

## B.A/B.Sc. (Hons.) Semester-V

Paper No.	Nomenclature of Paper	Max Marks	Internal Assessment	Total Marks	Time
501	Evolution of Geographic Thought	90	10	100	3 Hours
502	Geography and Ecosystems	90	10	100	3 Hours
503 (A)	Remote sensing and GIS (Theory)	50	10	60	3 Hours
503 (B)	Remote sensing and GIS (Practical)	40	-	40	3 Hours
504	Geography of India	90	10	100	3 Hours
505	Any one of the followings: (i) Social Geography (ii) Cultural Geography (iii) Political Geography (iv) Geography of Haryana	90	10	100	3 Hours

## B.A/B.Sc. (Hons.) Semester-VI

Paper No.	Nomenclature of Paper	Max. Marks	Internal Assessment	Total Marks	Time
601	Statistical Methods in Geography	90	10	100	3 Hours
602	Regional Development and Planning	90	10	100	3 Hours
603 (A)	Field Survey in Geography (Theory)	50	10	60	3 Hours
603 (B)	Field Survey in Geography (Practical)	40	-	40	3 Hours
604	Geography of Settlements	90	10	100	3 Hours
605	Any one of the followings: (i) Geography of Transport (ii) Geography of Tourism (iii) Geography of Health (v) Soil Geography	90	10	100	3 Hours

## **Paper 501 Evolution of Geographic Thought**

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **SECTION-A**

1. Classification of Sciences and Place of Geography among Sciences.
2. Relation of Geography with natural and social sciences.
3. Contribution of Greeks and Roman Scholars in geographical knowledge.

### **SECTION-B**

4. Geography in Medieval Period: Arab Geographers and Renaissance.
5. Contribution of Varenus and Kant in geography.
6. Classical Period: Humboldt and Ritter's contribution to geography.

### **SECTION-C**

7. Environmental Determinism and Possibilism.
8. Chorology and Landscape concepts.
9. Dualism in Geography: Systematic versus Regional and Physical versus Human Geography.

### **SECTION-D**

10. Quantitative Revolution and Development of Geography as Spatial Sciences.
11. Behavioral Geography.
12. Welfare Geography and Radical Approach.

### **Suggested Readings:**

1. Dikshit, R.D.(ed.)A The Art & Science of Geography Integrated Readings, Prentice Hall of India, New Delhi, 1994.
2. Hartshorne, R.: Perspectives on Nature of Geography, Rand McNally & Co.1959.
3. Husain, M.: Evolution of Geographic Thought, Rawat Pub., Jaipur, 1984.
4. Johnston, R.J.: Philosophy and Human Geography, Edward Arnold, London, 1983.
5. Johnston, R.J.: the Future of Geography, Methuen, London, 1988.
6. Minshull, R. : The Changing Nature of Geography, Hutchinson University Library, London, 1970.

## Paper 502 Geography of Ecosystem

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **Section - A**

1. Environmental Geography – Concept and Scope.
2. Human-Environment Relationships–Historical Progression and Adaptation

### **Section - B**

3. Ecosystem – Concept, Structure and Functions. Ecosystem productivity and ecological pyramid.
4. Flow of energy; food chain and food web; trophic level.

### **Section – C**

5. Biomes and Habitat: Classification of Biomes. Tropical rainforest biome, Grassland biomes, Monsoon biome and Marine biome.
6. Environmental Problems: Climate change, ozone depletion, air pollution and soil degradation.

### **Section – D**

7. Environmental Programmes and Policies –National and Local levels
8. Global Environmental concern: Stockholm conference, Earth summit and Kyoto protocol and after.

### **Suggested Reading List :**

1. Chandna R. C., 2002: Environmental Geography, Kalyani, Ludhiana.
2. Cunningham W. P. and Cunningham M. A., 2004: Principals of Environmental Science: Inquiry and Applications, Tata Macgraw Hill, New Delhi.
3. Goudie A., 2001: The Nature of the Environment, Blackwell, Oxford.
4. Miller G. T., 2004: Environmental Science: Working with the Earth, Thomson Brooks Cole, Singapore.
5. MOEF, 2006: National Environmental Policy-2006, Ministry of Environment and Forests, Government of India.
6. Odum, E. P. et al, 2005: Fundamentals of Ecology, Ceneage Learning India.
7. Singh S., 1997: Environmental Geography, Prayag Pustak Bhawan. Allahabad.
8. UNEP, 2007: Global Environment Outlook: GEO4: Environment For Development, United Nations Environment Programme.

### **Hindi Reading List**

1. Singh, Savindra 2001. Paryavaran Bhugol, Prayag Pustak Bhawan, Allahabad. (in Hindi).
2. Singh, Shri Narayan 1993. Vatavaran Bhugol, Tara Book Agency. (in Hindi)

**Paper 503 (A) Remote Sensing and GIS (Theory)**

**Maximum Marks: 50**

**Internal Assessment: 10**

**Time: 3 Hours.**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

**SECTION-A**

1. Introduction to Aerial Photographs: their advantages and types.
2. Elements of Air, Photo Interpretation.

**SECTION-B**

3. Introduction to Remote Sensing: Electromagnetic spectrum and process of Remote Sensing.
4. Types of Satellites, Indian Remote Sensing Satellites and their data Product (Type of imageries).

**SECTION-C**

5. Introduction to Geographical information system: Definition, Purpose, Advantages, Hardware and Software requirements.
6. Spatial and Non-spatial Data: their sources and entering in GIS environment.

**SECTION-D**

7. Application of Remote Sensing in Agriculture Environment and Resource Management.
8. Application of Geographical Information System in Urban, Regional and Real time Planning.

**Suggested Readings:**

1. Anji Reddy, Remote Sensing and Geographical Information Systems.
2. J.R. Jensen (2009), Remote Sensing of the Environment: An Earth Resource Perspective Pearson Education (LPE), New Delhi.
3. Lillesand and R.W. Kiefer (2005), Remote Sensing and Image Interpretation, John Wiley and Sons.
4. Meenakshi Kumar (2001), 'Remote Sensing, NCERT, New Delhi.
5. Pritvish Nag and M. Kudrat (1998), Digital Remote Sensing, Concept Publication, New Delhi.

## **Paper 503 (B) Remote Sensing and GIS (Practical)**

**Maximum Marks: 40**

**Time: 3 Hours.**

**Exercise : 24**

**Record Book : 10**

**Viva-voce : 6**

**Note:** There will be four questions in all and candidates have to attempt three questions/exercises.

1. Demarcation of Principal Point, Conjugate Principal Point and Flight line on Aerial Photograph--1 Exercise.
2. Determination of Scale of Photograph-1 Exercise.
3. Interpretation of Single Vertical Photograph-1 Exercise.
4. Use of Stereoscope of Identification of Features -1 Exercise.
5. Identification of Features on PAN+ LISS Imagery (Mark copy of FCC)- 3 exercises.

### **Suggested Readings:**

1. Melinda Meade and R.J. Earichson (2008), Medical Geography, Guilford Press, New York.
2. Peter Hagett (2000) , The Geographical Structure of Epidemics, Oxford.

## Paper 504 Geography of India

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### SECTION-A

1. India: Location, size and shape; physiographic structure and division; drainage system of India and their importance.
2. Climate: Regional and seasonal variations of climate in India; Rainfall distribution; Climatic regions of India.

### SECTION-B

3. Soils: Soil types, distribution and characteristics of Indian soils; soil erosion and conservation in India.
4. Natural Vegetation: Vegetation types and their distribution; Forest, their utilization and need for conservation; Forest management programmes in India.

### SECTION-C

5. Agriculture: Role of agriculture in Indian Economy; regional variations in cropping pattern; Role of Irrigation in agriculture; problems pertaining to Green Revolution and mitigation strategies.
6. Minerals and power resources:  
Production and distribution of the following: (1) Iron-ore (2) Mica  
(3) Coal (4) Petroleum (5) Hydropower

### SECTION-D

7. Industries: Factors affecting location of industries; production and distribution of iron and steel industries, cotton-textile industry and Sugar industry; Industrial Complexes of India.

8. Trade: Factors affecting India's trade; Major exports and imports of India, Balance of payments of India's trade.

**Suggested Readings :**

1. Deshpande, C.D. 1992. India-A Regional Interpretation. Northern Book Depot, New Delhi.
2. Khullar, D.R. 2009. India-A Comprehensive Geography, Kalyani Publishers, New Delhi.
3. Shafi, M. 2000. Geography of South-Asia. McMillan and Company, Calcutta.
4. Sharma, T.C. 2009. Economic and Commercial Geography of India. Vikas Publication, New Delhi.
5. Singh, Gopal, 2006. Geography of India. Atma Ram and Sons, New Delhi.
6. Singh, R.L. 1971. India- A Regional Geography, NGS, Varansi.
7. Spate, O.H.K and Learmonth. 1967. India and Pakistan. Methuen and Company, London.
8. Tideman, E.M. 1996. Watershed Management: Guidelines for Indian Conditions, Omega Publications, New Delhi.
9. Tirth, R. and Krishna, G. 1996. Emerging India. Rawat Publications, Jaipur
10. Wadia, D.N. 1967. Geology of India, Macmillan, London.

## Paper 505 (i) Social Geography

Maximum Marks: 90

Internal Assessment: 10

Time: 3 Hours

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### SECTION-A

1. Nature and Scope of Social Geography.
2. Development and Philosophy of Social Geography.
3. Social Geography and Social Sciences.

### SECTION-B

4. Space and Society: Structure and Processes.
5. Geographical Bases of Social Formations.
6. Social Geography's Contribution in Social Theory.

### SECTION-C

7. Social Geography of India-Social Differentiation and Region Formation.
8. Evolution of Socio-cultural Regions in India.
9. Unity and Diversity in India.

### SECTION-D

10. Social Transformation and Change in India.
11. Social Wellbeing and Physical Quality of Life.
12. Human Development: Measures and Indications.

### Suggested Readings:

1. Ahmad, Aijazuddin, Social Geography, Rawat Publication, New Delhi, 1999.
2. Dreze Jean, Amartya Sen, Economic Development and Social opportunity, Oxford University Press, New Delhi, 1996.
3. Dubey. S.C. : Indian Society, National Book Trust, New Delhi, 1991.
4. Gregory, D and J. Larry, (eds.). Social relations and spatial structures, McMillan, 1985.
5. Schwartzberg Joseph; An Historical Atlas of South Asia, University of Chicago Press, Chicago, 1978.
6. Sen, Amartya & Dreze Jean, Indian Development: Selected Regional Perspectives, Oxford University Press, 1996.
7. Smith, David: Geography: A Welfare Approach, Edward Arnold, London, 1977.
8. Sopher, David. : An Exploration of Indian, Cornell University Press, 1980.
9. Subba Rao. Personality of India; Pre and Proto Historic Foundation of India and Pakistan. M. S. University Baroda, Vadodara, 1985.



## Paper 505 (ii) Cultural Geography

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### SECTION-A

1. Introduction: Nature and Scope of Cultural Geography.
2. Cultural Elements and Components of Culture.
3. Cultural Changes: Perception and Behavioralism.

### SECTION-B

4. Bases of Cultural Diversity: Race, Religion and Language.
5. Cultural Diversity in World.
6. Cultural Diversity and Regionalization in India.

### SECTION-C

7. Geography of Ethnic and Tribal Groups.
8. Cultural Landscape and Cultural Ecology.
9. Religion: Origin, diffusion and Spatial Distribution.

### SECTION-D

10. Pattern of Livelihood: Economic Activities and Cultural adaptation.
11. Agriculture, Industrialization and Modernization.
12. Technological Changes and Culture.

### Suggested Readings:

1. Crang, Mike: Cultural Geography, Routledge Publications, London, 1998.
2. Harmandorf, Tribes of India: The Struggle for Survival, Oxford University Press, Delhi, 1989.
3. Massey, D & Jess P. A Place in the World: Places, Cultures and Globalization Oxford University, New York, 1995.
4. Massey, et.al (ed), Human Geography Today, Polity Press, Combridge, 1999.
5. Mukherjee, A.B. and Aijazuddin, A: India: culture, Society and Economy, Inter-India Publication, New Delhi.
6. Schwartzberg, J.E.: Historical Atlas of South Asia, University of Chicago, 1978.
7. Singh, A.K. : Approaches to Tribal Development, Swarup and Sona, New Delhi, 1994.

## Paper 505 (iii) POLITICAL GEOGRAPHY

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **Section-A**

1. Introduction: Introduction, Nature, Scope and Geopolitics.
2. State, Nation and Nation State – Concept of Nation and State, Attributes of State – Frontiers, Borders, Shape, Size, Territory and Sovereignty, Concept of Nation State.

### **Section-B**

3. Global strategic views: Mahan and sea power, Mackinder and Heartland; Spykman and Rimland.
4. Geopolitical significance of Indian Ocean.

### **Section-C**

5. Electoral Geography – Geography of Voting, Geographic Influences on voting pattern, Geography of Representation, Gerrymandering.
6. Political Geography of Resource Conflicts – Water Sharing Disputes, Disputes and Conflicts Related to Forest Rights and Minerals, issues of land locked states in Asia and Africa

### **Section-D**

7. Politics of Displacement: Issues of relief, compensation and rehabilitation: with reference to Dams and Special Economic Zones
8. Case studies of Displacement and Rehabilitation: Bhakra Nangal Dam, Narmada's Sardar Sarovar Dam and displacement due to mining.

### **Suggested Reading List:**

1. Agnew J., 2002: Making Political Geography, Arnold.
2. Agnew J., Mitchell K. and Toal G., 2003: A Companion to Political Geography, Blackwell.
3. Cox K. R., Low M. and Robinson J., 2008: The Sage Handbook of Political Geography, Sage Publications.
4. Cox K., 2002: Political Geography: Territory, State and Society, Wiley-Blackwell
5. Gallaher C., et al, 2009: Key Concepts in Political Geography, Sage Publications.
6. Glassner M., 1993: Political Geography, Wiley.
7. Jones M., 2004: An Introduction to Political Geography: Space, Place and Politics, Routledge .  
**Dixit, R.D. 2010: Political Geography**
8. Mathur H M and M M Cernea (eds.) Development, Displacement and Resettlement – Focus on Asian Experience, Vikas, Delhi
9. Painter J. and Jeffrey A., 2009: Political Geography, Sage Publications.
10. Taylor P. and Flint C., 2000: Political Geography, Pearson Education.
11. Verma M K (2004): Development, Displacement and Resettlement, Rawat Publications, Delhi
12. Hodder Dick, Sarah J Llyod and Keith S McLachlan (1998), Land Locked States of Africa and Asia (vo.2), Frank Cass.

## Paper 505 (iv) Geography of Haryana

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### SECTION-A

1. Haryana: Location, size, shape and administrative division; physical divisions and drainage systems.
2. Climate: Characteristics and factors; seasons; distribution of rainfall and climatic regions.

### SECTION-B

3. Soils and natural vegetation: Soil types-their distribution and characteristics; vegetation types, distribution and importance.
4. Human resources: Distribution and density, growth and urbanization.

### SECTION-C

5. Agricultural resources: Major crops; Irrigation; new trends in agriculture; problems pertaining to agricultural development and strategy for its advancement.
6. Manufacturing Industries: Major Industries; Industrial policy, SEZ and Foreign investment in Industries.

### SECTION-D

7. Transportation: Modes of transportation and road density; significance of Grant Trunk Road in the Economic development of Haryana.
8. Regionalization of Haryana: Concept of region, bases and classification.

### Suggested Readings:

1. Census of India. 1981. Regional Division in Haryana.
2. Census of India. 2001. Administrative Atlas of Haryana.
3. Chaudhary, D.R. 2009. Haryana at Crossroads: problems and prospects. National Book Trust of India, New Delhi.
4. Singh, J. 1976. Agricultural Geography of Haryana, Vishal Publication, Kurukshetra.
5. Singh, R.L. 1971. India- A Regional Geography. National Geographical Society of India, Varansi.
6. Verma, D.C. and Singh, S. 2001. Haryana-The Land and People. National Book Trust of India, New Delhi.

## **Paper 601 Statistical Methods in Geography**

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **SECTION-A**

1. Type of data and descriptive Statistics: visual descriptive methods such as histograms, ogives.
2. Numerical descriptive Statics: measure of Central Tendency and partition values.

### **SECTION-B**

3. Measure of dispersion: Quartile deviation, Mean deviation, Standard deviation.
4. Measure of Inequality: Lorenz Curve.

### **SECTION-C**

5. Continuous Probability Distributions and Models.
6. Properties of Normal Distribution.

### **SECTION-D**

7. Inferential Statistics: confidence Intervals and Hypothesis Testing.
8. Sampling its type and its application in Geographical Studies.

### **Suggested Readings:**

1. Aslam Mahmood, Statistical Methods for Geographers, Rajesh Publications, New Delhi.
2. Peter A. Rogerson (2010), Statistical Methods for Geography, Sage Publishers.
3. Saroj Kumar Paul, "Statistics for Geoscientists: Techniques and Applications, Concept Publishers, 1998."

## **Paper 602 Regional Development and Planning**

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **SECTION-A**

1. Concept of Region, types of Regions.
2. Methods of Regionalization.

### **SECTION-B**

3. Theories of Regional Development: Hirschman and Myrdal's Theory.
4. Regional Imbalances in development in India with spatial reference of human and Economic development.

### **SECTION-C**

5. Concept of Planning: Spatial and Sectoral, Regional and National, Micro and Macro.
6. Environmental Issues in Regional Planning: Planning for Sustainable Development.

### **SECTION-D**

7. Features of Various Five years Plans in India.
8. Urban Planning in India with spatial reference to National Capital Region.

### **Suggested Readings:**

1. R.C. Chandna : Regional Planning and Development.
2. Mahesh Chand and Puri : Regional Planning in India, Allied Publishers, Delhi.
3. S.C. Patnaik, Economics of Regional Development and Planning in Third World Countries, Associated Publishing, New Delhi.
4. V. Nath, Regional Development and Planning in India.

**Paper 603 A Field Survey in Geography (Theory)**

**Maximum Marks: 50**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

**SECTION-A**

1. Topographical Sheets-1:50,000 and 1:25,000
2. Socio-economic Information on Toposheets.

**SECTION-B**

3. Sources of Demographic and Socio-economic Data of Villages.
4. Census data for the Socio-economic Study of Village/Towns.

**SECTION-C**

5. Cadastral maps for Field mapping of Village/towns.
6. Field mapping of the Features of Landuse and Land Quality.

**SECTION-D**

7. Use of Structured Questionnaires for Socio-economic Survey.
8. Analysis of Collected Socio-economic Data.

## **Paper 603 (B) Field Survey in Geography (Practical)**

**Maximum Marks: 40**

**Time: 3 Hours**

Students have to carry out compulsory socio-economic field survey of a village/town, analyse and interpret the collected data. Every student has to prepare a field survey report based on the survey.

### **Break up of Marks.**

<b><u>Activity</u></b>	<b><u>Marks</u></b>
Participation in Field Survey	10
Field Survey Report	20
Viva-Voce	10

## Paper 604 GEOGRAPHY OF SETTLEMENTS

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **Section - A**

1. Introduction: Nature and Scope of settlement geography. 2. Basic Concepts: Rural and Urban Settlements, Hamlet, Village, Town, City, Metropolis, Megalopolis, Conurbation, and Rural-Urban Fringe.

### **Section- B**

3. Histogenesis of rural settlements: historical development, distribution of rural settlements. Size and spacing of rural settlements in India

4. Rural Settlements: Types, Patterns and Determinants. Functional classification of rural settlements.

### **Section- C**

5. Regional Settlement Hierarchy: Central Place Theory, Rank-Size Rule, Primate City.

6. Urban Land use Models; Concentric zone model, sector model and multiple nuclei model.

### **Section- D**

7. Urban problems: housing, poverty, water supply and sanitation.

8. Planned Cities: A Case Study of Chandigarh – Site and Situation, Layout and Landuse, Services and Infrastructure, Problems.

### **Suggested Reading List :**

1. Chishlom M., 2007: Rural Settlement and Land Use, Transaction Publishers.
2. Daniel, P. 2002: Geography of Settlement, Rawat Pubs., Jaipur & New Delhi.
3. Ghosh, Santwana 1999: A Geography of Settlements, Orient Longman, Kolkata.
4. Kalia Ravi, 1999: Chandigarh: The Making of Indian City, Oxford University Press.
5. Kaplan D. H., Wheeler J. O. and Holloway S. R., 2008: Urban Geography, John Wiley.
6. Krishan G., 1999: Inner Spaces – Outer Spaces of a Planned City: A Thematic Atlas of Chandigarh, Celebrating Chandigarh.
7. Pacione M., 2009: Urban Geography: A Global Perspective, Taylor and Francis.
8. Ramachandran R., 1989: Urbanisation and Urban Systems of India, Oxford University Press.
9. Ramachandran, R., 1992: The Study of Urbanisation, Oxford University Press, Delhi
10. Singh R. Y., 1994: The Geography of Settlement, Rawat Publication, New Delhi.
11. Tiwari, R. C. 2000: Settlement Geography, (in Hindi), Prayag Publ., Allahabad.
12. Misra, R. P. & Misra, K. eds. 1998: Million Cities of India, Sustainable Development Foundation, New Delhi.



## **Paper 605 (i) Geography of Transport**

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **SECTION-A**

1. Nature, scope, significance and development of transport geography.
2. Factors associated with development of transport system; physical, economic, social cultural and institutional.

### **SECTION-B**

3. Characteristic and relative significance of different modes of transport; railways, roads, airways and waterways.
4. Regional variations in transport density; traffic flow and regional interaction; Bases of spatial interaction.

### **SECTION-C**

5. Transport and location activities; Impact of different aspects of transport on spatial equilibrium of location; problem of location and regional development.
6. Transportation network: Function, pattern and geometry; Models of network change.

### **SECTION-D**

7. Urban transport: Profile of urban transport facilities; traffic in towns; transport services and urban landuse pattern.
8. Problems of urban transportation: transportation and environmental degradation; vehicular pollution and congestion; alternative to transport system in Mega-cities.

### **Suggested Readings:**

1. Ashton, W.D. 1966. The Theory of Traffic Flow. Methuen, London.
2. Bhaduri, S. 1992. Transport and Regional Development, Concept Publishing Company, New Delhi.
3. Fleming, D.K. and Hayuth. Y. 1994. Spatial Characteristics of Transportation Hubs. Centrality and Intermediacy. Journal of Transport Geography 2(i) 3-18.
4. Hagget, P. 1965. Locational Analysis in Human Geography. Methuen, London.
5. Hay, A. 1973. Transport Economy, Macmillan, London.
6. Hoyle, B. S. and Knowles, R. 2000, Modern Transport Geography. John Wiley and Sons, New York.
7. Hoyle, B.S. 1973. Transport and Development. Macmillan, London.

8. Husain, M. and Zaidi, S.S.H. 1996. Environmental Management in India. Concept Publications, New Delhi.
9. Nagar, V.D. and Gautam, S. 1984. Principles and Problems of Indian Transport. Kailash Pustak Sadan, Gwalior.
10. Raza, M and Agarwal Y.P. 1986. Transport Geography of India. Concept Publication, New Delhi.
11. Vaidya, B.C. 1998. Readings in Transport Geography, Devika Publications, New Delhi.
12. White, H.P. and Senior, M.L. 1983. Transport Geography. Longman, London.

## Paper 605 (ii) GEOGRAPHY OF TOURISM

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **Section- A**

1. Nature and Scope – Concepts and Issues, Types of Tourists; Visitor, Traveller, and Excursionist– Definition and differentiation.
2. Tourism, recreation and leisure, their interrelationships.

### **Section- B**

3. Type of Tourism: Nature tourism, Heritage Tourism, Medical Tourism, Pilgrimage.
4. Important Places of Tourism in India and their significance.

### **Section- C**

5. Tourism Infrastructure – Transport, Facilitations and Hospitality Industry.
6. International and Domestic Tourism – Recent Trends.

### **Section- D**

7. Impact of Tourism: On Economy, Environment and Society; Concept of Ecotourism.
8. Problems of Tourism: Social behaviour, maintenance of tourist places, inadequate funding, advertisement and propaganda.

### **Suggested Reading List:**

1. Babu S. S., Mishra S., and Parida B. B. (eds.): Tourism Development Revisited – Concepts, Issues and Paradigms, Sage.
2. Bhardwaj et. al. (eds.): International Tourism: Issues and Challenges, Kanishka New Delhi.
3. Bhatia, A. K., 1991: International Tourism: Fundamentals and Practices, Sterling Publishers, New Delhi.
4. Boniface B. G. and Chris C., 2005: Worldwide Destinations: The Geography of Travel and Tourism, Elsevier Butterworth-Heinemann, Oxford.
5. Dhar P. N., 2006: International Tourism: Emerging Challenges and Future Prospects, Kanishka, New Delhi.
6. Hall M. and Stephan P., 2006: Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.

## **Paper 605 (iii) Geography of Health**

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### **SECTION-A**

1. Evolution of medical Geography.
2. Concept of Health and its Determinants.

### **SECTION-B**

3. Indicators of Health, its measurement and Data sources.
4. Global Patterns of Health, Mortality and Morbidity.

### **SECTION-C**

5. Food Security and health.
6. Demographic Transition and Health Transition Models.

### **SECTION-D**

7. Health care, Infrastructures, Provisions and Policies in Developed and Developing countries
8. Factors Affecting Regional Variations in Health with Spatial Reference to India.

### **Suggested Readings:**

1. D.M. Smith, (1977), Human Geography: Welfare approach, Arnold Meinman.
2. Melinda Meade and R.J. Earichson (2008), Medical Geography, Guilford Press, New York.
3. Peter Hagett (2000) , The Geographical Structure of Epidemics, Oxford.
4. R.P. Misra (2006), Geography of Health, Concept Publishing.

## Paper 605 (v) Soil Geography

**Maximum Marks: 90**

**Internal Assessment: 10**

**Time: 3 Hours**

*Note: There will be nine questions in all covering the entire syllabus. Question No.1 shall be short answer type and compulsory. The candidates have to answer four questions from the rest of eight questions. All questions carry equal marks.*

### SECTION-A

1. Definition, nature, scope and significance of soil geography; relationship of soil geography and pedology.
2. Soil forming factors: parent material, climate, topographic organic and their spatial temporal dimensions.

### SECTION-B

3. Soil Processes: Eluviations, Humification, Classification, salinization, podzolisation.
4. Soil profile: Development and Characteristics of soil profile.

### SECTION-C

5. Physical properties of soils: tenure, structure, colour, porosity and permeability.
6. Chemical Properties of soils: soil reaction, Factors of controlling soil reaction, Humus, soil clays, pH and Ec.

### SECTION-D

7. Soils and Environment problems: Soil erosion, degradation and conservation; methods to improve the physical qualities of soil.
8. Soil Survey: Modern techniques of soil survey, soil mapping sustainable development of soil resources with reference to India.

### Suggested Readings:

1. Buckman, H.O. and Brady N.C. 2000. The Nature and Properties of Soils, Macmillan, New York.
2. Bunting, B.T. 1973. The Geography of Soils. Hutchinson, London.
3. Brikeland, P.W.1984. Soils and Geomorphology. Oxford University Press, London.
4. Daji, J.A. 1990. A Text Book of Soil Science. Asia Publishing House, New Delhi.
5. Foth H.D. and Turk L.M. 1972. Fundamentals of Soils Science. John Wiley, New York.
6. Govinda Rajan, S.V. and Gopala Rao, H.G. 1978. Studies of Soils of India. Vikas Publications, New Delhi.
7. Sehgal, J. 2000. Pedology Concepts and Applications. Kalyani Publications, New Delhi.

8. Pitty, A.F. 1978. Geography and Soil Properties. University Press, London.