



**APPLICABILITY OF REGULATIONS FOR THE TIME  
BEING IN FORCE**

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

**GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of Geography (Semester System) (Effective from the First Year Admissions for the Academic Session 2008-2009)**

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

- (i) Terminal Evaluation : 80 %
- (ii) Continuous Assessment : 20 %
- (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.
- (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :
  - (a) Written Test : 25 (reduced to 5)
  - (b) Snap Test : 25 (reduced to 5)
  - (c) Participation in Class discussion : 15 (reduced to 3)
  - (d) Term Paper : 25 (reduced to 5)
  - (e) Attendance : 10 (reduced to 02)

**Total : 100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under :

<i>Attendance Component</i>	<i>Marks for Theory Papers</i>
(a) 75 % and above upto 85 %	1
(b) Above 85 %	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF  
GEOGRAPHY FOR M.A. (SEMESTER SYSTEM) EXAMINATION 2015-2016.

SEMESTER-I for the examination of November/December

	<i>Te</i>	<i>Marks</i>	<i>Credits</i>
Paper-I	: Geographic Thought	100	4
Paper-II	: Geomorphology	100	4
Paper-III	: Cartography (Theory and Practical)	100	4
Paper-IV	: <i>Any one of the following optional courses</i>		
Option (i)	: Fundamentals of Population Geography	100	4
Option (ii)	: Fundamentals of Agricultural Geography	100	4
Option (iii)	: Political Geography	100	4
Option (iv)	: Geographical Perspectives on Sustainable Development	100	4
Option (v)	: Geography and Ecosystems	100	4
Option (vi)	: Contemporary issues in Human Geography	100	4
<b>Total :</b>		<b>400</b>	<b>16</b>

SEMESTER-II for the examination of April/May

	<i>Te</i>	<i>Marks</i>	<i>Credits</i>
Paper-I	: Climatology	100	4
Paper-II	: Geography of India (Systematic and Regional)	100	4
Paper-III	: Fundamentals of Remote Sensing (Theory and Practical)	100	4
Paper-IV	: <i>Any one of the following optional courses</i>		
Option (i)	:		
Option (ii)	:		
Option (iii)	:		
Option (iv)	:		

## SEMESTER-III

**OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.A. GEOGRAPHY  
(SEMESTER SYSTEM) Examination, 2015-2016**

**SEMESTER-I**

There will be four papers, three compulsory and one optional (out of the offered optional papers), of 100 marks each including practical examination as under :

*t e*

*Mar s    Cred ts*

**Course Content :****UNIT-I : Historical Developments upto 19th Century**

- (i) Contributions of the Greeks and Romans with special reference to Herodotus, Eratosthenes, Strabo and Ptolemy.
- (ii) Geography in the Muslim world.
- (iii) Geography in the Modern Period : Contributions of Varenus, Kant, Humboldt and Ritter.

**UNIT-II : Developments in 20<sup>th</sup>**

**List of Readings :**



2. Jensen, A.H.: *Geography Its History and Concepts*, Sage Publications, Thousand Oaks, London, Thousand Oaks, New Delhi, 1999.
3. Johnston, R. J. & Claval, P.: *Geography since the second world war An International Survey*, Crown Halm, Sydney, 1984.
4. Johnston, R. J. and Sidaway, J.D.: *Geography and Geographers Anglo American Human Geography since 1945*, Arnold, London, 2004.
5. Johnston, R. J.: *Philosophy and Human Geography*, Edward Arnold, London, 1983.
6. Minshull, R.: *The Changing Nature of Geography*, Hutchinson, University Library, London, 1970.

**Pedagogy :** The students are to be encouraged to interact with students from other streams of knowledge i.e. physical, social sciences and humanities for a proper grounding into geography. All issues relating to philosophy, methodology and history of the discipline are to be explained by asking the students to prepare write ups on specific problems. Emphasis will be both on theoretical and practical aspects.

**UNIT-II**

- (iv) Earth Movements: Epeirogenic, orogenic, cymatogenic.
- (v) Morphogenetic regions.
- (vi) Mass movement of debris.

**UNIT-III**

- (vii) Volcanic topography.
- (viii) Karst topography.
- (ix) Fluvial, Aeolian, Glacial and Marine Landforms and their processes.

**UNIT-IV**

- (x) Models of landscape evolution and slope development: Ideas of Davis, Penck, and King.
- (xi) Multicyclic and polygenetic evolution of landscapes.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignm

4. Chorley, R.J., Beckinsale, R.P. and Dunn, A.J.: *The History of the Study of Landforms or the Development of Geomorphology*, Volume One: Geomorphology Before Davis, Routledge, London, 1964.
5. Chorley, R.J., Beckinsale, R.P. and Dunn, A.J.: *The History of the Study of Landforms or the Development of Geomorphology*, Volume Two: The Life and Work of William Morris Davis, Methuen & Co. Ltd., London, 1973.
6. Chorley, R.J. and Beckinsale, R.P.: *The History of the Study of Landforms or the Development of Geomorphology* Volume 3: Historical and Regional Geomorphology 1890–1950, Routledge, London, 1991.
7. Cooke, R. U. and A., Warren: *Geomorphology in Deserts*, Batsford, London, 1973.
8. David, S.G. Thomas: *Arid Zone Geomorphology: Pattern Formation and Change in Dry Lands* Wiley Blackwell, New York, 2011.
9. Davis, W. M.: *Geographical Essays*, Dover, Boston, 1909.
10. Douglas, W.B., Robert, S.A.: *Textbook of Geomorphology*, Wiley Blackwell, New York, 2011.
11. Embleton, C. and C. A. M., King: *Glaciation and Periglacial Geomorphology*, Arnold, London, 1968.
12. Fairbridge, R.W.: *Encyclopedia of Geomorphology*, Reinhold, New York, 1969.
13. Goudie, A.S.: *Arid and Semi-arid Geomorphology*, Cambridge University Press, England, 2013.
14. Holmes, A.: *Principles of Physical Geography*, Nelson, London, 1968.
15. Hubbard, B. and Glasser, N.: *Field Techniques in Glaciology and Glacial Geomorphology*, John Wiley & Sons Ltd., The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England, 2005.
16. King, L.C.: *The Morphology of the Earth*, Hafner, New York, 1962.
17. Melhorn, W. N. and R. C., Flemal: *Lectures of Landform Development*, State University of New York, Binghamton, 1976.
18. Migon, Piotr: *Great Landscapes of the World*, Oxford University Press Inc., New York, 2006.
19. Paul, A.L., Mike, G., David, J.M., David, W.R.: *Geographical Information Systems and Science*, Wiley Blackwell, New York, 2010.
20. Pavlopoulos, K., Evelpidou, N. and Vassilopoulos, A.: *Mapping Geomorphological Environments*, Springer-Verlag Berlin Heidelberg, 2009.
21. Penck, W.: *Morphological Analysis of Landforms*, St. Marisip Press, London, 1953.
22. Pitty, A. F.: *Introduction to Geomorphology*, Methuen, London, 1971.

23. Richard, J.H.: *Fundamentals of Geography* (Routledge Fundamentals of Physical Geography), Routledge, Taylor & Francis Group, London, 2011.
24. Scroder, J.F.: *Textbook of Geography*, Elsevier, London, 2013.
25. Singh, Savinder: *Geography*, Prayag, Prakashan, Allahabad, 1998.

#### Further Readings:

1. Skinner, B. J. and S.C., Porter: *Dynamic Earth*, John Wiley, New York, 1995.
2. Small, R. J.: *Study of Landforms*, Cambridge University Press, Cambridge, 1970.
3. Strahler, Alan and Arthur Strahler: *Physical Geography: Principles and Systems of the Human Environment*, John Wiley & Sons, New York, 3<sup>rd</sup> Edition, 2005.
4. Thornbury, W. D.: *Principles of Geography*, John Wiley, New York, 1969.
5. Twidale, C. R.: *Analysis of Landforms*, John Wiley, London, 1976.
6. Twidale, C.R.: *Structure of Landforms*, A.N.U. Press, Canberra, 1971.
7. Wang, Chi-Yuen and Manga, M.: *Earthquakes and Water*, Lecture Notes in Earth Sciences, Springer-Verlag Berlin Heidelberg, 2010.

#### Pedagogy :

The study of this paper needs adequate understanding of geomorphic forms and processes. It can be achieved through suitable use of audio-visual aids, photographs, maps, other forms of illustrations and, depending upon feasibility, field visits.

#### Paper-III : Cartography (Theory and Practical)

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

#### Distribution of Marks :

- |   |          |
|---|----------|
| (i) Written paper of three hours duration in which candidates will be required to attempt five questions. | 50 Marks |
| (ii) Practical record and viva-voce (20+10).  | 30 Marks |



4. Assessment of practical record and viva voce on it will be done by a Board of Examiners, consisting of one external examiner and one internal examiner, as practical examinations.
5. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

#### **List of Readings :**

##### **Essential Readings:**

1. Birch, T.: *Maps: Topographical and Statistical*, Clarendon Press, Oxford, 1949.
2. Bolstad, P.: *Geographical Information Systems: A First Text on Geographic Information Systems*, Second Edition, White Bear Lake, MN: Eider Press, 2005.
3. Brown, L.A.:



**UNIT-III**

- (iv) Population and resources: Concepts of optimum population, over-population and under-population.
- (v) Population - Resource regions, theories of population (Malthus, Ricardo and Marx).

**UNIT-IV**

- (vi) A comparative study of the population problems and policies of developed and less developed countries with special focus on the following countries :
  - (a) Developed: Canada, Japan.
  - (b) Less developed: China, India.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
  4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put Theil 495 2404 33(d)-6.0241( )-15.542(p),**





12. Wood, Robert: *Theoretical Population Geography*, Longman Inc., New York, 1982.
13. Woods, R.: *Population Analysis - Geography*

- (vi) Land capability classification (U.S. and Britain).

**UNIT-IV**

- (vii) A critical evaluation of the classification of world



(b) Human elements (Population - size, density & distri

5. Kasperson, R. E. et.al. (ed.) : *the structure of Political Geography* University of London Press, London, 1970.
6. Sudipta, Adhikari : *Political Geography* Rawat Publications, Jaipur, 1997.

**Further Readings :**

1. Carlson, Lucie : *Geography and Political Processes* Prentice Hall, New Jersey, 1971.
2. Cohen, S.B. : *Geography and Political Processes in a Divided World* Methuen & Co., London, 1968.
3. Edward K. Bergman : *Modern Political Geography* WMC Brown Company, Dubuque, Iowa, 1975.
4. Goblet, Y. M. : *Political Geography and the World Map* Philip & Sons, London, 1955.
5. Muir, Richard : *Modern Political Geography* Macmillan, London, 1995.
6. Percy, G. E. et.al. : *World Political Geography* Second Edition, Thomas Y. Growell Company, New York, 1957.
7. Pounds, N.J.G. : *Political Geography* 2nd Ed., McGraw-Hill, N.Y., 1972.
8. Short, John R. : *An Introduction to Political Geography* Routledge & Kegan Paul, London, 1982.

**Pedagogy :**

The students should be encouraged to engage in classroom discussions on the geographical aspects of political problems at the national and international levels.

**OR**

**Option (iv) : Geographical Perspectives on Sustainable Development**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

**Objectives :**

The course aims at creating better understanding of geographical perspectives of sustainable development in the world. The course attempts to grapple with the diversity both of political views on the subject and theoretical approaches and to show how thinking geographically can enhance our understanding of them. A variety of geographical perspectives presented will demonstrate to a student of geography that there is more to subject than they realize, and encourage them to pay greater attention to sustainable development in the future.

**UNIT-I**

- (i) Sustainable Development : Definition, concept and historical developments; difference between

4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**

#### List of Readings :

##### Essential Readings:

1. Adams, W.M.: *Green Development*



**Objectives :**

- To appraise the students with the interrelationship between man and the environment in which he/she lives and also his/her linkages with other organisms.
- The students are to be made aware of the importance of conserving biodiversity to maintain ecological balance.
- Examples of some human induced ecological changes have been highlighted and restoration measures suggested.

**Course Content :****Unit –I**

- (i) Ecosystem Approach : Definition, Characteristics and Components.
- (ii) Functional Characteristics of Ecosystems : Food chains and Food webs; Trophic levels; Ecological Pyramids; Energy Flow; Nutrient Cycling.
- (iii) Ecological succession and equilibrium.

**Unit II**

- (iv) Forest Ecosystem : Tropical, Temperate Forest and Boreal Ecosystems.
- (v) Grassland Ecosystem : Tropical Grassland and Temperate Grassland Ecosystems.
- (vi) Desert Ecosystem : Hot Desert and Cold Desert Ecosystem.

**Unit –III**

- (vii) Biodiversity: Concept; Importance; Causes for the loss of biodiversity; Hot spots.
- (viii) Ecological changes over space and time.
- (x) Ecosystem stability and disturbance.

**Unit –IV**

- (xi) Managed ecosystems : Agricultural, Urban.
- (xii) Case studies of human induced ecological changes :
  - (a) Hill ecosystems with specific reference to Punjab Siwaliks;
  - (b) Wetland ecosystems with specific reference to the Punjab wetlands;
  - (c) Agricultural ecosystems with specific reference to the Green Revolution in Punjab.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).

3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**



**UNIT-II**

- (iii) Geography of Difference and Exclusion : Geographies of identity and difference related to class, religion, caste, gender and location; social justice and political geography of difference.
- (iv) Geographical Organisation of Power : Spatial meaning and definitions of power; dynamics of spatio-social interactions and power; geopolitics of power-territoriality and globalization.

**UNIT-III**

- (v) Geography of Development : Meaning, definitions and approaches; construction of development indicators; linking globalisation and new forms of development; local initiatives towards development.

**UNIT-IV**

- (vi) Geography of social action and movements : Reasons and approaches to social movements; aspects of social security; social-environmental movements in India.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
  4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment. The marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**

**List of Readings :****Essential Readings:**

1. Agnew, J.A. and Corbridge, S.: *Mastering Space: Hegemony, Territory and International Political Economy*, Routledge, London, 1995.
2. Benko, G. and Strohmayer, U.: *Space and Social Geography: Interpreting Modernity and Postmodernity*, Blackwell Publishers, Oxford, London, 1997.
3. Bhabha, H.: *The Location of Culture*, Routledge, London and New York, 1994.

4. Corbridge, S., Martin, R. and Thrift, N.: *Money Power and pace*, Blackwell, Oxford, 1997.
5. Derek, G., Martin, R., and Smith, G.: *Human Geography: society, space and development*, Macmillan Publishers, Cambridge, 1994.
6. Johnston, R.J.: *A geographical introduction to human geography*, Blackwell, Oxford, 1987.

**SEMESTER II**

**Objectives :**

The overall objective of the course is to foster comprehensive understanding of atmospheric phenomena; dynamics and global climates.

**Course Content :****UNIT-I**

- (j) Climatology : History, development, subdivisions, importance.
- (ii) The earth's atmosphere : Composition and structure.
- (iii) Atmospheric energy and terrestrial radiation : Solar radiation; mechanism of heat transfer (conduction, convection, radiation); distribution of solar radiation over the earth; global radiation budget.
- (iv) Temperature : Concept, measurement, scales, daily and annual cycles of temperature; vertical distribution; world distribution.

**UNIT-II**

- (v) Atmospheric pressure and winds : Vertical variation of pressure; horizontal variation of pressure; forces affecting wind : pressure systems; surface winds.
- (vi) Atmospheric moisture and precipitation : Concept and measurement of atmospheric moisture; forms of condensation; adiabatic temperature changes, hydrologic cycle; formation and types of precipitation; global distribution of precipitation.

**UNIT-III**

- (vii) Air masses : Origin, classification and types of modification.
- (viii) Fronts : Types and characteristics, tropical and temperate cyclones.

**UNIT-IV**

- (ix) Need for and criteria of climatic classification.
- (x) Climatic classification with special reference to Koppen and Thornthwaite.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
  4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**







2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**

#### List of Readings :

##### Essential Readings:

1. Ahmad Aijazuddin: *oc a Geography*, Rawat Publication, New Delhi, 1999.
2. Chandna, R.C. : *Geography of Popu at on* Kalyani Publishers, Delhi, 1998.
3. Deshpande, C.D. : *Ind a A eg ona Interpretat on* ICSSR and Northern Book Center, New Delhi, 1992.
4. Gautam, A. : *Advanced Geography of Ind a* Sharda Pustak Bhawan, Allahabad, 2009.
5. Hussain, M. : *Geography of Ind a* Tata Mc Graw Hill Publishing Company Limited, New Delhi, 2008.
6. India, A Reference Annual : Ministry of Information & Broadcasting, GOI, New Del 1 1()-4.348252(s)3. 31()-4.346.024

**Further Readings :**

1. Center for Science and Environment : *State of India's Environment* New Delhi, 1985.
2. Desai, B. Sonalde et al. : *Human Development in India* Oxford University Press, New Delhi, 2010.
3. Dreze, Jean and Amartya Sen : *Indian Development* Oxford University Press, Delhi, 1996.
4. Farmer, B. H. : *Introduction to South Asia* Methuen, London, 1983.
5. Francis, Robinson : *The Cambridge Encyclopedia of India Pakistan Bangladesh Sri Lanka Nepal Bhutan and the Maldives* Cambridge University Press, London, 1989.
6. Gazetteer of India, Vol. I & II : Ministry of Information & Broadcasting, GOI, New Delhi, 1973.
7. Johnson, B.L.C: *India : Resources and Development* , Arnold Heinemann, London, 1980.
8. Singh, K.S. : *People of India Anthropological Survey of India* Dehradun, 1992.
9. Sivaramkrishnan, K.C., Amitabh Kundu and B.N. Singh, : *Oxford Handbook of Urbanisation in India* Oxford University Press, New Delhi, 2007.





**Pedagogy :**

Fundamentals of remote sensing are introduced by demonstrating construction exercises in the class. Students are provided aerial photographs and trained to identify and map physical and cultural features. Instruments such as pocket and mirror stereoscope are used to prepare stereo models. Students are given simple exercises on photogrammetry.

**Paper- IV :** *Any one of the following optional courses*

**Option (i): Cultural Geography**

Max. Marks	: 100
Terminal Exam.	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours

**Objectives :**

- To introduce Cultural Geography as a relevant and fertile sub-discipline within Geography.
- To introduce the conceptual and philosophical elements of cultural geography.
- To foster a comprehensive understanding of Culture as a concept in Geography.

**Course Content :****UNIT-I: INTRODUCTION TO CULTURAL GEOGRAPHY**

- (i) Nature, Scope and Significance of Cultural Geography.
- (ii) The place of Cultural Geography within Geography.
- (iii) Development of Cultural Geography:
  - (a) Culture and Empire.
  - (b) Cultural Landscape.
  - (c) Representational/ Non Representational Cultural Geography.

**UNIT-II: CONCEPTS IN CULTURAL GEOGRAPHY**

- (iv) Culture, Material/Non material elements.
- (v) Culture Areas, From Space to Place.
- (vi) Traces and Symbols.
- (vii) Representation/Non Representation.



4. Appadurai, A.: *Modernity at Large: Cultural Dimensions of Globalization*. University of Minnesota Press, Minneapolis, 1996.
5. Bertolas, R.J.(1998): Cross-cultural Environmental Perception of Wilderness. *Professional Geographer* 50(1), pp 98-111.
6. Cosgrove, D. & Jackson, P. (1987): New Directions in Cultural Geography, *Area* 19(2), pp 95-101.
7. Price, M. & Lewis, M. (1993): The Reinvention of Cultural Geography, *Modern Geographies*



**Course Contents :****UNIT-I**

- (i) Population and development planning.
- (ii) Population, Globalisation and Development.

**UNIT-II**

- (iii) Population growth in the context of :
  - (a) Manpower and employment.
  - (b) Educational planning.
  - (c) Housing needs.
  - (d) Health and family planning.
- (iv) Population distribution, migration and development.

**UNIT-III**

- (v) Population and environment.
- (vi) Population and world's Forests.
- (vii) Population and poverty.

**UNIT-IV**

- (viii) Development problems of more developed countries (Economic, Physical, Environmental, Population, Social and Health).
- (ix) Population and development (case studies of Japan, Brazil and India).

- Note*
- 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  - 2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).

**List of Readings :****Essential Readings:**

1. Allen, J.L.: *Environment*, The Dishkin Publishing Group, Inc. Connecticut, U.S.A., 1992.
2. Barnett, T.: *Social and Economic Development: An Introduction*, The Guilford Press, New York, 1989.
3. Cassen, R.: *Population and Development: Old Debates New Conclusions*, US Third World Policy Perspectives: No. 19, Overseas Development Council, Washington DC, 1994.
4. Courteny, P.P. (ed.): *Geographical Studies of Development*, Longman, United Kingdom.
5. Cunningham, W.P. and Saigo, B.W.:



**UNIT-IV**

- (x) Disaster Management: Pre-disaster phase, Emergency phase and Post-disaster phase.
- (xi) Disaster Management Mechanism in India: Disaster Management Agencies.
- (xii) Disaster Management Plans and Policies.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).

9. Hewitt, K.: *Concepts of Disaster: A Geographical Introduction to Disasters*, Longman, London, 1997.
10. Kasperson, J.X., Kasperson, R.E. and Turner, B. L.: *Concepts and Comparisons of Hazardous Environments in Natural Disasters* University Press, Tokyo, 1995.

**Further Readings:**

1. Schneider, S.K.: *Working with Disaster: Public Management and Crisis Treatments*, M.E. Sharpe, New York, 1995.
2. Quarantelli, E.L. (ed): *Hazards and Disaster: Perspectives on the Quest for Prevention*, Routledge, London, 1998.
3. Kapur, Anu and Others: *Disasters in India: Studies of Gravity*, Rawat, Jaipur, 2005.
4. Kapur, Anu: *Understanding India: A Geographical Study of Disasters* Sage Publications India Pvt Ltd, New Delhi, 2010.
5. M.C. Gupta, L.C. Gupta, B.K. Tamini, Vinod K. Sharma: *Manual on Natural Disaster Management in India* National Disaster Management Centre, New Delhi, 2000.

**Pedagogy :**

The students should be explained the interib5915(a)-6.63.0-3.01205(.0241(e.156626(r)-4.3506.0241(l)p6(u)6.0241(d)-6.0241(e)-1.

**UNIT-II**

- (iii) Development of marketing systems.
- (iv) Classification of Markets : Rural, urban and intra-urban.
- (v) Periodic Markets : Periodicity, locational and distributional patterns, fair as a market place.

**UNIT-III**

- (vi) Analysis of hinterlands, market size and hinterland relationships; modes and patterns of consumer and trader travels, consumer behaviour, functional hierarchy of markets; functional interaction between markets.

**UNIT-IV**

- (vii) Geographic study of markets in India, Ghana, Kenya and Germany.
- (viii) Role of market centres in regional development.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignm

5. Saxena, H.M.: *Geography of Transport and Market Centres* S. Chand & Co., New Delhi, 1975.
6. Saxena, H.M.: *Market Geography* Rawat Publications, 1990.
7. Thompson, Grahame; Frances Jennifer; Levacic Rosalind & Jeremy Mitchell: *Markets Hierarchies and Networks* Sage Publications, 1994.

**Further Readings :**

1. Christaller, W.: *Central Places in Southern Germany* Englewood Cliffs, Prentice Hall, 1966.
2. Hodder, B.W.: *Markets in West Africa* Ibadan Ibadan University Press, 1969.
3. Saxena, H.M.: *Urban Markets and Development* Rawat Publications, 1988.

**Pedagogy :**

Field visits should be organised to familiarize the students with markets in India and students should be encouraged to take up empirical exercises to understand patterns of distribution of markets in India.

**Option (v) : Geography of Water Resources**

Max. Marks	: 100
Terminal Exam.	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours

**Objectives :**

- To bring awareness among the students about the finite nature of water resources; declining per capita availability of quality water; escalating demands and the looming water crisis.
- To understand the need for better management of water resources through appropriate methods and conservation of water resources.

**Course Content:**

**UNIT-I**

- (i) Water as a focus of geographical interest, inventory and distribution of world's water resources (surface and sub-surface).
- (ii)

**UNIT-II**

- (iii) Water demand and use in (a) Agriculture (b) In





**Option (vi) : Administrative Geography**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

**Objectives :**

It enables the student to understand the role of Geography in area administration. It also helps them to appreciate the role of public policy and public finance in development of administrative areas.

**Course Content:****UNIT-I**

- (i) Administrative Geography; Definition, subject matter and significance: Interface between Geography and Public Administration and Political Geography.

**UNIT-II**

- (ii) Study of administrative areas in terms of (a) Evolution, (b) Nature, (c) Structural Attributes (hierarchy, size, shape and headquarters) and (d) Administrative area reform.

**UNIT-III**

- (iii) Area Administration: (a) Public Policy: Formulation, Implementation and Impact, (b) Public Finance: Public goods and public economy.

**UNIT-IV**

- (iv) Administrative System: (a) The world pattern, (b) Case studies: India and U.S.A.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in

**List of Readings :****Essential Readings:**

1. Alderfer, H.F.: *Local Government and Developing Countries*, McGraw Hill, New York, 1964.
2. Bennett, R.J.: *Geography of Public Finance*, Methuen, New York, 1980.
3. Coppock, J.T. and JRD Sewell (ed.): *Local Authorities and Public Policy*, Pergamon Press, Oxford, 1976.
4. Fesler, J.W.: *Area and Administration*, University of Alabama Press, Alabama, 1949.
5. Humes, S. and Martin, E. M.: *The Structure of Local Government throughout the World*, Martinus Nijhoff, The Hague, 1961.
6. Kant, Surya: *Administration and Geography of India*, Rawat Publication, Jaipur, 1988.
7. Krishan, Gopal: *Administration and Geography*, Transaction of the Institute of Indian Geographers, Vol. 5, No. 2, pp 101-108, 1983.
8. Krishan, Gopal: 'World Pattern of Administration and Area Development', *The Geographical Journal*, Vol. 154, No. 1, pp 93-99, 1988.

**Further Readings:**

1. Massam, B. H.: *The Structure of Administrative Systems*, Association of American Geographers, Research Paper No. 12, 1972.
2. Muir, R.: *Modern Political Geography*, Macmillian, London, 1981.
3. Pounds, N.J.G.: *Political Geography*, 2<sup>nd</sup> Edition, McGraw Hill, New York, 1972.
4. Prescott, J.R.V.: *The Geography of the State Policies*, Hutchinson, London, 1968.

**Pedagogy:**

The students should be made to understand administrative areas and area administration and underlying philosophy involved in formation of spatial units and formulation of public policies.

.....





**Course Content :**

**UNIT-I**



**Paper-II : Research Methodology in Geography**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

**Objectives :**

This paper is to familiarise the students with basics of research and its significance. It aims to make them understand the ways data are collected, classified, tabulated and analysed. It also trains them to differentiate

**LIST OF READINGS:****Essential Readings :**

1. Hagget, Peter and Others, Locational Analysis i



**Course Content :****UNIT-I**

- (i) Introduction : Overview, History and Concepts of GIS, Scope and Application Areas, Purpose and Benefits of GIS, Components and Functional Elements of GIS.
- (ii) Map Concept – Map scales and representation.
- (iii) Map Projection – Coordinate system, datum, and projection systems.

**UNIT-II**

- (iv) Data Input, Storage and Editing: Nature of geographic data : Spatial and Attribute Data, Concept of vector and raster based models; data input devices : Digitization; external data bases; storage and manipulation of GIS data bases.

**UNIT-III**

- (v) GPS : Introduction and usages.
- (vi) Data Acquisition, Data from Remote Sensing Imagery, Global Positioning System (GPS) based data acquisition.

**UNIT-IV**

- (vii) Cartography and Map Production : Nature of maps and cartography, Key map design principles, map symbology.
- (viii) Presentation of GIS Output : Layout of Maps using GIS.

- Note*
1. A compulsory question containing 10 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 7 questions in about 25-30 words each. Each question shall carry 2 marks (total 14 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt **four** questions selecting one from each unit carrying nine marks. These will be in addition to the compulsory question at serial number 1.
  3. Assessment of practical record and viva voce on it will be done by a Board of Examiners, consisting of one external examiner and one internal examiner, as practical examinations.
  4. Improvement/repeat cases must prepare either an improved form of their earlier practical record or prepare a new one . They must get it approved and signed by the faculty member teaching the course at their parent department.
  5. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

**LIST OF READINGS:****Essential Readings :**

1. Albrecht, J. : 'Key Concepts and Techniques in GIS', Sage Publications Ltd., London 2007.
2. Aronoff, S.: Geographic Information Systems : A Management Perspective, WDL Publications Ottawa, Canada, 1992.
3. Burrough, Peter A. and Rachael A. McDonnell.: Principles of Geographical Information Systems, Oxford University Press, Toronto, 1998.
4. Chang, Kang-tsung : Introduction to Geographic Information Systems, 4<sup>th</sup> ed., Tata McGraw-Hill Publishing Company Limited, New Delhi, 2008.
5. DeMeers, Michael N. : Fundamentals of Geographic Information Systems, 3rd. ed., John Wiley and Sons, Toronto, 2005.
6. ESRI : Understanding GIS, Environmental Systems Research Institute, U.S.A., 1993.

**Further Readings :**

**Paper-IV : Any one of the Following Optional Courses :**

**Option (i) : Regional Development and Planning in India**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

2. A total of eight questions will be set out of th



**Option (ii) : Special Themes in Agricultural Geography**

Max. Marks	: 100
Terminal Exam.	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours

**Objectives :**

- To discuss how agriculture originated, diffused and developed in different parts of the world, what are the recent approaches used to study the subject matter and how various economic laws affect agriculture.
- To familiarize the students with locational models, diffusion models and various forms of modern agriculture.
- In its second part, the course aims to apprise the students with Indian agriculture as to how it developed after Independence in the country, what are its main features, problems and policy.
- In addition, it also familiarizes the students with the process of transformation of agriculture, through their actual field visits to selected villages of the Green Revolution region.

**Course Content :****UNIT-I**

- Origin, dispersal and development of agriculture in the world.
- Economic principles and agriculture.

**UNIT-II**

- Locational theory and landuse : Von Thunen`s model of agricultural landuse.
- Diffusion of innovations : Types of spatial diffusion, T. Haggerstrand`s neighbourhood effect model of agricultural innovation diffusion.

**UNIT-III**

- Green Revolution in India, the Punjab model of agricultural development.
- Regionalisation of agriculture in India and a brief discussion of each region.

**UNIT-IV**

- Indian agriculture - Its characteristics and problems.
- Agricultural policy in India.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt **four** questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
  4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal asse







10. Tivy, Joy, *Biogeography, A Study of Plants in the Ecosphere*, Longman Scientific & Technical, UK, 1993.
11. Tivy, Joy and Greg O'Hare, *Human Impact on the Ecosystem*, Oliver & Boyd, Edinburgh, 1981.

**Further Readings :**

1. Dansereau, P., *Biogeography, An Ecological Perspective*, Ronald Press, New York, USA, 1957.
2. Kormondy, Edward J., *Concepts of Ecology, Third Edition*, Prentice Hall of India, New Delhi, 1989.
3. Mani, M.S. (ed.), *Ecology and Biogeography in India*, Dr. W. JUNK b.v. Publishers, The Hague, 1974.
4. Mathur, H.S., *Essentials of Biogeography*, Pointer Publishers, Jaipur, 1988.
5. Mielke, Howard W., *Patterns of Life : Biogeography of a Changing World*, Unwin Hyman : London, 1989.
6. Myers, A. A. & P. S. Giller (ed.), *Analytical Biogeography : An Integrated Approach to the Study of Animal and Plant Distributions*, Chapman & Hall, London, 1989.
7. Odum, Eugene P., *Fundamentals of Ecology*, Natraj Publishers, Dehra Dun, 1971.
8. Osborne, Patrick, *Tropical Ecosystems and Ecological Concepts*, Cambridge University Press, UK, 2000.
9. Pears, Nigel, *Basic Biogeography, Second Edition*, Longman Scientific & Technical, UK, 1985.
10. Quammen, David, *The Song of the Dodo : Island Biogeography in an Age of Extinction*, Simon & Schuster, 1996.
11. Saharia, V.B., *Wildlife in India*, Natraj Publishers, Dehra Dun, 1982.
12. Seddon, B., *Introduction to Biogeography*, Duckworth, London, 1971.
13. Simmons, I.G., *Biogeography, Natural and Cultural*, Arnold-Heinemann, London, 1979.
14. Taylor, J.A. (ed.), *Themes in Biogeography*, Croom Helm, London, 1984.
15. Udvardy, M.D.F., *Dynamic Biogeography : With Special Reference to Land Animals*, Van Nostrand Reinhold, N.Y., 1969.



- (ii) Concepts and themes in social geography :
- (a) Social space.
  - (b) Social segregation.
  - (c) Social justice.
  - (d) Social well-being.
  - (e) Ethnicity.

#### UNIT-II

- (iii) Evolution of socio-cultural regions in India :
- (a) Evidence from classical literature.
  - (b) Core and peripheral regions.
- (iv) Attributes of spatial distribution of :
- (a) Tribes.
  - (b) Religion.
  - (c) Language.
  - (d) Caste.

#### UNIT-III

- (v) Social transformation and change in India :
- (a) Modernization and sanskritization.
  - (b) Role of rural-urban interaction.
  - (c) Problems of social transformation.

#### UNIT-IV

- (vi) (a) Social and ethnic diversity of India and national integration.  
(b) Cultural pluralism and development.

*Note* 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).

2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks(total 60 marks).
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**

#### LIST OF READINGS:

##### Essential Readings :

1. Ahmad, Aijazuddin : Social Geography, Rawat Publications, New Delhi, 1999.
2. Jones, Emrys and John Eyles : An Introduction to Social Geography, Oxford University Press, London, 1977.
3. ones,

**Further Readings :**

1. Atreya, B.L. et.al. (ed.) : Indian Culture, Universal Publications, New Delhi, 1966.
2. Dubey, S.C. : Indian Society, National Book Trust, New Delhi, 1991.
3. Sen, Amartya, and Dreze Jean : Indian Development : Selected Regional Perspectives, Oxford University Press, Delhi, 1996.

**Pedagogy :**

The students should be encouraged to participate in classroom discussions on the socio-spatial aspects of current issues of social, political and developmental importance.

**Option (v) : Political Geography of India**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

**Course Content :****UNIT-I**

ii.

- Note* 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 qu





- vi. Medium Range Forecasts, Long Range Forecasts.
- vii. Satellites in Weather Forecasting.

**UNIT-III**

- viii. Air Pollution : Sources and Types of Air Pollution.

5. Barry, R.G.. & Chorley, R.J. : Atmosphere, Weather and Climate, Methuen Co. Ltd., London, 5<sup>th</sup> Edition, 1987.
6. Bhutani, Smita, Our Atmosphere, Kalyani Publishers, Ludhiana, 2000.
7. Darrel Hess: Mcknight's Physical Geography: A Landscape Appreciation, Prentice Hall of India Pvt. Ltd., New Delhi, 2012.
8. Frederick K. Lutgens & Edward J. Tarbuck : The Atmosphere: An Introduction to Meteorolgy, Prentice Hall of India Pvt. Ltd., New Delhi, 2012.
9. Lal, D.S.: Climatology, Thoroughly revised and Enlarged Edition, Sharda Pustak Bhaban, Allahabad, 2009.
10. Lydolph, P.E., The Climate of the Earth, Rowman Nad Allanheld, Totowa, New Jersey, 1985.
11. Oliver, John E.; Oliver, John and Hidore John J., C

**SEMESTER-IV**

**Outlines of Tests**

There will be four papers, three compulsory and one



- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt **four** questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
  4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4)**

**Further Readings :**

1. Bludon, John & Others (eds.) : Regional Analysis and Development, Harper & Row, London, 1973.
2. Burrough, A. : Principles of Geographic Information Systems for Land Resource Assessment, Clarendon Press, Oxford, 1986.
3. Chadwick, G. : Systems View of Planning, Pergamon Press, Oxford, 1971.
4. Faludi, Andreas : Reader in Planning Theory, Pergamon Press, Oxford, 1976.
5. Freeman, T.W. : Geography and Planning, Hutchinson, London, 1958.
6. Friedman, John and Clyde Weaver : Territory and Function : The Evolution of Regional Planning, Edward Arnold, London, 1979.
7. Isard, Walter : Introduction to Regional Science, Prentice Hall, New York, 1975.
8. Lavrov, S. and Sdasyuk, G. : Concepts of Regional Development, Progress Publishers, Moscow, 1988.
9. Misra, R.P. & Others (eds.) : Regional Planning and National Development, Vikas, New Delhi, 1978.
10. Misra, R.P. & Others (eds.) : Regional Planning : Concepts, Techniques, Policies and Case Studies, University of Mysore, Mysore, 1969.
11. Philip R. Berke and David Godschalk : Urban Land Use Planning, University of Illinois Press, 5<sup>th</sup> edition 2006.

**Pedagogy :**

The students should be made to do sessional assignments based on diverse data to formulate regions at the local and regional levels and to identify the regional differentiations. They should be made conversant with the trends in the development of the regional aspects using 'space' in the multi disciplinary approach to regional development.

**Paper -II : Field Based Project Report (Practical only)**

Max. Marks : 100

**Course Contents :**

(Since this paper is of practical nature only, therefore contents of syllabus need not to be organized into units).

**Field Based Project Report in Geography :**

The project report will involve statement of objectives and scope of field investigation; methods of field work for studies of different scales (macro, meso, and micro); preparation of a questionnaire; sampling techniques, collection, processing, representation, analysis and interpretation of data/information. The candidates are required to write a project report on small assigned problem involving field investigations.

- Note*
1. The candidates are required to submit their project reports one week before the commencement of examination to the concerned Head of the Postgraduate Department.
  2. Assessment of practical record and viva voce on it will be done by a Board of Examiners, consisting of external examiner, internal examiner and the chairperson of the department.
  3. Improvement/repeat cases must prepare either an improved form of their earlier practical record or prepare a new one. They must get it appr

**Paper-III : Quantitative Methods in Geography (Theory and Practical)**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

**Objectives :**

- To provide knowledge of statistical techniques and their application in geography;
- To train the students to apply these techniques and methods to the analysis of the geographic problems.

***Distribution of marks :***



- Note*
1. A compulsory question containing 10 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 7 question in about 25-30 words each. Each question shall carry two marks (total 14 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least two from each unit. The candidates will attempt **four** questions selecting one from each unit carrying nine marks (total 36 marks). These will be in addition to the compulsory question at serial number 1.
  3. Assessment of practical record and viva-voce on



M.A. GEOGRAPHY (SEMESTER SYSTEM)

**Pedagogy :**

The course should be backed up with extensive use of examples from Indian Urban Places with the help of audio-visual aids and, depending upon feasibility, field trips.

**Option (ii) : Geography of Food Security**

Max. Marks	: 100
Terminal Exam.	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours

**Objectives :**

- To make students understand various conceptual and methodological issues involved in food security system.
- To understand demand, supply and issues relating to availability and accessibility of food with special reference to developing countries and changes in the scenario in light of globalization process.

**Course Contents :****UNIT-I**

- (i) Food Security : Concept, Approaches(household economy and livelihoods), and Methods of Measurement.
- (ii) Concepts of poverty, hunger and malnourishment.

**UNIT-II**

- (iii) Food security through sustainable agricultural development.
- (iv) Climate change and food security.

**UNIT-III**

- (v) World pattern of major food resources: grain farming, animal husbandry and fisheries.
- (vi) World pattern of food security.

**UNIT-IV**

- (vii) Spatial pattern of food security in India : trends and patterns of foodgrains production; patterns of poverty and hunger.
- (viii) Government policies towards food security in India : Public distribution system (PDS) and Targeted Public Distribution System(TPDS), and Food Security Act..

*Note*

**Further Readings :**

1. Aggarwal, P.K.(2008): “ Global Climate Change and Indian Agricultural: Impact, Adaptation and Mitigation”, Indian Journal of Agricultural Science, Vol. 78, No. 10, pp. 911-919.
2. Capaldo, J. et al.”: “A Model of Vulnerability to Food Insecurity”, ESA Working Paper NO. 10-03, Agricultural Development Economics Division (FAO), 2010.
3. Chatterjee B. and Kundo, S. (2011) : “ Food Security in Bangladesh – Patterns, Determinants, Interventions and Scope for Regional Cooperation”, Man and Development, Vol. 33, No.3, pp. 25-58.
4. Clay, E. (2002): Food Security: Concepts and Measurements”, Paper for FAO Export Consultation on Trade and Food Security, Rome, 11-12 July, 2002.
5. Mishra, R. P.: Population and Food Supply in Madhya Pradesh, Northern Book Centre Publication, New Delhi, 1989.
6. Mohammad, N. : “ Regional Patterns of Food Security in India”, Annals, NAGI, Vol. 21, Delhi, 2002.
7. Radhakrihna, R. (1991) : “ Food and Nutrition : Challenge for Policy”, Journal of the Indian Society of Agricultural Statistics, Vol. 53, No. 3.
8. Sen, A.K. : Poverty and Famines : An Essay in Entitlement and Deprivation, Oxford University Press, Delhi, 1981.
9. Shafi, M. and Aziz, A. (ed.) : Food Systems of the World, Rawat Publication, Jaipur, 1989.
10. Thompson, H. et al. (2010) : “ Climate Change and Food Security in Sub-Saharan Africa : A Systematic Literature Review”, Sustainability, Vol. 2, pp. 2719-2733.

**Pedagogy :**

The students are required to understand the deep rooted dimensions of the whole concept of food security/insecurity in the world. This can be done by encouraging wide use of literature available in journals, books, research reports, atlases, maps and through interaction with students/researchers from other disciplines such as Economics, Sociology and Public Administration.

**Option (iii) : Economic Geography (with special reference to India)**

Max. Marks	: 100
Terminal Exam.	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours

**Objectives :**

- The overall objective is to foster the comprehensive understanding of conceptual and methodological issues involved in organization of economic activities and understand the theories of industrial location and their application in context of developing economies like Indian.



- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks (total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in





**UNIT-IV**

**Further Readings :**

1. Chisholm, M., Rural Settlement and Land Use, Hutchinson University Library, London, 1962.
2. Mitra, A., Report on House Types and Village Settlement Patterns in India, Manager of Publications, Delhi, 1960.
3. Rapoport, A., House Form and Culture, Prentice Hall, New Jersey, 1969.

**Pedagogy :**

The course should be conducted with the help of adequate illustrations using audio-visual aids and depending upon feasibility, field visits.

**OPTION (v) : QUALITATIVE RESEARCH METHODS IN HUMAN GEOGRAPHY**

Max. Marks	:	100
Terminal Exam.	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours

**Objectives:**

This paper is to familiarise the students with basics of qualitative research and its significance. It aims to make them understand the ways qualitative data are collected, classified, tabulated and analysed. It also trains them to differentiate between casual and research based statements that help them in their life.

**Course Content:****Unit – I**

- i. Qualitative research : History, types and contribution to geography.
- ii. Relationship between quantitative and qualitative geography.
- iii. Contemporary qualitative geography.

**Unit-II**

- iv. Objectivity and subjectivity in qualitative data collection.
- v. Qualitative research design : Asking research question, selecting cases and participants.

**Unit-III**

- vi. **Qualitative research methods:**
  - a. Interviewing : Types, design and practice, recording, transcribing and analyzing.

- b. Focus; groups: Composition, size and number of groups, recruiting participants
- c. Case studies.

#### Unit –IV

- vii. Computer assisted qualitative data analysis (CAQDA)
- viii. Reasons for using computers for qualitative research.
- ix. Strengths and weaknesses of CAQDA systems.

- Note*
1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 questions in about 25-30 words each. Each question shall carry 2 marks (total 20 marks).
  2. A total of eight questions will be set out of the whole syllabus, at least *two* from each unit. The candidates will attempt *four* questions selecting one from each unit. These will be in addition to the compulsory question at serial number 1 and each question will carry 15 marks(total 60 marks).
  3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
  4. For reappear/improvement candidate(s), who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be increased proportionally to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (4) in the question paper.**

#### List of Readings

##### Essential Readings:

1. Crang, M.A., & Cook, Z. :Doing Ethnographies”, Sage Publication, London, 2007.
2. Emerson, R. M., Fretz, R.I et al. : “Writing Ethnographic field notes”, The University Chicago Press, 1995.
3. Gang, M. : “Cultural Geography”, Routledge, London, 1998.
4. Hagget, P. et. Al. : Locational Analysis in Human Geography, Arnold, London, 1977.
5. Harvey, David : Explanation in Geography, Arnold, 1969.
6. Kothari, C. R. : Research Methodology, Wiley Easter



**Course Content****UNIT-I : CLIMATE & CLIMATE CHANGE: BASIC CONCEPTS**

- i. Evolutions of Earth's atmosphere and its climatic significance
- ii. Climate change: Natural and Anthropogenic Causes.
- iii. Information Sources of Past Climate
  - a. Ocean Sediments and Continental Archives.
  - b. Ice cores, Dendrochronology, Hi



3. Erle C. Ellis, Kees Klein Goldewijk, Stefan Siebert, Deborah Lightman and Navin Ramankutty (2010). Anthropogenic transformation of the biomes, 1700 to 2000. *Global Ecology and Biogeography*, 19, 589-606.
4. Foley, J.A., Defries, R., Asner, G.P., Barford, C., Bonan, G., Carpenter, S.R., Chapin, F.S., Lii, Coe., M.T., Daily, G.C., Gibbs, H.K., Helkowski, J.H., Holloway, T., Howard, E.A., Kucharik, C.J., Monfreda, C., Patz, J.A., Prontice, I.C., Ramankutty, N. and Snyder, P.K.(2005). Global consequences of land use. *Science*, 309, 570-574.
5. Hansen D. M. & Galetti, M. (2009) Ecology : The forgotten megafauna. *Science*, 324, 42-43.
6. Joanna D. Haigh (2003). The effects of solar variability on the Earth's climate. *Phil. Trans. R. Soc. A*, 361, 95-111.
7. Kevin Anderson and Alice Bows (2011). Beyond 'dangerous' climate change: emission scenarios for a new world. *Phil. Trans, R. Soc. A.*, 369, 20-44.
8. M. G. Sanderson, D.L. Hemming and R.A. Betts (2011). Regional temperature and precipitation changes under high-end ( $\geq 4^{\circ}\text{C}$ ) global warming. *Phil. Trans. R. Soc. A*, 369, 85-98.
9. Mann, M.E., Bradley, R. S. & Hughes, M. K. (1998) Global-scale temperature patterns and climate forcing over the past six centuries. *Nature* 392, 779-787.
10. Ramankutty, N. & Foley, J.A. (1999). Estimating historical changes in global land cover: croplands from 1700 to 1992. *Global Biogeochemical Cycles*, 13, 997-1027.
11. Ruddiman, W.F. (2003). The Anthropogenic greenhouse era began thousands of years ago. *Clim. Change* 61, 261-293. (doi :10.1023/B:CLIM.0000004577.17928.fa).
12. Ruddiman, W.F. & Ellis, E.C. (2009). Effect of per-capitl land use changes on Holocene forest clearance and CO2 emissions. *Quaternary Science Reviews*, 28, 3011-3015.
13. Will Steffen, Jacques Grinevald, Paul Crutzen and John Mcneill (2011). The Anthropocene: conceptual and historical Perspectives. *Phil. Trans. R. Soc. A*, 369, 842-867 (doi:10.1098/rsta.2010.0327)
14. Zalasiewicz, J., Williams, M., Steffen, W. and Crutzen, P. (2010). The new world of the Anthropocene. *Environ. Sci. Technol.* 44, 2228-2231.(d