over two years. That means two semesters per year.

A brief note on the Innovation and the Employability -

1. Now a days Geography has become a very useful subject in various competitive examinations including Civil services and Rajasthan Administrative Services.

2. Geography not only deals with the physical economic and social conditions of the World, India, Rajasthan but now its nature has become applied and it is helpful in solving the environmental and urban problems.

3. Geography provides a background for the regional planning in development and help in sustainable development.

4. The modern techniques of Geographical analysis such as Remote Sensing, GIS, GPS etc. are helpful in Resource and Environmental Management and Disaster Management.

5. Geography provide an opportunity of employment in various fields. The important are : Teaching and Research ;Town Planning Departments ; Regional Planning ; Remote Sensing ; Statistical Departments ;Urban / Rural / Agricultural Planning ; Water Resource Departments ; Demographic Study Departments & Administrative Services – Central and State Governments etc.

Scheme of Examination:

1.The course shall have 24 or 25 credits in one semester and 96 credits but not 100 in a complete 4 semester course. However the credits in a course shall be equal in each semester.

2. There shall be fixed 5 papers each of 100 marks in each semester comprising both theory & Practical papers. The Total marks for each semester shall be 500 marks.

3. The Total marks theory papers will be divided Into 70% external assessment and 30% internal Assessment marks .

4. There will be no internal assessment in practical papers .

5. Each paper shall divided into five units for question paper framing from examination point of view.

6. The assessment of the student for theory paper shall be divided into two parts in which first part is continuous assessment or internal (30% of maximum marks) and second part is semester assessment or external assessment (70% of maximum marks) for practical papers there will be only one external assessment(100% of maximum marks).

7. Following rules have been recommended for internal assessment:

(a)The internal assessment for each theory paper shall be taken by the teacher concerned in the department during each semester. There will be two internal assessment tests each 15% weightage, For theory papers in each semester Each internal assessment test shall be of one hour duration for each semester Each internal assessment test shall be taken according to academic calendar notified by the university. There will be no internal examination in the practical paper.

(b) A student, who remains absent(defaulter) or fails or wants to improve the marks in the internal assessment , may be permitted to appear in the desired paper(s) (only one time) in the same semester

with the permission of the concerned Head of the Department. A defaulter/improvement fee of Rupees 250/- per paper shall be charged from such candidates. Duly forwarded application of such candidates by the teacher concerned shall be submitted to HOD who may permit the candidate to appear in the internal assessment after depositing the defaulter improvement fee. A record of such candidates shall be kept in the Department.

8. Following rules are recommended for Semester Assessment or External Assessment:

(a) The external assessment shall be of three hours duration for each theory paper and six to twelve hours duration for practical paper as per the requirement of the subject and courses of practical. The practical examination shall be taken by the panel of at least one external and one internal examiner at the end of each semester.

(b) The syllabus for each theory paper is divided into five independent units and theory question paper will be divided into three sections as mentioned below:

Section –A shall have 01 compulsory question comprising 10 question (maximum 20 words answer) taking two question from each unit. Each question shall be of one mark of this section will be 10. This section will be compulsory in the paper.

Section-B will carry 25 marks with equally divided in to five long answer type questions(answer about in 250 words)and examiner are advised to set two questions from each unit and students are instructed to attend five questions by selecting one question from each unit.

Section-3 will contain five long answer five long answer type questions. One compulsory question of 15 marks and four question of 10 marks each. students are instructed to attempt total three questions with one compulsory question(answer about in 500 words)of and any two more questions(answer about in 400 words)out of remaining four questions. paper setter shall be instructed to design question paper covering from all five units.

09. Minimum pass marks and Rules regarding Determination of result are recommended as follows:

(i)The candidate shall be declared as pass in a semester examination .if he/she secure at least 40% marks in each theory paper separately in external & internal examination and 50% marks in each practical paper and at least 50% marks in project/dissertation with 50% aggregate marks in that semester.

(ii)A candidate declared as fail/absent in one or more papers at any odd semester examination shall be permitted to take admission in the next higher semester (even semester)of the same academic session.

(iii)A candidate may be promoted in the next academic session(odd semester)if he/she has cleared collectively at least 50% of the paper of both semesters of previous academic session with 50% of the aggregate marks .The candidate who does not fulfil the above condition will remain as an ex-student and will reappear in the due papers along with the next odd/even semester exam.

(iv)If any student who is provisionally admitted in higher odd semester but could not secure prescribed minimum marks in previous semester will be treated as ex-student and his/her admission fee will be carry forwarded to the next odd semester of forth coming academic session.

(v)If a candidate ,who is declared as pass, wishes to improve his/her performance in theory papers of previous semester .he/she may re –appear only one time in these paper in next odd/even semester examination.

(vi)Candidate shall not be permitted to re-appear or improve the marks obtain in the external examination of practical/dissertation in any condition.

(vii)If the number of papers prescribed in a semester examination is an odd number. It shall be increased by one for the purpose of reckoning 50% of the papers for considering the student pass/fail.

(viii)A candidate may be given only two additional chances for passing semester thus maximum tenure for completing the two years, postgraduate course will be limited to four years, for three years postgraduate programme up to five years and so on.

10. Classification of successful Candidates after Last semester Examination is recommended as follows:

Description of marks Obtained	Division/Result
• 80% and above marks in a paper	Distinction in that paper
• A candidate who has secured aggregate 60% and above marks	First Division
• A candidate who has secured aggregate 50% and above but less than 60% marks	Second division

Paper Scheme:

Year / Semester	Serial Number, Code & Nomenclature of Paper			Duration of Exam.	Teaching Hrs/Week & Credit			Distribution of Marks			Min. Pass Marks	
	Number	Code	Nomenclature		L	P	C	Conti. Assess.	Sem. Assess.	Total Marks	Conti. Assess.	Sem. Assess.
I Year Semester I	1.1	GEO 101	Evolution of Geographical Thought-Ancient	3 Hrs	4		4	30	70	100	12	28
	1.2	GEO 102	Advanced Economic Geography	3 Hrs	4		4	30	70	100	12	28
	1.3	GEO 103	Advanced Geomorphology	3 Hrs	4		4	30	70	100	12	28
	1.4	GEO 104	Advanced Geography of Environment	3 Hrs	4		4	30	70	100	12	28
	1.5	GEO 105	Geography Practical	6 Hrs		16	8	--	--	100	--	50
	Total				**16**	**16**	**24**	**120**	**280**	**500**		
I Year Semester II	2.1	GEO 201	Evolution of Geographical Thought-Classical & Modern	3 Hrs	4		4	30	70	100	12	28
	2.2	GEO 202	Resource Geography	3 Hrs	4		4	30	70	100	12	28
	2.3	GEO 203	Advanced Climatology & Oceanography	3 Hrs	4		4	30	70	100	12	28
	2.4	GEO 204	Man & Environment	3 Hrs	4		4	30	70	100	12	28
	2.5	GEO 205	Geography Practical	6 Hrs		16	8	--	--	100	--	50
					16	**16**	**24**	**120**	**280**	**500**		

GEO-101	**Evolution of Geographical Thought-Ancient**

UNIT – I

Definitions, scope, nature and purpose of Geography, (including concepts) and its relation with other social sciences.

UNIT – II

Development of Geography in India, Pre-Scientific Geographical ideas in Ancient times in India, Ancient Classical Geography.

UNIT – III

Dark age, Brief Account of the Tools and techniques in Geography, Indian influences and Geography of the Vedic Age.

UNIT – IV

Main regions of geographical knowledge in ancient times, Contribution by Greek.

UNIT – V

Roman and Arab Geographers.

Books Recommended :

1. Minshull, Roger : The Changing Nature of Geography.
2. Hartshorne, Richard : Perspectives on the Nature of Geography. The Association of American Geographers, Hutchinson University Library, London.
3. Dikshit, R.D. : Geographical Thought A Contextual History of Ideas, Prentice Hall of India Pvt.Ltd.
4. Wooldridge & East : The Spirit and Purpose of Geography, Hutchinson University Library, London.
5. Dikshit, R.D. : The Arts Science of Geography, Integrated Readings. Prentice Hall of India, New Delhi, 1994.
6. Saxena, D.P. : Regional Geography of Vedic India, Granthan Rambag, Kanpur.
7. Harvey & Holly : Themes in Geographic Thought, Rawat Publications, Jaipur.
8. Husain, Majid : Evolution of Geographical Thought, Rawat Publications, Jaipur.
9. Haggett, P. – Geography : A Modern Synthesis, Harper International Ed.
10. हुसैन, माजिद : भौगोलिक विचारधाराओं का इतिहास, रावत पब्लिकेशन्स, जयपुर।
11. कौशिक, एस.डी. : भौगोलिक विचारधारायें एवं विधि तंत्र।
12. जैन, एस.एम. : भौगोलिक चिन्तन व विधि तंत्र, साहित्य भवन, आ गरा।

GEO-102	Advanced Economic Geography

Unit - I
Nature and Scope of Economic Geography, approaches and recent trends in economic geography, Spatial variation, location of economic activities and spatial organization of economies.

Unit – II
Classification of economies, sectors of economy: primary, secondary and tertiary, Transportation development and spatial impact, impact of Spatial variation in production costs: labour, capital, technical knowledge, location impact.

Unit – III
Types of agriculture: subsistence agriculture: Tropical plantations, Mixed farming ,Commercial grain farming and corn region of USA, Mediterranean agriculture.

Unit – IV
Impact of modern economy on environment, Concept of economic region- formation and types, Economic regions of India and regional development.

Unit – V
Study of Great Lake industrial region of USA , Study of Ruhr and Ukraine industrial regions, Study of industrial belts of Japan, World pattern of water transportation and trade.

Books Recommended :

1. Alexander, J. W., Economic Geography, Prentice Hall of India, New Delhi
2. Alien, S. W. and Leonard, J. W., Conserving Natural Resources, McGraw Hill
3. Bengston, N. A. and M. W. Royen, Fundamentals of Economic Geography, Prentice Hall
4. Berry J. L. Geography of Market Centres and Retail Distributions, Prentice Hall, New York,1967
5. Berry, B. J. L., et al, D.M, Economic Geography, Prentice Hall
6. Boesch, H., A Geography of World Economy, D. Van, Nostrand
7. Chatterjee, S. R, Economic Geography of Asia, Allied Book Agency, Calcutta, 1984
8. Chisholm, M., Geography and Economy, G. Bell, London
9. Chorley, R. J. and P. Haggett (ed.), Network Analysis in Geography, Arnold, 1969
10. Chorley, R. J., Water, Earth and Man, Methuen
11. Dreze, J. and A. Sen, India: Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1996
12. Eckarsley, R. (ed.), Markets, the State and the Environment, McMillan, London, 1995
13. Garnier. B. J. and A. Delobez, A Geography of Marketing, Longman, London, 1979
14. Guha and Chatterjee, A New Approach to Economic Geography of Resources
15. Hamilton, F. E. I. (ed.), Resources and Industry, Oxford University Press, New York, 1992
16. Hamilton, F. E. I., Spatial Perspectives on Industrial Organisation and Decision Making, John Wiley, New York, 1974
17. Hurst, E., Transport Geography: Comments and Readings, McGraw Hill, New York, 1974
18. Janaki, V. A., Economic Geography, Concept Publishing Co., New Delhi
19. Jarret, H. R., A Geography of Manufacturing, MacDonald & Evans
20. Jones, G. G. and C. F. Darkenwald, Economic Geography, Mac Milan
21. Learmonth, T. A., Mysore State: Regional Synthesis, Asia Pub. House
22. Lloyd, P. and P. Dicken, Location in Space: A Theoretical Approach to Economic Geography, Harper and Row
23. Me-Carty, M. H. and J. B. Luidberg, A Preface to Economic Geography, Prentice Hall
24. Morgan, W. B. and R. J. C. Munton, Agricultural Geography, Methuen, London, 1977
25. Pachuri, R. K., Energy and Economic Development in India, Praeger, New York, 1977
26. Paterson, J. H., Land Work and Resources: An Introduction to Economic Geography, Arnold Heineman
27. Robertson, D. (ed.), Globalisation and Environment, E. Elgar Co., U.K., 2001.
28. Robinson, H., Economic Geography, MacDonald and Evans
29. Zimmermann, E. W., World Resources and Industries, Harber
30ण श्रीवास्तव, वी. के. एवं राव, बी. पी. : आर्थिक भूगोल के मूल तत्व (वसुन्धरा प्रकाशन, गोरखपुर)
31ण जैन, हरकचन्द : सैद्वान्तिक आर्थिक भूगोल (कमलेश प्रकाशन, भीलवाडा)
32ण्रजा, एम. एवं सिंह, ए. : संसाधन भूगोल
33ण नैगी, बी. एस. : संसाधन भूगोल
34ण सिंह एवं सिंह : आर्थिक और संसाधन भूगोल

GEO-103	Advanced Geomorphology

UNIT – I

Geomorphology : Development of geomorphology, Fundamental concepts, Nature and Scope, Factors controlling landform development: Endogenetic and Exogenetic forces.

UNIT – II

Denudation process: Weathering and Erosion, Cycle of Erosion, Views of Davis and Penk, soil formation, Geosynclines , Folds and Faults, Mountain Building .

UNIT – III

Interior of the earth ,volcano : types, world distribution and volcanic activities, earthquake: cause, effect and world distribution.

UNIT – IV

Concept of Geomorphic Cycle : Landforms associated with fluvial, glacial, arid, coastal and Karst topography.

UNIT – V

Isostasy, Continental Drift and Plate Tectonics, Environmental and Applied Geomorphology.

Books Recommended :

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. Hugget, Richard, Fundamentals of Geomorphology, Routledge, Taylor & Francis Group, New York, 2007
5. ICSSR, A Survey of Research in Physical Geography, Concept, New Delhi, 1983
6. Kale, V. and A. Gupta, Elements of Geomorphology, Oxford University Press, Calcutta, 2001
7. King, C. A. M., Beaches and Coasts, E. Arnold, London, 1972
8. Leopold, L. B. et al, Fluvial Processes in Geography, Eurasia Publishing House, New Delhi
9. Pike, R.J., I.S. Evans and T. Hengl, Geomorphometry: A Brief Guide, Developments in Soil Science, Volume 33, Elsevier B.V., 2009
10. Pitty, A., Introduction to Geomorphology, Methuen, London, 1974
11. Ritter, D.F., R.C. Kochel and J.R. Miller, Process Geomorphology, 4th edition, McGraw Hill, New York, 2002
12. Sharma, H. S., Tropical Geomorphology, Concept, New Delhi, 1987
13. Shepard, F. P., Submarine Geology, Harper & Sons, New York, 1948
14. Singh, S., Geomorphology, Prayag Pustakalaya, Allahabad, 1998
15. Small, R. J., The Study of Landforms, McGraw Hill, New York, 1985
16. Sparks, B. W., Geomorphology, Longmans, London, 1960
17. Strahler, A. H., Introducing Physical Geography, 5th Edition, John Wiley & Sons, 2009
18. Summerfield, M. A., Global Geomorphology, Longman, 1991
19. Thornbury, W. D., Principles of Geomorphology, Wiley Eastern, l969

GEO-104	Advanced Geography of Environment

UNIT – I

Concept of environment, Nature and scope of the Geography of environment, Concept of ecology , eco-system-definition and elements.

UNIT – II

Energy flow in eco-system, Productivity in eco-system, Food Chain- Food Web, Types of eco-system.

UNIT – III

Man-environment relationships, Degradation and conservation of Environment, Development vis-a-vis ecological crisis. Perception of environment and its quality.

UNIT – IV

Environmental Pollution – Water, Air, Noise, Soil and Radio-activity, causes, impact and measures of control with Indian examples.

UNIT – V

Global Environmental Issues : Climate Change - Ozone depletion, Green House effect and Global warming, Desertification, Biodiversity.

Books Recommended :

1. Batel, B. (Ed.) – Management of Environment, Wiby Eastern Ltd., New Delhi, 1980.
2. Desh Bandhu (Ed.) – Environmental Management, Indian Environment Society, New Delhi.
3. Singh & Singh (Ed.) – Geography of Environment Concept, New Delhi.
4. Saxena, H.M. – Environmental Geography, Rawat Pub., Jaipur, 2005.
5. Savinder Singh – Geography of Environment, Allahabad.
6 Murdock, W. (Ed.)- Environment Resources, Pollution and Society, Sin over Association Inc.
7. Gupta & Gurjar - Sustainable Development, Rawat Pub., Jaipur.
8. Strahler, A.N. – Geography and Man's Environment, John, Willey.
9. Khan, M.Z.A. & S.K. Agarwal – Environmental Geography, APH Publishing House, New Delhi,2004.
10.Centre for Science :The State of Indian Environment : A Citizen's Report 1982, Environment 1985, New Delhi.
11 सविन्द्र सिंह – पर्यावरण भूगोल, इलाहाबाद।
12ण वी.के. श्रीवास्तव : पर्यावरणीय, भूगोल एवं पारिस्थितिकी विकास, वसुन्धरा, गोरखपुर।
13ण एच.एम. सक्सैना – पर्यावरण एवं परिस्थितिकी भूगोल, राज. हिन्दी ग्रन्थ अकादमी

GEO-105	Geography Practical

Surveying / laboratory Work: ***Total 100 Marks***

1. Laboratory work test (3 hrs duration) 40 Marks
2. Record work & viva-voce(20+10) 2 hrs 30 Marks
3. Project Report & viva voce (20+10) 3 hrs 30 Marks

Note: **16 hrs of teaching- practical be provided to students per week .**

UNIT – I

Definition , Nature and scope of cartography , The Art and Science of Cartography, Maps: History of Maps, Materials, techniques, Types and Preparation of Maps.

UNIT – II

Scales; Types, Representation of Scales , Enlargement, Reduction of Maps, Data: Types: Primary-Secondary , representation of Bar Diagram, histograms, Frequency Polygon, Pie/Wheel Diagram.

UNIT – III

Geographical Maps-Diagrams : Isopleths, choropleth , chorochromatic , Population- Dot Map , Population Pyramid, Sten-de-Geers and Stilgen-Baurs-Method.

UNIT – IV

Three dimensional diagrams of economic and social data , Block Pile , Sphere ,Cube , Graphs: Simple Line Graph ,Polygraph , Climatograph , Hythergraph , Taylor's/Foster's Climograph.

UNIT – V

Project Report: Student will prepare a project report based on geographical ,socio-economic and environmental aspects of his/her residential area with sample survey of 10 houses under the direction of the faculty member independently of 10 to 15 pages.

Note: Record work will comprise of a minimum of 15 exercises drawn on one fourth of a full drawing sheet with analysis/ Explanations.

Books Recommended :

1. Robinson, A.H. etal – Elements of Geography, John Willey and Sons, U.S.A. 1995.
2. Sarkar, A.K. – Practical Geography – A Systematic Approach, Oriental Longman, Calcutta,1997.
3. Khan, Z.A. – Text Book of Practical Geography, Concept, New Delhi, 1998.
4. Monkhouse, E.J. & Wilkinson, H.R. – Maps and Diagrams, Methuen, London, 1994.
5. Singh, R.L. – Elements of Practical Geography, Kalyani Pub., New Delhi.
6. Steer, J.A. – Map Projections; University of London Press, London.
7. Lawrence, G.R.P. - Cartographic Methods, London, 1971.
8. Dickinson, G.C. – Statistical Mapping of Statistics, London.

9ण जे.पी. शर्मा – प्रयोगात्मक भूगोल, रस्तोगी, मेरठ।

10. इन्द्रपाल एवं माथुर – मानचित्र प्रक्षेप, राज. हिन्दी ग्रन्थ अकादमी, जयपुर।

GEO-201	Evolution of Geographical Thought- classical & Modern

UNIT – I

Founders of modern Geography -Humboldt, Ritter, Ratzel, Richthofen , Hettner, Contribution of Vidal-de-la-Blache and Brunhes.

UNIT – II

Post War trends, Inter-disciplinary Trends, Recent trends in Geography.

UNIT – III

Dichotomies in Geography : Physical and Human Geography, Determinism and Possibalism, Regional and Systematic Geography, Qualitative and Quantitative Geography, Theoretical and Applied Geography.

UNIT – IV

Changing paradigms ; Positivism, Behaviourlism , Humanistic geography, Functionalism and Idealism in Geography.

UNIT – V

The field of geography: its place in the classification of science, geography as a social science, and natural science. Definition, scope and functions of geography, Geography as science of relationship, as science of areal differentiation, as spatial science, Future of Geography.

Books Recommended :

1. Minshull, Roger : The Changing Nature of Geography.
2. Hartshorne, Richard : Perspectives on the Nature of Geography. The Association of American Geographers, Hutchinson University Library, London.
3. Dikshit, R.D. : Geographical Thought A Contextual History of Ideas, Prentice Hall of India Pvt.Ltd.
4. Wooldridge & East : The Spirit and Purpose of Geography, Hutchinson University Library,London.
5. Dikshit, R.D. : The Arts Science of Geography, Integrated Readings. Prentice Hall of India, New Delhi, 1994.
6. Saxena, D.P. : Regional Geography of Vedic India, Granthan Rambag, Kanpur.
7. Harvey & Holly : Themes in Geographic Thought, Rawat Publications, Jaipur.
8. Husain, Majid : Evolution of Geographical Thought, Rawat Publications, Jaipur.

9 Haggett, P. – Geography : A Modern Synthesis, Harper International Ed.

10. हुसैन, माजिद : भौगोलिक विचारधाराओं का इतिहास, रावत पब्लिकेशन्स, जयपुर।

11ण कौशिक, एस.डी. : भौगोलिक विचारधारायें एवं विधि तंत्र।

12ण जैन, एस.एम. : भागोलिक चिन्तन व विधि तंत्र, साहित्य भवन, आ गरा।

GEO-202	Advanced Resource Geography

UNIT – I

Scope, approaches and trends in resource geography; resources: concepts and classification Distribution, production and problems.

UNIT – II

Use, production and conservation of resources: iron ore and manganese, Conventional and Non-conventional Sources of Energy ,production and problems of conservation of coal, petroleum, Hydroelectricity, Solar and nuclear resources ,World Energy Crisis.

UNIT – III

Forest and water resources: distribution, utility, problems and conservation with spatial reference to India and Rajasthan.

UNIT – IV

Distribution, density and growth of human resources , Population-resource equilibrium, Problems of resource utilization and conservation of resources, Population-Resource regions of world.

UNIT – V

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

Books Recommended :

1. Lloyd & Dicken : Location in Space : Theoretical Approach to Economic Geography.
2. Mc-Cart & Lindeberg : A Preface to Economic Geography.
3. Smith, D.E. : Industrial Location – An Economic Geographical Analysis.
4. Hodder & Lee : Economic Geography.
5. Berry Conkling & Ray : The Geography of Economic Systems, Prentice Hall.
6. Smith, J.C. & Philip, M.O. : Industrial and Commercial Geography, Henry Halt.
7. Bengston, N.A. & Royen M.V. : Fundamentals of Economic Geography, Prentice Hall, New York.
8. Alexander, J.W. : Economic Geography, Prentice Hall, New York.
9. Guha & Chatterjee : A New Approach to Economic Geography.
10. Renner, T.H. & Other : World Economic Geography.
11. Robinson, H. : Economic Geography, M.Sc. Donald, London.
12. Thoman, R.S. : The Geography of Economic Activity, McGraw Hill, New York.
13. Zimmerman E.W. : World Resources and Industries, Harper and Co., New York.
14. Robertson, D. (Ed.) : Globalization and Environment, E. Elgan Co., U.K., 2001.
15. Wheeler, J.O. : Economic Geography, John Willey, New York, 1995.
16. Dreze, J. & Sen, A. : India – Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1996.

17ण काशीनाथ सिंह, जगदीश सिंह : आर्थिक भूगोल के मूल तत्व, वसुन्धरा, गोरखपुर।

18ण पुरूषोतम जैन : आर्थिक भूगोल, रस्तोगी प्रकाशन, मेरठ।

19ण सक्सेना, अग्रवाल एवं सक्सेना : आर्थिक भूगोल, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर–2010 ।

GEO-203	Advanced Climatology & Oceanography

UNIT – I

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

UNIT – II

Stability and instability of the atmosphere : Air-masses, Fronts, Temperate and Tropical cyclones, Types and distribution of precipitation.

UNIT – III

Classification of world climates : Kopen's and Thornthwaite's schemes , Hydrological Cycle , Climate change and Global warming.

UNIT – IV

Oceanography : Distribution of land and water, Origin of ocean basins- Major features of ocean basins , Study of Ocean Bottom relief of Indian, Atlantic and Pacific Oceans.

UNIT – V

Ocean deposits: Coral reefs, Temperature and Salinity of the Oceans, Ocean currents, waves and Tides, Impact of Humans on the marine environment.

Books Recommended :

1. Anikouchine, W. A. and R. W. Sternberg, The World Oceans: An Introduction to Oceanography, Englewood Cliffs, N.J. 1973
2. Barry, R. G. and R. J. Chorley, Atmosphere, Weather and Climate, Routledge, 1998
3. Critchfield, H., General Climatology, Prentice-Hall, New York, 1 975
4. Das, R. K., The Monsoons, National Book Trust, New Delhi, 1968
5. Garrison, T., Oceanography, Wadsworth Co. USA, 1998
6. Gerald, S., General Oceanography: An Introduction, John Wiley & Sons, New York, 1980
7. King, C. A. M., Beaches and Coasts, E. Arnold, London, 1972
8. King, C. A. M., Oceanography for Geographers, E. Arnold, London, 1975
9. Lydolph, Paul E., The Climate of the Earth, Rowman and Allanheld, Totowa, N. J., 1985
10. Mather, J. R., Climatology, McGraw Hill, New York, 1974
11. Patterson, S., Introduction of Meteorology, McGraw Hill Book Co., London, 1969
12. Sharma, R. C. and M. Vatel, Oceanography for Geographers, Chetnya Publishing House, Allahabad, 1970
13. Shepard, F. P., Submarine Geology, Harper & Sons, New York, 1948
14. Strahler, A. N., Environmental Geo-Science, Hamilton Publishing, Santa Barbara, 1973
15. Stringer, E. T., Foundation of Climatology, Surjeet Publications, Delhi, 1982
16. Thurman, H. B., Introductory Oceanography, Charles Webber E. Merril Publishing Co., 1984
17. Trewartha, G. T., An Introduction to Climate, International Students Edition, McGraw Hill, New York, 1980
18. Weisberg, J. and Howard, Introductory Oceanography, McGraw Hill Book Co., New York, 1976

19ण नेगी, बी. सी.: जलवायु विज्ञान तथा समुद्र विज्ञान, केदारनाथ रामनाथ, मेरठ

20ण बनर्जी, आर.सी. एवं उपाध्याय, डी.एस : मौसम विज्ञान (राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर)

GEO-204	Man & Environment

UNIT – I

Effect of World and Indian Population growth on Environment , Resources and Ecological crisis , Environment and quality of life .

UNIT – II

Environmental Management–Approaches, Management of forest, soil, wildlife, energy and mineral resources, Disasters & their management.

UNIT – III

Industrialization - Urbanization- Globalization , and Environmental Impact Assessment , Conservation of natural resources.

UNIT – IV

Environment Awareness and Education , Environmental policies and programmes (international and national) , Environmental problems, planning and legislation in India.

UNIT – V

Concept of Development , Sustainable development: concept, Importance and requirement , Position and problems of Environment in India and Rajasthan.

Books Recommended :

1. Batel, B. (Ed.) – Management of Environment, Wiby Eastern Ltd., New Delhi, 1980.
2. Desh Bandhu (Ed.) – Environmental Management, Indian Environment Society, New Delhi.
3. Singh & Singh (Ed.) – Geography of Environment Concept, New Delhi.
4. Saxena, H.M. – Environmental Geography, Rawat Pub., Jaipur, 2005.
5. Savinder Singh – Geography of Environment, Allahabad.
6 Murdock, W. (Ed.)- Environment Resources, Pollution and Society, Sin over Association Inc.
7. Gupta & Gurjar - Sustainable Development, Rawat Pub., Jaipur.
8. Khan, M.Z.A.& Gangwale Sonal : Global Climate change, Rawat Publications, Jaipur, 2011
9. Strahler, A.N. – Geography and Man's Environment, John, Willey.
10. Khan, M.Z.A. & S.K. Agarwal – Environmental Geography, APH Publishing House, New Delhi,2004.
11. Centre for Science – The State of Indian Environment : A Citizen's Report 1982, Environment 1985, New Delhi.
12. Sharma B.L. & Puja Puar : Global Environmental Challenges, Rohini Books, Jaipur.
13ण सविन्द्र सिंह – पर्यावरण भूगोल, इलाहाबाद।
14. वी.के. श्रीवास्तव : पर्यावरणीय, भूगोल एवं पारिस्थितिकी विकास, वसुन्धरा, गोरखपुर।
15. एच.एम. सक्सैना – पर्यावरण एवं परिस्थितिकी भूगोल, राज. हिन्दी ग्रन्थ अकादमी, जयपुर।

GEO-205	Geography Practical

Surveying and laboratory Work: *Total 100 Marks*
1. Laboratory work test (3 hrs duration), 40 Marks
2. Record work & viva-voce (20+10) 2 hrs, 30 Marks
3. Survey camp & viva - voce (20+10) 3 hrs 30 Marks

UNIT – I

Map Projection and their classification –(Merits and Demerits)
Construction and characteristics of projections (Mathematical constructions)
Conical Projections :
(a) Equal Area with one Standard Parallel (Lambert's Projection)
(b) Equal Area with two Standard Parallel (Albert's Projection)
(c) Bonne's
(d) Polyconic
Cylindrical Projections :
(a) Cylindrical Equal Area
(b) Mercator's
(c) Gall's stereographic

UNIT – II

Zenithal Projection's
(a) Gnomonic Polar Case &. Eq-case
(b) Stereographic Polar Case &. Eq-case
(c) Orthographic Polar Case &. Eq-case
(d) Equal Area Polar Case &. Eq-case
(e) Equidistant Polar Case &. Eq-case
Conventional Projections :
(a) Sinusoidal
(b) Mollweide

UNIT – III

Scheme of symbols , Conventional Symbols , Weather Symbols , Interpretation of Weather Maps and Indian Weather Report.

UNIT – IV

Computation of Mean, Median and Mode , Deviations : Standard Deviation and Mean Deviation , Correlation , Theoretical Basis of Nearest Neighbour Analysis.

UNIT – V

Project Report : Report should be prepared for a topic related to any regional problem. A report should be prepared in typed form within 15 to 20 pages with the help of maps and diagrams.

Note: Record work will comprise of a minimum of 15 exercises drawn on one fourth of a full drawing sheet with analysis/ Explanations.

Books Recommended :

1. Arthur G., Advance Practical Geography, Heinemann
2. Campbell, J., Introductory Cartography, Prentice Hall Inc., New York
3. Govt. of Rajasthan, District Census Handbooks, latest as well as of previous Census
4. Keates, J. S., Cartographic Design and Production, Longman, London
5. Loxton, J., Practical Map Production, John Wiley & Sons, New York
6. Mishra, R. P. and A. Ramesh, Fundamentals of Cartography, Concept Publishers, New Delhi
7. Monkhouse, F. J. and H. R. Wilkinson, Maps and Diagrams, Methuen & Co., London
8. Raisz, E., General Cartography , McGraw Hill Book Co., New York
9. Robinson, A. H., Elements of Cartography, Chapman & Hall
10. Sing, R. L., Elements of Practical Geography, Kalyani Publishing
11. Singh, R. N., Map Work and Practical Geography, Central Book Depo