Sat Jinda Kalyana (PG) College, Kalanaur

(NAAC ACCREDITED 'A' GRADE & ISO 9001:2015 CERTIFIED INSTITUTE)

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AQAR: 2022-2023

CRITERION 1

Curricular Aspect

1.3.2. Number of courses that include experiential learning through project work/field work/ internship during the year

Syllabus of Courses

Submitted to

National Assessment and Accreditation Council

1.3.2

M.D.UNIVERSITY, ROHTAK

SCHEME OF STUDIES, SYLLABUS & EXAMINATION OF ENVIRONMENTAL STUDIES

(Common For All UG Courses)

Course Number	Course Title	Teaching Schedule				Marks	Exam. Schedule	Total	Duration
		L	T	P	Total of class	Theory	Practical Exam Marks		
GES 106F	Environmental Studies	3	0	1	4	75	25	100	3hrs

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GES-106-F : ENVIRONMENTAL STUDIES

Theory 75 Marks
Field Work 25 Marks (Practical)

Unit-1 The Multidisciplinary nature of environmental studies. Definition, scope and importance.

Unit-2 Natural Resources :

Renewable and non-renewable resources : Natural resources and associated problems.

a) Forest resources : Use and over-exploitation : deforestation, case studies. Timber extraction, mining dams and their effects on forests and tribal people.

b) Water resources : Use and over-utilisation of surface and goround water, floods, drought, conflicts over water, dams- benefits and problems.

c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

d) Food resources : World food problems, changes, caused by agriculture and overgrazing, effects of modern agriculture, fertrilizer-pesticide problems, Water logging, salinity, case studies.

e) Energy resources : Growing energy needs; renewable and non- renewable energy sources, use of alternate energy sources, case studies.

f) Land resources : Land as a resource, loand degradation, man induced landslides, soil erosion and desertification.

* Role of an individual in conservation of natural resources.

* Equitable use of resources for sustainable lifestyles.

(8 lectures)

Unit-3 Ecosystems :

* Concept of an ecosystem.

* Structure and function of an ecosystem.

* Producers, consumers and decomposers.

* Energyflow in the ecosystem.

* Ecologicalsuccession.

* Food chains, food webs and ecological pyramids.

* Introduction, types, characteristic features, structure and function of the following eco-system :

a. Forest ecosystem.

b. Grassland ecosystem.

c. Desert ecosystem.

d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

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(6 lectures)

Unit-4 Biodiversityand its conservation

* Introduction - Definition : Genetic, Speciesand ecosystem diversity.
* Biogeographical classification of India.
* Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
* Biodiversityat global, National and local levels.
* India as a mega-diversitynation.
* Hot-spots of biodiversity.
* Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.
* Endangered and endemic species of India.
* Conservation of biodiversity : In-situ and ex-situ conservation of biodiversity.

(8 lectures)

Unit-5 Environmentalpollution :

Definition, causes, effects and control measures of :

a) Air pollution.
b) Water pollution
c) Soilpollution
d) Marine pollution
e) Noise pollution
f) Thermalpollution
g) Nuclear hazards

* Solids waster management : causes, effects and control measures of urban and industrial wastes.
* Role of an individual in prevention of pollution.
* Pollution case studies.
* Disaster management : floods, earthquake, cyclone and landslides.

(8 lectures)

Unit-6 Social issues and the Environment :

* From unsustainable to sustainable development.
* Urban problems related to energy.
* Water conservation, rain water harvesting, watershed management.
* Resettlement and rehabilitation of people : its problems and concerns case studies.
* Environmental ethics : Issues and possible solutions.

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* Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
* Wasteland reclamation.
* Consumerism and waste products.
* Environment ProtrectionAct.
* Air (Prevention and Control of pollution) Act.
* Water (Prevention and Control of pollution) Act.
* Wildlife ProtectionAct.
* Forest ConservationAct.
* Issuesinvolved inenforcement ofenvironmentallegislation.
* Public awareness. (7 lectures)

Unit-7 Human population and the Environment.

Population growth, variation among nations. Population explosion- FamilityWelfare Programme. Environment and human health.
Human Rights. Value Education. HIV/AIDS.
Woman and Child Welfare

Role of Informatoin Technology in Environment and human health.

Case Studies. (6 lectures)

Unit-8 Field Work :

* Visit to a local area to document environmental assets - river/forest/grassland/hill/mountain.
* Visit to a local polluted site-urban/Rural/ Industrial/ Agricultural.
* Study of common plants, insects, birds.
* Study of simple ecosystems- pond, river, hill slopes, etc. (Field work equal to 5 lecture hours).

References

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Pub. Ltd. Bikaner.
2. Bharucha, Frach, The Biodiversity of India, MApin Publishing Pvt. Ltd. Ahmedabad-380013, India, E-mail : mapin@icenet.net (R).
3. Brunner R.C. 1989, Hazardous Waste Incineration, Mc. Graw Hill Inc. 480p.

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4. Clark R.S., Marine pollution, Slanderson Press Oxford (TB).
5. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, EnvironmentalEncyclopedia, Jaico Pub. House, Mumbai 1196 p.
6. De A.K., EnvironmentalChemistry, Wiley Eastern Ltd.
7. Down to Earth, Centre for Science and Environment (R).
8. Gleick, H.P., 1993. Water in crisis, Pacific Institute for Studies in Dev. Environment & Security Stockholm Env. Institute, Oxford Univ. Press, 473p.
9. Hawkins R.E. Encyclopedia of Indian NaturalHistory, Bombay Natural HistorySociety, Bombay (R).
10. Heywood, V.H. & Watson, R.T. 1995. Global Biodiversity Assessment, Cambridge Uni. Press 1140p.
11. Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p.
12. Mackinney, M.L. & Schoch, RM 1996, Environmental Science systems & solutions, Web enhanced edition. 639p.
13. Mhaskar A.K., Mayyer Hazardous, Tekchno-Science Publications (TB)
14 Miller T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB).
15. Odum, E.P. 1971, Fundamentals of Ecology. W.B. Saunders Co. USA, 574p.
16. Rao M.N. & Datta, A.K. 1987 Waste Water Treatment. Oxford & TBH Publ. Co. Pvt. Ltd. 345p.
17. Sharma, B.K. 2001, Environmental Chemistry, Goal Publ. House, Meerut.
18. Surveyof the Environment, The Hindu (M).
19. Townsend C., Harper J. and Michael Begon. Essentials of Ecology, BlackwellScience (TB).
20. Trivedi R.K., Handbook of Environmental Laws, Rules, Guidelines, Comliances and Standards, Vol. I and II Enviro Media (R).
21. TrideviR.K. and P.K. Goal, Introduction to air pollution, Techno

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Science Publications (TR).

22. Wagner K.D., 1998, Environmental Management, W.B. Saunders co. Philadelphia, USA 499p.

23. Atext book environmental education G.V.S. Publishers byDr. J.P. Yadav.

(M) Magazine

(R) Reference

(TB) Textbook

The scheme of the paper will be asunder :

The subject of Environmental Studies will be included as a qualifying paper in all UG Courses (including professional courses also) and the students will be required to qualify the same otherwise the final result will not be declared and degree will not be awarded. Annual System : The duration of the course will be 50 lectures. The examination will be conducted alongwith with the annual examinations. Wherever semester system prevails the environmental Course of 50 lectures will be conducted in the second semester and the examination shall be conducted at the end of the second semester.

Exam. Pattern : In case of awarding the marks, the question paper will carry 100 marks. Theory : 75 marks, Practical : 25 marks. The structure of the question paper will be:

Part- A: Short Answer Pattern : 25 marks

Part- B : EssayType with inbuilt choice: 50 marks

Part-C : Field Work (Practical) : 25 marks

Instructions for Examiners :

Part- A : Question No. 1 is compulsory and will contain ten short- answer type question of 2.5 marks each covering the entire syllabus

Part-B : Eight essay type questions (with inbuilt choice) will be set from the entire syllabus and the candidate will be required to answer any four of them. Each question will be of 12.5 marks.

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The examination of the regular students will be conducted by the concerned college/Institute. Each student will be required to score minimum 35% marks separately in theory and practical. The marks in this qualifying paper will not be included in determining the percentage of marks obtained for the award of degree. However, these marks will be shown in the detailed marks certificate of the students.

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Department of Geography
Maharshi Dayanand University, Rohtak
Scheme of Examination
w. e. f. Session 2015-16

B.A. Geography (Pass Course)

Paper No.	Title	Internal Assessment	External Assessment	Maximum Marks	Time
	Semester-I				
101	Geography of India	15	60	75	3 Hours
102	Maps and scales (Practical)			25	3 Hours
	Semester-II				
103	Physical Geography I	15	60	75	3 Hours
104	Representation of Physical Features (Practical)			25	3 Hours
	Semester-III				
201	Physical Geography II	15	60	75	3 Hours
202	Representation of Climate Data (Practical)			25	3 Hours
	Semester – IV				
203	Human Geography	15	60	75	3 Hours
204	Maps projections (Practical)			25	3 Hours
	Semester – V				
301	Economic Geography	15	60	75	3 Hours
302	Distribution Maps and Diagrams (Practical)			25	3 Hours
	Semester- VI				
303	Introduction to Remote Sensing, GIS and Quantitative Methods	15	60	75	3 Hours
304	Introduction to Remote Sensing and Field Survey Report (Practical)			25	3 Hours

Paper 101 Geography of India

Internal Assessment Marks: 15
External Assessment Marks: 60
Maximum Marks : 75
Time : 3 Hours

Note: There shall be nine questions in all. The candidates have to attempt five questions including Question 1 which is compulsory comprising six short questions to be answered in 15-20 words each. In addition the candidates have to attempt four more questions selecting at least one from each section. All questions carry equal marks.

SECTION- A

1. India: Location, relief structure and drainage systems.
2. Climate, soils, natural vegetation, and natural disasters in India.

SECTION – B

3. Population: distribution, density, growth and composition.
4. Migration, human settlement types and levels of urbanization.

SECTION-C

5. Land resources, irrigation, regional variations in cropping pattern, Green revolution and problems of Indian agriculture.
6. Energy and mineral resources: coal, petroleum, hydroelectricity and nuclear energy, iron ore, manganese and mica.

SECTION-D

7. Industries- iron and steel, cotton textile, sugar and petrochemical industries; and industrial regions of India.
8. Modes of transport and communication, international trade changing pattern of export and import.

Suggested Readings

1. Deshpande, C D: India – A Regional Interpretation, Northern Book Depot, New Delhi, 1992.
2. Singh, Gopal : Geography of India, Atma Ram and Sons, 2006.
3. Shafi, M : Geography of South Asia, McMillan and Company, Calcutta, 2000.
4. Singh, R L (ed) : India : A Regional Geography, National Geographical Society, India, Varanasi, 1971.
5. Singh, Surender and Saroha, Jitender : Geography of India, Access Publishing India Pvt. Ltd., New Delhi, 2014.
6. Spate, D H K and ATA Learmonth : Indian and Pakistan – Land, People and Economy, Methnen and Company, London, 1967.

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Paper 102 Maps and Scales (Practical)

Maximum Marks: 25
Time : 3 Hours

Distribution of Marks
Exercises = 15
Record File = 05
Viva-voce = 05

Note: There will be four questions in all and candidate has to attempt three exercises.

	Exercises
1. Introduction to Cartography.	
2. Maps and their types.	
3. Map Scales.	
(i) Methods of Expressing a scale	2
(ii) Conversion of Statement of Scale into R.F. and vice-versa.	
(iii) Plain Scale (Km and mile)	
(iv) Comparative Scale	1
(v) Diagonal Scale	1
4 Measurement of Distances and Areas on Maps	
5 Enlargement and Reduction of Maps	

Suggested Readings:

1. F.J. Monkhouse and H.R. Wilkinson (1972) Maps and Diagrams, Mothuen and Co. Ltd., London
2. L.R. Singh and Raghuvander Singh (1973), Map Work and Practical Geography, Central Book Depot, Allahabad.
3. R.I. Singh and P.K. Dutt (1968), Elements of Practical Geography, Students Friends, Allahabad.
4. Singh Gopal (2004) 4th edition, Map Work and Practical Geography, Viksa Publication House.

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Paper 103 Physical Geography – I

Internal Assessment Marks: 15
External Assessment Marks: 60
Maximum Marks : 75
Time : 3 Hours

Note: There shall be nine questions in all. The candidates have to attempt five questions including Question 1 which is compulsory comprising six short questions to be answered in 15-20 words each. In addition the candidates have to attempt four more questions selecting at least one from each section. All questions carry equal marks.

SECTION- A

1. Definition, Nature, scope and fields of Physical Geography.
2. Interior of the earth, Geological time scale and rocks.

SECTION- B

3. Earth movements; organic, eperogenic, earth quakes and volcanoes.
4. Theory of Isostasy ; Wegner's theory of continental drift and Plate tectonic theory.

SECTION- C

5. Weathering; causes and its types.
6. Mass-movements; causes, its types and impacts.

SECTION- D

7. Concept of cycle of erosion; cycle of erosion by W.M.Davis and
8. Process of Wind, River, Underground water, Glaciers and Sea waves.

References

1. Sharma H.S. Perspective in Geomorphology, Concept, New Delhi 1980.
2. Singh Savinder, Geomorphology, Prayag Publication, Allahabad 1998.
3. Singh Savinder, Physical Geography Prayag Publication, Allahabad, 1998.
4. Sparks B.W. Geomorphology, Jojngman, London, 1960.
5. Thornbury W.D. 1969 Principles of Geomorphology, New York, John Wiley & Sons.

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Paper 104 Representation of Physical Features (Practical)

Maximum Marks: 25
Time : 3 Hours

Distribution of Marks
Exercises = 15
Record File = 05
Viva-voce = 05

Note: There will be four questions in all and candidate has to attempt three exercises.

		Exercises
1.	Introduction to Topographical Sheets India and adjacent countries	3
.	Degree Sheet	
.	Half Degree Sheet	
.	Quarter Degree Sheet	
.	Conventional Signs	
2.	Methods of representing relief	1
3.	Representation of Topographical features by contours. Slopes (Concave, convex, undulating and terraced) Valleys (V Shaped, U shaped, Gorge, Re-entrant) Ridges (Conical hill, Volcanic hill, Plateau, Escarpment) Complex features (waterfall, sea cliff, overhanging cliff, Fiord coast)	4
4.	Drawing of Profiles	5
(a)	Cross Profiles: Serial, superimposed, projected and composite profiles.	
(b)	Longitudinal profiles	

Suggested Readings:

1. F.J. Monkhouse and H.R. Wilkinson (1972) Maps and Diagrams, Mothuen and Co. Ltd., London.
2. L.R. Singh and Raghuvander Singh (1973), Map Work and Practical Geography, Central Book Depot, Allahabad.
3. R.I. Singh and P.K. Dutt (1968), Elements of Practical Geography, Students Friends, Allahabad
4. Singh Gopal (2004) 4th edition, Map Work and Practical Geography, Vikas Publication House, New Delhi.

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Paper 201 Physical Geography-II

Internal Assessment Marks: 15
External Assessment Marks: 60
Maximum Marks : 75
Time : 3 Hours

Note: There shall be nine questions in all. The candidates have to attempt five questions including Question 1 which is compulsory comprising six short questions to be answered in 15-20 words each. In addition the candidates have to attempt four more questions selecting at least one from each section. All questions carry equal marks.

SECTION-A

1. Weather and Climate; Origin, composition and structure of atmosphere.
2. Insolation, Global heat budget, Horizontal and vertical distribution of temperature, inversion of temperature.

SECTION-B

3. Atmospheric pressure- measurement and distribution, pressure belts, planetary winds, Monsoon, Jet Streams EL NINO- La Nina Phenomenon and Local winds.
4. Humidity- measurement and variables, evaporation, condensation, precipitation forms and types and distribution, hydrological cycle.

SECTION-C

5. Air masses- concept and classification; Fronts- type and characteristics, Weather disturbances- tropical and extra-tropical cyclones.
6. Climate classification by Koppen; climatic change and global warming.

SECTION-D

7. Configuration of oceanic floors and surface relief of Pacific, Atlantic and Indian Oceans; temperature and salinity of oceans.
8. Tides, waves and oceanic currents; circulation in Pacific, Atlantic and Indian Oceans; Oceanic resources.

Suggested Readings:

1. Barry, RG and Chorley R.J., Atmosphere, Weather and Climate, Routledge, 1998.
2. Critchfield, H., General Climatology, Prentice-Hall of India, 2002.
3. King, C. Oceanography for Geographers, Edward Arnold, London, 1975.
4. Trewartha, GT: An Introduction to Climate, Mc-Graw Hill, New York, 1981.
5. Trewartha, G.T., The Earth's Problems Climates, University of Wisconsin Press, USA.

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Paper – 202 Representation of Climatic Data (Practical)

Maximum Marks: 25
Time : 3 Hours

Distribution of Marks
Exercises = 15
Record File = 05
Viva-voce = 05

Note: There will be four questions in all and candidate has to attempt three exercises.

1. Measurement of temperature, rainfall, pressure and humidity.
2. Representation of temperature and rainfall.
   (i) Line and Bar Graph – 1 Exercise.
   (ii) Distribution of temperature (180 therms) – 1 Exercise.
   (iii) Distribution of rainfall (180 hytes) – 1 Exercise.
   (iv) Hythergraph - 1 Exercise.
   (v) Rainfall deviation diagram - 1 Exercise.
3. Climograph (wet and dry places) - 2 Exercise.
4. Distribution of pressure (180 bars) - 2 Exercise.
5. Weather map Interpretation (January & July) - 2 Exercise.
6. Change and tape survey – 2 Exercise.

Suggested Readings:

1. Mishra R.P. and Ramesh A. 1999. Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Monkhouse, FJ, and Wilkinson H.R., 1972. Maps and Diagrams, Methuen Press, London
3. Robinson, A.H. et.al. Elements of Cartography, John Wiley & Sons, 1995.
4. Singh, R.L., 1979. Elements of Practical Geography, Kalyani Publisher, New Delhi.

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Paper 203 Human Geography

Internal Assessment Marks: 15
External Assessment Marks: 60
Maximum Marks : 75
Time : 3 Hours

Note: There shall be nine questions in all. The candidates have to attempt five questions including Question 1 which is compulsory comprising six short questions to be answered in 15-20 words each. In addition the candidates have to attempt four more questions selecting at least one from each section. All questions carry equal marks. **Section -I**

1. Nature and scope of Human Geography, Branches of Human Geography, Approaches to the study of Human Geography.
2. Division of Mankind: Spatial distribution of race and tribes of India; concept of men-environment relation : A historical approach.

Section - II

3. Human adaptation to the environment (i) Cold region – Eskimo (ii) Hot region- Bushman (iii) Plateau – Gonds (iv) Mountains – Gujjars
4. Meaning, nature and components of resources; Classification of resources – renewal and non- renewable ; biotic and aboitic, recyclable and non recyclable.
   Distribution, utilization and conservation of biotic (flora and fauna) and aboitic (water, minerals and energy) resources.

Section - III

5. Distribution and density of world population, population growth, fertility and mortality patterns.
6. Concept of over, under and optimum population; Population theories: Malthus, Ricardo and Marx.

Section-IV

7. Rural settlements: Meaning, classification and types. Urban settlements: Origin, classification and functions of towns.
8. Population pressure, resource use and environment degradation; sustainable development, concept of deforestation, soil erosion, air and water pollution.

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Suggested Readings:-

1. Agarwal, A etal : The Citizen's Fifth Citizen's Report, Centre for Science & Environment, New Delhi, 1999.
2. Alexander, John. W. : Economic Geography, Prentice Hall of India Ltd., New Delhi, 1988.
3. Bergwan, Edward E: Human Geography: Culture Connections and Landscape, Prentice-Hall, New Jersey, 1985.
4. Carr, M. Patterns: Process and Change in Human Geography, McMillan Education, London, 1987.
5. Chandna, R.C. : A Geography of Population : Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi, 1986.
6. DeBlij, H. J. : Human Geography, Culture, Society and Space, John Wiley, New York, 1996.
7. Fellman, J.L. : Human Geography-Landscapes of Human Activities, Brown and Benchman Pub., USA, 1997.
8. Global Environment Outlook: Earthscan, London, 2000.
9. McBride, P.J. Human Geography; Systems Patterns and Change, Nelson, UK and Canada, 1996.
10. Michael, Can: New Patterns : Process and Change in Human Geography, Nelson, 1996.

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Paper 204 Maps Projections (Practical)

Maximum Marks: 25
Time : 3 Hours

Distribution of Marks
Exercises = 15
Record File = 05
Viva-voce = 05

Note: There will be four questions in all and candidate has to attempt three exercises.

Total Exercises = 15

1. Introduction to Map Projection: Meaning, Classification and importance; Characteristics of latitudes and longitudes lines.
2. Cylindrical projections: Characteristics, applications and drawing; (3)
   (i) Simple cylindrical projection
   (ii) Cylindrical equal area projection.
   (iii) True shape or orthomorphic or Mercator's Projection. (5)
3. Conical Projections: Characteristics, applications and drawing.
   (i) Simple conical projections with one standard parallel
   (ii) Simple conical projection with two standard parallel
   (iii) Bonne's Projection
   (iv) Polyconic projection.
   (v) International Map Projection.
4. Zenithal Projections: Characteristics, applications and drawing. (5)
   (i) Polar Zenithal Equidistant Projection.
   (ii) Polar Zenithal Equal Area Projection
   (iii) Polar Zenithal Gnomonic Projection
   (iv) Polar Zenithal Stereographic Projection.
   (v) Polar Zenithal Orthographic Projection
5. Characteristics, applications and drawings of (i) Sinosoidal and (ii) Mollweide Projections. (2)
6. Plane Table Survey. (2)

Suggested Readings:-

1. Goyal K.K.1981.. Practical Geography, Manthan Publication, Rohtak.
2. Gregory S. 1963. Statistical Methods and the Geography, Longman, London.
3. Khan, A.A. 1996. Text Book of Practical Geography, Concept, New Delhi,.
4. Lawarence, GRP1968. Cartographic Methods, Methuen, London,.
5. Monkhouse, F.J. and Wilkinson, H.R1994. Maps and Diagrams, Methuen, London,
6. Pal. S.K. 1998: Statistics for Geoscientist- Techniques and Applications, Concept Publication, New Delhi,.
7. Sarkar, A.K 1997: Practical Geography-A Systematic Approach, Orient Longman, Calcutta,.
8. Singh, R.L. 1972. Elements of Practical Geography, Kalyani Pub., New Delhi
9. Steers, J.B. Map Projections; University of London Press, London.

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Paper 301 Economic Geography

Internal Assessment Marks: 15
External Assessment Marks: 60
Maximum Marks : 75
Time : 3 Hours

Note: There shall be nine questions in all. The candidates have to attempt five questions including Question 1 which is compulsory comprising six short questions to be answered in 15-20 words each. In addition the candidates have to attempt four more questions selecting at least one from each section. All questions carry equal marks.

Section A

1. Nature, scope and relationship of economic geography with economics and other branches of social sciences.
2. Classification of economic activities and their impact on environment.

Section B

3. World natural resources: Types, bases and classification.
4. Conservation and utilization of natural resources.

Section C

5. Spatial distribution of food (rice and wheat), commercial (cotton and sugarcane) and plantation crops (tea, rubber and coffee).
6. Classification of mineral resources (ferrous and non-ferrous), distribution and production of coal, iron ore, petroleum and natural gas.

Section D

7. Classification of industries, world distribution and production of iron and steel and textile industry, major industrial complexes of the world.
8. Transport, communication and trade: geographical factors in their development, major modes of water, land and air transport, recent trends in international trade

Suggested Readings:

1. Hartshorne TN and Alexander JW. 1988. Economic Geography, Prentice Hall, New Delhi.
2. Jones CF and Darkenwald GG. 1975. Economic Geography. McMillan Company, New York
3. Thomas, RS. 1962. The Geography of Economic Activities. McGraw Hill, New York.
4. Wheeler J et al. 1995. Economic Geography. John Wiley, New York.

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Paper 302 Distribution Maps and Diagrams (Practical)

Maximum Marks: 25
Time : 3 Hours

Distribution of Marks
Exercises = 15
Record File = 05
Viva-voce = 05

Note: There will be four questions in all and candidate has to attempt three exercises.

1. Principal of map design and layout
2. Symbolization: point, line and area symbol
3. Lettering and toponomy
4. Mechanics of map construction
5. Distribution maps
   (i) Qualitative distribution maps
      - Choroschematic maps- 1 Exercise
      - Chorochromatic maps- 2 Exercise

   (ii) Quantitative distribution Maps
      - Isopleth maps-3 Exercises
      - Choropleth maps-3 Exercises
      - Dot maps-3 Exercises
      - Diagrammatic maps- 3 Exercises.
6. Prismatic Compass Survey – 2 Exercises.

Suggested readings:

1. Mishra RP and Ramesh A. 1999. Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Monkhouse FJ and Wilkinson HR. 1972. Maps and Diagrams, Methuen Press, London
3. Singh Gopal. 2004. Map Work and Practical Geography, Vikas Publication House, New Delhi.
4. Singh RL. 1979. Elements of Practical Geography, Kalyani Publishers, New Delhi

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Paper-303-Introduction to Remote Sensing, GIS & Quantitative Methods

Internal Assessment Marks: 15
External Assessment Marks: 60
Maximum Marks : 75
Time : 3 Hours

Note: There shall be nine questions in all. The candidates have to attempt five questions including Question 1 which is compulsory comprising six short questions to be answered in 15-20 words each. In addition the candidates have to attempt four more questions selecting at least one from each section. All questions carry equal marks.

Section-A

1. Introduction to Aerial Photographs: their advantages and types.
2. Elements of aerial Photo interpretation.

Section-B

3. Introduction to Remote Sensing; Electromagnetic spectrum, stages in remote sensing, type of satellites.
4. Types of Imageries and their application in various fields such as agriculture, environment and resource mapping.

Section-C

5. Introduction to Geographical Information System: Definition, purpose, advantages and software and hardware requirements.
6. Application of GIS in various fields of geography.

Section-D

7. Measure of Central Tendency: Mean, Median and Mode.
8. Measure of Dispersion: Range, Quartile deviation and Mean deviation, Standard deviation, Coefficient of variation.

Suggested Readings:

1. Aslam Mahmood 1993. Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi,.
2. John R. Jensen 2009. Remote Sensing of the Environment;, An Earth Resource Perspective, Pearson Education, (India Edition) New Delhi,
3. Kumar Meenakshi 2001. Remote Sensing, NCERT, New Delhi,
4. Lillesand and R.W.Kiefer,2005. Remote Sensing and Image Interpretation, John Wiley and Sons.
5. Pritvish Nag, and M.Kudrat 1998. Digital Remote Sensing, Concept Publishing Company, New Delhi,

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M.A. Geography Semester-III Session 2016-17 onwards

17GEO23CL1: PRACTICAL: FIELD WORK

Credit: 03 (0+0+3)
Distribution of Marks
Lab Work Test: 20
Record on Lab/Field Work: 15
Viva-Voce: 15
Total Marks: 50
Time: 4 hrs.

Leaning Objectives:
The Objective of the course is to provide an opportunity to the students with the understanding of ground reality of a specific chosen Geographical area by observation, and learn field survey techniques.

Learning Outcomes:
Students would be able to understand the basic socio-economic characteristics of the chosen area through the field methods/ techniques and build the capability of writing a report.

Field Work in Geographical studies- Role, Value and Ethics; Field techniques- Merits and Demerits; Source of Data- Primary and Secondary; Collection of data: methods of primary data collection- Observation method, interview method, through questionnaire, through schedule and other methods; Questionnaire and Schedule; Processing and analysis of data.

Field Work and Report writing: Identification of research problem; data collection through field visit; Preparing research design- aims and objectives, methodology, analysis, interpretation and writing of report.

Note-1:

1. The students shall conduct physical/socio-economic survey in the area as decided by the department under the supervision of a faculty member (s) of the department.
2. A group of 15 students will prepare a report based on primary and secondary data collected during field work.
3. The duration of the field work should not exceed ten days.
4. One copy of the report on A-4 size paper should be submitted in soft binding.

Note-2:

The question paper of Lab work test shall contain three questions in all. Candidate(s) are required to attempt two questions in all. All questions carry equal mark

Recommended Readings:

1. Ahuja, Ram (2003), Social Survey and Research (Hindi version), Rawat Publications, Jaipur.
2. Basotia, G. R. and Sharma, K. K. (2002), Research Methodology, Mangal Deep Publications, Jaipur.
3. Creswell J. (1994), Research Design: Qualitative and Quantitative Approaches, Sage Publications.
4. Dikshit, R. D.(2003), The Art and Science of Geography: Integrated Readings, Prentice-Hall of India, New Delhi.
5. Evans M. (1988), "Participant Observation: The Researcher as Research Tool" in Qualitative Methods in Human Geography, eds. J. Eyles and D. Smith, Polity.
6. Gideon Sjoberg and Roger Nett (1992), A Methodology for Social Research, Rawat Publications,Jaipur.
7. Mukherjee, Neela (1993), Participatory Rural Appraisal: Methodology and Application. Concept Publs. Co., New Delhi.
8. Mukherjee, Neela (2002), Participatory Learning and Action: with 100 Field Methods. Concept Publs. Co., New Delhi.
9. Robinson A. (1998), "Thinking Straight and Writing That Way", in Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
10. Special Issue on "Doing Fieldwork" The Geographical Review 91:1-2 (2001).
11. Stoddard R. H. (1982), Field Techniques and Research Methods in Geography, Kendall/Hunt.
12. Wolcott, H. (1995), The Art of Fieldwork, Alta Mira Press, Walnut Creek, CA.

ADVANCE POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (APGDCA) (Regular)

SCHEME OF EXAMINATIONS
With effect from : 2015-16

Semester - 1

Paper Code	Title of Paper	External marks	Internal Assessment	Total Marks
APGDCA-101	Foundation Course in IT And MS-Office -2000	80	20	100
APGDCA-102	Computer Networking & Multimedia	80	20	100
APGDCA-103	Programming in C and Data Structure	80	20	100
APGDCA-104	Computer Organization And Architecture	80	20	100
APGDCA-105	Practical-I (Based on APGDCA-101 & 103)	80	20	100

Semester - 2

Paper Code	Title of Paper	External marks	Internal Assessment	Total Marks
APGDCA-201	VISUAL C++	80	20	100
APGDCA-202	Visual Basic & Oracle	80	20	100
APGDCA-203	System Analysis & Design	80	20	100
APGDCA-204	Practical-II (Based on APGDCA-201& 202)	80	20	100
APGDCA-205	Project Work, Report & Viva-Voce (Based on any Language, Software Development Tool, etc.)	80	20	100