

MA Final(Geography)  
Climatology and Oceanography

Paper-I

- Unit 1 Nature and scope of climatology and its relationship with meteorology. Composition, mass and structure of the atmosphere. Insolation heat balance of the earth, green house effect; vertical and horizontal distribution of temperature. Atmospheric motion: Forces controlling motion of air vertical motion and vorticity, local winds, jet stream, general circulation in the atmosphere; Atmospheric moisture: Humidity, Evaporation, Condensation, precipitation: formation, types acid rain world pattern of precipitation.
- Unit 2 Tropical, temperate and high latitude weather system- concept of air masses and atmospheric disturbances, ocean atmospheric interaction- El Nino, southern oscillation (ENSO) and LaNina. Monsoon winds, norwesters and cyclones Tropical Temperate phenomena. Climate of India and its controls: Western disturbances
- Unit 3 Climatic classification of KOPPEN and THORNTHWAITE, Major climates of the world climatic changes: Evidences, possible causes; global warming.
- Unit 4 Nature and scope of oceanography- History of oceanography; distribution of land and water; major features of ocean basins; continental margin and deep-ocean basins; earth structure and plate tectonics; marine sediments.
- Unit 5 Physical and chemical properties of sea water; Interlink between Atmospheric circulation patterns in the ocean; Surface currents; thermohaline waves and tides. Ocean deposits; Coral Reefs. Marine biological environment: bio-zones, types of organisms. Plankton, Nekton and Benthos, food and mineral resources of the Sea

Books Recommended:

- Barry, R.G. and Chorley, P.J. 1998: Atmosphere. Weather Climate  
Routledge, London and New York.
- Peterson, S. 1969: Introduction to Meteorology, Mc Graw Hill Book, London.
- Davis Richard J.A. 1986: Oceanography- An Introduction to the Marine Environment,  
Wm.C. Brown Iowa.
- King, C.A.M. 1962: Oceanography for geographers.
- Ummerkutty, A.N.P. 1985: Science of the oceans and Human Life. NBT, N-Delhi.

MA Final(Geography)  
REGIONAL GEOGRAPHY OF INDIA

**Paper-II**

- Unit 1 Bases of regionalization: Geo- political, climatic, agro- climate, Physiographic, Historical, Demographic, Socio-economic dimensions of regionalization, case studies.
- Unit 2 Macro- Regions: Genesis and changing profile; Indian federalism: a synoptic view; natural and human resources and resource utilization; population- development, environment interface. Policies and programmes.
- Unit 3 Meso- Regions: Bases of regionalization: physical and human resources; economic and interlinkages; population-development environment interface, policies programmes.
- Unit 4 Micro- Region: Bases of regionalization; Physical human and economic resources; Formal and functional linkages. Population- development environment nexus; policies and programmes.
- Unit 5 Case-studies of meso/Micro level regions in detail;  
(1) Natural/Physical: Like Sundearban Delta, Indo-gangetic plan, Coastal India.  
(2) Urban/Metropolitan Regions: Delhi Metropolitan Region, Calcutta Metropolitan Regions, Bombay Metropolitan region etc.  
(3) Cultural Region: Bundeikhand.

**Books Recommended:**

- Deshpande C.D. India 1992 - A Regional Integration ICSSR and Northern Book Centre.  
Dreze, Jean and Amartya Sen(ed), 1996: India Economic Development and Social opportunity: Oxford University Press N Delhi.  
Singh, R.L.(ed) 1971 :India-A Regional Geography. National Geographical society, Varanasi, India.

MA Final(Geography)  
Geographic Information system and Remote Sensing Techniques.

Paper-III

- Unit 1 Spatial Science Geography of spatial science, maps and spatial information, Dynamics of spatial information, elements of information technology, geographic objects and their relations- definition and deployment of GIS, computer environment for GIS.
- Unit 2 Spatial Data. Elements of spatial Data; Data sources: primary and secondary. Census and sample-data; quality and error variation-raster and vector data Structures data conversion-comparison of raster and vector databasemethods of spatial interpolation is a data format for the computer environments?
- Unit 3 Elements of GIS Data capture -verification and preprocessing-data storage and maintenance of data-based-Database management systems: types and merits and demerit-data manipulation, analysis (integrated analysis of spatial and attribute overlay analysis, neighborhood operations and connectivity function) and spatial modeling-output format and generation. IS technology? coordinate system-basic principles of cartography and computer assisted cartography for GIS remote sensing data as a data sources for GIS and integration of GIS and remote sensing GPS and GIS Technology data generation and limitations visualizations in GIS digital elevation models (DEM and TINs))
- Unit IV Historical development of remote sensing as a technology- Relevance of remote sensing in Geography -concepts and basics: energy source energy and radiation principles energy interaction in the atmosphere and earth surface features remote sensing systems: platform, sensors and radiation records.
- Unit V Air Photos and Photogrammetry: Elements of photographic system: types, Scales and ground coverage, resolution, radiometric characteristics, films, filters, Aerial Cameras, Film exposure, geometric fundamentals of photogrammetry: Elements of vertical photographs, Relief displacement, Image parallax, Stereoscopic, orthophotos, Airphoto interpretation, Shadows, Site, Stellite Remote sensing; Platforms- LAND SPOT, NOAAVHRR, RADARSAT, IRS, INSAT: Principles geometry of scanners and CCD arrays, Orbital characteristics and data products- MSS, TM, LISS I and II, spotpla and M.L.A, SLAR.

**Books Recommended:**

- Burrough.P.A. 1986 : Principles of Geographic information systems for Land Resource Assessment. Oxford University press. New York.
- Star.J and J Estes. 1994 Geographic information systems: An introduction. Prentice- hall, Englewood cliff, New jersey
- American society of photogrammetry, 1983: Manual of Remote sensing, A S P, falls Church, V.A.
- Compbell J. 1989 : Introduction to Remote sensing, Guiford, New York.
- Curran, Paul J. 1985: Principles of Remote sensing, Longman, London.
- Hord.R.M. 1989 · Ditigal Image pricessing of Remotely sensed Data, Academic, New york.
- Rao,D.P.(ed) 1998: Remote sensing for earth resources, Association of exploration Geophysicist, Hyderabad.Tmomas J.L.Lillesand and Ralph W. Kefer,1994: Remote sensing and Image Interetation, John Wiley and sons, New York.



MA Final(Geography)  
Geography of Tourism

Paper- IV

- Unit 1 Basics of Tourism: Definition of tourism; Factors influencing tourism: historical, natural, socio-cultural and economic; motivating factors for pilgrimages: leisure, recreation; elements of tourism, tourism as an industry.
- Unit 2 Geography of Tourism: Its spatial affinity; areal and locational dimensions comprising physical, cultural, historical and economic; Tourism types: cultural, eco-ethno- coastal and adventure tourism, National tourism, International Tourism: globalization and tourism.
- Unit 3 Indian Tourism: Regional dimensions of tourist attraction: evolution of tourism, promotion of tourism.
- Unit 4 Infrastructure and support system: Accommodation and supplementary accommodation, other facilities and amenities; Tourism circuits-short and longer duration-Agencies and intermediaries-Indian hotel industry
- Unit 5 Impact of tourism: Physical economic and social and perceptual positive and negative impacts: Environmental law and tourism-Current trends, spatial patterns and recent changes; Role of foreign capital and impact of globalization on tourism.

Project Report on relevant topics such as impact of tourism on Gharwal Himalaya, Goa, Nainital, Khajuraho, Impact on a historic city.

**Books Recommended:**

- Bhatia, A.K. 1996: Tourism development: Principles and practices. Sterling publishers, N-Delhi.
- Bhatia, A.K. 1991: International Tourism: Fundamentals and Practices, Sterling, N- Delhi.
- Hunter, C and Green, H. 1995: Tourism and the Environment: A sustainable relationship, Routledge, London.
- Kaul, R.K. 1985: Dynamics of Tourism and reaction, Inter-India, N-delhi.
- Milton, D. 1993: Geography of World Tourism, Prentice Hall, N-Delhi.
- Sharma, J.K (ed) 2000. Tourism planning and Development-A new perspective, Kanishka Publishers, N-Delhi.
- Theobald, W.(ed) 1994: Global Tourism: The next decade, Oxford Butterworth, Heinemann, Oxford.
- Williams, A.M. and Shaw, G(ed.) : Tourism and Economic development- Western European Experiences, Belhaven, London.

