I SEMESTER

Gr – 101. GEOMORPHOLOGY


Unit – II  Isostasy – Theories of continental drift – Interior of the earth – Mountain building Activity – Plate tectonics.


Unit – IV  Landforms and earth materials. Processes of weathering, mass wasting and erosion.

Unit – V  Landforms made by (a) streams (b) wind (c) underground water (d) Waves (e) Glaciers

References:

Gr – 102.  ECONOMIC GEOGRAPHY  
(Revised w.e.f.2014-15)

Unit – I  Scope and content in economic geography; relation of economic Geography with other branches of social sciences; Location of Economic activities and spatial organization of economics (primary, secondary and tertiary).

Unit – II  Factors of location of economic activities: Physical social, economic and cultural; Concept of techniques of delimitation of agricultural regions; Von Thunen’s model and its validity in the modern world

Unit – III  Classification of industries; Theories of Industrial location-Weber, Losch; Case studies of selected industries Iron, Steel and Textile etc.

Unit – IV  Transportation and transport cost, accessibility and connectivity; Typology of Markets, market networks/ systems in rural and urban areas.

Unit – V  Economic development of India, Regional disparities, Impact of green revolution on Indian Economy, Globalization and Indian economy and its impact on environment.

References :

Gr – 103. GEOGRAPHY OF INDIA AND ANDHRA PRADESH

Unit - I  Location – Major physiographic divisions – Major river systems – drainage pattern – climate and climatic regions of India.

Unit - II  Soils – Natural vegetation – Need for conservation of soils and forests. Agricultural types and regions – irrigation and power – distribution of food and commercial crops.


Unit - V  Andhra Pradesh – Relief, climate, soils, vegetation, agriculture, irrigation and power, mineral Wealth and industrial development, population and urbanization.

References:

5. Shrama and Cautinho. Economic and Commercial geography of India.
6. Shrama, T.C. Technological change in Indian Agriculture, Rawat publication, Jaipur.
7. Negi, B.S. Geography of India, Kedar Nath Ram Nath, New Delhi.
Gr – 104. PRINCIPLES OF CARTOGRAPHY


Unit – II  Cartography as graphic means of Communication. Theory of Visual perception-Visual variables. Graphic elements- Clarity and legibility contrast, Figure- ground, Balance. Colour and pattern in Cartography.


References:


1 SEMESTER – PRACTICALS

Gr – 105. MAP ANALYSIS

1. Introduction to types of maps and scales.
2. Map series, numbering methods, scales of the map series (Old & New), Latitudinal and Longitudinal extents of International maps and topographical maps
3. Interpretation of topographical maps – Indian and foreign.
4. Representation of relief features by contours
5. Profile drawing – Simple, superimposed and composites

References:

2. R. Singh & Kanujia. Map work and practical geography, Central Book Depot, Allahabad
Gr - 106. CARTOGRAPHY

1. Scales: Methods of Representation, Conversions
2. Map projections: Zenithal, Conical, Cylindrical, Conventional Map Projections
3. Thematic mapping:
   - Bar graphs – simple, compound, wind roses
   - Line graphs – simple and polygraph
   - Dot method
   - Choropleth Technique
   - Isopleth technique
   - Proportional circles
   - Sector Diagrams

References:

1. Misra, R.P. and Ramesh, A. Fundamentals of cartography, Concept, New Delhi
2. E.Raisz. Principles of cartography
II SEMESTER

Gr - 201. CLIMATOLOGY AND OCEANOGRAPHY

UNIT – I Scope, and content of Climatology; Earth, its origin and its planetary Relation to the sun; time and its measurement.

UNIT – II Structure and composition of the atmosphere; Solar and Terrestrial Radiation – Heat budget; Distribution and patterns of whether elements – Temperature, Precipitation and wind; General circulation of the atmosphere, Monsoon mechanism.

UNIT – III synoptic Climatology – Air masses and Fronts; Cyclogensis satellite studies Climatology; Elements of Climatic classification – Koppen and Thornthwaite.


UNIT – V Movements of ocean water (a) waves (b) Tides (c) Currents.

References:

UNIT – I  The field of geography; its place in the classification of sciences; geography as a social science; selected concepts in the philosophy of geography, distributions; relationships, interactions; aerial differentiation and spatial organization.

UNIT – II  Dualisms in geography; systematic & regional geography; physical & human geography. Systematic geography & its relation with systematic sciences and with regional geography. The myth and reality about dualisms. Regional geography: Concept of region, regionalization and the regional method.

UNIT – III  Scientific explanations: routes to scientific explanations (Inductive/Deductive); types of explanations; cognitive description; cause & effect; temporal; functional/ecological systems

UNIT – IV  Laws, theories & models, the quantitative revolution, response to positivism, behaviorism, postmodernism

UNIT – V  Historical Development Contributions of different scholars during ancient medieval and modern period. Geography in the 20th Century; conceptual and methodological developments and changing paradigms, status of Indian Geography. Future of geography, task ahead relating to development of geographic thought with special reference to changing views on man-environment relationship.

References:

Gr – 203. URBAN GEOGRAPHY
(Replaced w.e.f. 2014 -15)

Unit –I: Internal structure of Cities; Concentric Zone theory, sector theory, multi
nuclei theory, city classification – functional classification of Towns.

Unit – II: Rural Urban fringe: City Region and Umland, Central Business District.

Unit – III: Primate City distribution and rank rule size. The central functions and
central place theory.

Unit – IV: Urban problems: Slums & squatter settlement. Housing problems,
Transport traffic congestion problem.

Unit – V: Urban Environmental problems (Air, Water, Solid waste)

References:

1. Berry. B.J.L and Horton. F.F: Geography Perspectives on urban systems. Prince
5. Gibbs, J.P. Urban Research Methods. D. Van Nostrand Co. in Princton, New
6. Jones. P.L and Jones C.F (eds): American Geography, Inventory and prospect,
Syracuse University Press, Syracuse, 1954.
7. Kanda, A. Urban development and Urban research in India, Khama publication,
8. Mayor, H.M. Kohn C.F.(eds). Readings in Urban Geography. UNIVERSITY OF
Chicago Press.
New Delhi.
Publishers, Banglore.
Delhi, 1998.
Ecological Perspectives Concept 1966.
Gr – 204. PRINCIPLES OF REMOTE SENSING


References:

II SEMESTER – PRACTICALS

Gr – 205. INTERPRETATION OF AERIAL PHOTOGRAPHS

2. Oblique photographs
3. Stereogram, landforms, drainage, urban, rural, agricultural and industry
4. Stereo pairs: Landforms, drainage, urban, rural, agricultural and industry
5. Land sat Imageries
6. Use of Mirror stereoscope.
7. Use of stereo meter.
8. Use of aero-sketchmaster.

References:

Gr – 206. CLIMATIC DATA ANALYSIS

1. Rainfall data analysis Mean annual and seasonal –intensity-rainfall Variability
2. Monthly mean precipitation and temperature - Global stations and Indian drain stations
3. Wind rose diagrams
4. Thermal continentality
6. Drought climatology –drought frequency histogram –climatic shifts
7. Graphs-Climograph, Hydrograph and Ergo graph
8. Urban heat islands and temperature inversions

References:
3. I.A Ramadas, Crops and Weather in India, ICAR, New Delhi.
III SEMESTER

Gr – 301.  POPULATION GEOGRAPHY

Unit – I    Nature and Scope of population geography-Interface between society, population, ecology and geography. Population geography and its relation with other social sciences. Sources of data and methodology of studying population geography

Unit – II   World population, distribution and composition. India’s population, composition and distribution. Factors affecting the growth and distribution of population.

Unit – III  Malthus theory of population and his contribution – Demographic transition theory and theory of optimum population.


Unit – V    Population policies in developed and developing countries – India’s population policy measures to control population.

References:

1. UNESCO. Determinants and consequences of population trends, 1953.


UNIT – III Population growth and environment, carrying capacity of the earth, Land resources and world food security. Human settlements and environment; Industrial environment – urban environment. Man’s impact on physical & social environments.


UNIT – V Environmental legislation – the Stockholm Conference, the Earth Summit Environmental laws in India. Environmental planning and management. Environmental programs.

References:

UNIT – I  Factors and processes of soil formation, Soil profiles, Physical and chemical properties of soil; Classification of soils-zonal, zonal and intra zonal, world patterns.

UNIT-II  Soil erosion and conservation, Soils of India, Sustainable development of soil resource with reference to India.

UNIT-III  Hydrological cycle: Elements of hydrological cycle; Precipitation intensity and duration; Evaporation; infiltration, water balance elements and analysis ; flood and drought analysis.

UNIT-IV  Ground water occurrences and types, Movement, Quality and quantity measure; Nature and distribution of ground and surface water distribution in India.

UNIT-V:  Water conservation, Application of Remote sensing in hydrological studies.

References:
9. Raychoudhuri, S.P. Soils of India, ICAR, New Delhi, 1958
14. Dakshina Murty,C.,et al., Water resources of India and their utilization in agriculture, Indian agricultural Research Institute, New Delhi,1973
UNIT – I  Definition and concept of Hazards: classification of hazards; climate change causes and implications; natural hazards: Earthquakes; volcanicity, landslides, land subsidence and avalanches; forest fires.

UNIT – II  Climatic hazards: Droughts and desertification: drought preparedness and monitoring, floods: flood control and management; thunderstorms; tornadoes, cyclones, heat waves, cold waves, hail storms.

UNIT – III  Coastal hazards: coastal erosion. Strom surge and Tsunamis; origin, propagation and devastation.

UNIT – IV  Human induced disasters: Urban and industrial disasters: Air pollution, acid rains; Global warming and Ozone depletion, Deforestation; Desertification; siltation; wetland degradation; Epidemics.

UNIT – V  Risk assessment: Disaster preparedness and management for various hazards; Geo – spatial technologies for disaster management; Remote Sensing applications in disaster management.

References:

5. Roy, P.S., Van Westen, C.J. Jha, V.K. Lakhera, R.C and Champathi RAY, P.K., Natural disaster and their Mitigation: Remote sensing and geographical information system perspectives, IIRS, Dehra Dun, Govt. of India, 2003
III SEMESTER – PRACTICALS

Gr - 305. QUANTITATIVE TECHNIQUES IN GEOGRAPHY

1. Questionnaire formulation and collection of primary data
2. Processing of data: Classification and tabulation
3. Representation of statistical data
4. Statistical measures of central tendency – Mean, Median, Mode, Quartiles, Deciles and percentiles.
6. Interpolation and extrapolation
7. Time series
8. Correlation

References:

Gr – 306. IMAGE PROCESSING

Visual Interpretation – Elements, Keys, land use, land cover mapping, multispectral data, FCC, Digital analysis – Image data formats, sub map extraction, color composite, Statistics extraction, image registration, Image enhancement – contrast stretching, Edge enhancement, Filtering, Band rationing, Image classification – supervised, unsupervised, creating base map, overlay, field work.

References:
IV SEMESTER

Gr - 401   AGRICULTURAL GEOGRAPHY
(Repaced w.e.f. 2014 – 15)


UNIT – II Von Thunen’s model of agricultural location – modifications, limitation and application in India. Whittlesey’s classification of agricultural systems. Agricultural Typology – International Commission of the IGU.


UNIT – IV agricultural regions of India and their characteristics. Agricultural typology of India. Five year plans and agriculture. Agricultural policy in India. Green revolution and implication. Specific problems in Indian agriculture.


References:
UNIT – I Concept of Region: Planning in India: Goals and Achievements – Ideology, Objectives, challenges and opportunities. The system approach – Economic regions, Environmental region, Administrative regions, Multi level planning regions.


References:

12. Nangia Sudesh, Delhi Metropolitan Region Rajesh publication, Delhi, 1976.
UNIT – I  Nature, scope and significance of geography of health. Development of this area of specialization; its distinction from medical science.


UNIT – IV  Ecology, etiology and transmission of major diseases: Cholera, Malaria, Tuberculosis, Hepatitis, Leprosy, Cardiovascular, Cancer, AIDS and STDs. Diffusion of diseases and cause for the same. Deficiency disorders and problems of mal – nutrition in India.


References :


References:

8. ESRI. Understanding GIS – Redlands, USA: ESRI
IV SEMESTER – PRACTICALS

Gr - 405. TERRAIN ANALYSIS

1. Methods of Representation of relief – Profiles – Geological cross sections
2. Morphometry of drainage basin
3. Slope analysis – Wentworth and Smith methods
4. Altimetric frequency Analysis
5. Hypsometric Analysis
6. Clinometric Analysis
7. Relative relief Analysis
8. Digital Elevation Model representation

References:

1. Components of Information system
2. Directory and File Structures, Binary coding
3. Organization of data records – network, relational and hierarchical records
4. Topology
5. GIS data structure: Vector and raster database structures and conversions
6. Buffer zones in Raster and Vector models
7. Data entry and map composition: Digitizing – Scanning – Editing – Plotting and map making
8. Overlay analysis and Boolean operations
9. Digital Elevation Models

References: