LESSON PLAN FOR M.Sc. (2nd Sem) (NEP) (2024-25)

SUBJECT: GEOGRAPHY (THEORY)

Month/Paper/Teacher's Name	January	February	March	April	May
GEO- 201 **Geography in Hazard Management** **Mr Virender**	**Unit I** **l. Risk, hazards and disasters: definitions, distinctions. 2. Hazards: classification and dimensions. 3. Disaster effects and impacts (physical and social).**	**Unit II** **4. Disaster rulnerability: definition, types, measures and affecting factors.** **5. Disaster risk assessment and management.** **6. Disaster cycles: mitigation measures and prqraredness.**	**Unit III** **7. Desertification: causesr assessment, effects and control measures.** **8. Sea level change: causes, consequences, and control measures.** **9. Technological hazards: nature, theories and practice, perception, mitigation, protection and adaptation.**	**Unit IV** **10. Disaster risk reduction framework: Hygo and Sandai.** **ll. Disaster management in India: strategies, policies and organizational structure setup.** **12. Geospatial technology applications in disaster prevention and monitoring.**	**Revision**
GEO – 202 **Research Methodology in Geography** **Dr. Sanjeev Goel**	**Unit I** **Introduction to research methodology: meaning and objectives of research, characteristics of research, types of research.** **Introduction of research design: purpose and characteristics of design, problems and formulation of research design in geography.**	**Unit II** **Sources of data: characteristics of primary and secondary data, significance of field work in geography.** **Sampling design for collection of primary data, quantitative and qualitative data, hypothesis formulation and testing.**	**Unit III** **Remotely sensing data: processes of obtaining data, air and space based, types of satellites, sensors characteristics, resolution and types.** **Panchromatic, multispectral, thermal and hyperspectral remote sensing data, characteristics and significance.**	**Unit IV** **Indian remote sensing resource satellites data, changing characteristics, significance and uses; applications of remote sensing data in geographical research: data requirement for urban, agriculture and resource mapping and monitoring.** **Format of report/ dissertation/ thesis writing.**	**Revision**
GEO - 203 **Geography of Agriculture and Food Security** **Mr Sunil Kumar**	**Unit I** **Nature scope and significance of agricultural geography** **Origin and dispersal of agriculture.** **Determinants of agricultural patterns: physical, technological and cultural factors. Approaches to the study of agriculture geography regional and systematic approach, ecological and commodity**	**Unit II** **Concepts of land capability classification: land use survey and classification. Concept of intensity of cropping, degree of commercialization, cropping diversification and concentration, crop combination; von thunen model of agricultural land use**	**Unit III** **agricultural regionalization concept and criteria; Whittlesey's agricultural systems; measurement of agriculture efficiency and productivity. Agro-climatic zonation: concept and Indian experiences.**	**UnitIV** **Neo-liberalization and Indian agriculture; problems of Indian agriculture; food and security in india.** **Perspectives in agriculture; urban agriculture, contract farming, agri-business, sustainable agricultural development; agriculture and climate change: impacts and adaptation; Indian agricultural policies and challenges.**	**Revision**
GEOG – 204 **Population Dynamics and Policies** **Dr. Sanjeev Goel**	**Unit I** Sources , quality, reliability and applications of population data. Methodological problems in population geography. Problems of mapping population data. Note: Assignment-I	**Unit II** Concepts, measurements, determinants and world patterns of fertility, mortality, migration (including policies) and growth. Composition of Population: Concepts, measurements, determinants and world patterns of age and sex, occupational structure and workforce. Demographic dividend: linkages between population and economic development.	**Unit III** Theories of population (Malthus, Ricardo and Marx) Demographic Transition Model. Population Resource Relations: concepts of overpopulation, under population and optimum population; Population resource regions. Limits to growth: concept and application. Note: Assignment- II	**Unit IV** Comparative study of population problems and policies of developed and less developed countries. Population problems and Environmental Implications. Note: Thematic Test	**Revision**
Constitutional, Human and Moral Values, and IPR **Mr Virender**	**Unit I** **Constitutional Values:** Historical Perspective of lndian Constitution; Basic Values enshrined in the Preamble of the Indian Constitution; Concept of Constitutional Morality; Patriotic Values and Ingredients Nation Building; Fundamental Rights and Duties; Directive Principles of the State Policy.	**Unit II** **Humanistic Values:**Humanism, Human Virtues and Civic Sense; Social Responsibilities of Human Beings; Ethical ways to deal with human aspirations; Harmony with society and nature; Idea of International Peace and Brotherhood (Vasudhaiv Kutumbkam).	**Unit III** **Moral Values and Professional Conduct:** Understanding Morality and Mora[Values; Moral Education and Character Building; Ethics of Relations: Personal, Social and Professional, Introduction to Gender Sensitization; Affirmative approach towards Weaker Sections (SCs, STs, OBCs, EWS& DAs); Ethical Conduct in Higher Education lnstitutions; Professional Ethics.	**Unit IV** **Intellectual Property Rights:** Meaning, Origins and Nature of Intellectual Property rights (lPRs); Different Kinds of IPRs - Copyright, Patent, Trademark, Trade Secrets, Traditional Knowledge; Infringement and Offences of IPRs - Remedies and Penalties; Basics of Plagiarism policy of UGC.	**Revision**

LESSON PLAN FOR M.Sc. (4th Sem) (2024-25)

SUBJECT: GEOGRAPHY (THEORY)

Month/ Paper Teacher's Name	January	February	March	April	May
GEOG- 401 Geographical Thought **Dr. Sanjeev Goel**	**Unit I** Classification of knowledge, Nature of Geography and its place among sciences. Nature of Geographic knowledge during ancient (Greek and Roman) and medieval (Arab) periods. Foundation of Modern Geography – Varenius, Kant, Humboldt and Ritter. **Note: Assignment-I**	**Unit II** Emergence of Geography as a study of (i) physical features (ii) chorology (iii) landscapes. Concepts and dualism in Geography: Determinism and Possibilism, Areal Differentiation; Physical vs Human Geography, and Systematic vs Regional Geography **Note: Assignment-II**	**Unit III** Quantitative Revolution – Emergence of theoretical geography. Positive Explanations in Geography – Laws, theories, models, inductive and deductive logic.	**Unit IV** Behavioral and Humanistic Perspectives in Geography. Social Relevance in Geography – Welfare, Radical and Feminist Perspectives. Postmodernism and Geography. **Note: Thematic Test**	**Revision**
GEOG – 402 Hydrology and Oceanography **Mr Sunil Kumar**	**Unit I** Definition, nature, scope and historical development of hydrology. Relationship of hydrology with other physical sciences. Hydrological cycle, estimation of global water budget, human impact on hydrological cycle. **Note: Assignment-I**	**Unit II** Rainfall: frequency, intensity and measurement, accuracy of rainfall measurement, determination of average rainfall (Arithmetic mean, theiesson polygon, isohyet, variations in rainfall and world distribution. Sources, and measurement of stream flow, hydrograph factors affecting the hydrograph shape, methods of hydrograph separation, variations in runoff, rainfall-runoff relationship. **Note: Assignment-I**	**Unit III** Major topographic features of ocean basin, bottom relief of atlantic, pacific and Indian oceans Sources classification and distribution of ocean diposits, corals-origin, types and conditions for development. Theories of the origin of coral reefs (subsidence and standstill)	**Unit IV** Origin, causes, type, and effects of the ocean currents, currents of the Atlantic, Pacific and Indian oceans. Oceanic temperature: distribution and causes of variation. Composition of oceanic water and distribution of salinity **Note: Thematic Test**	**Revision**
GEO – 403 Reg. Geog. Of India (Haryana) **Mr Virender**	**Unit I** Concept and types of regions and regionalization Regional Diversities in India Critical Review of schemes of regionalization of India **Note: Assignment-I**	**Unit II** Macro Regions of India Bases of demarcation of Meso Regions in India. Schemes of socio-economic regionalisation **Note: Assignment-II**	**Unit III** Physical and economic diversities in Haryana	**Unit IV** Demographic characteristics and diversities in Haryana. Social diversities in terms of education and health in Haryana. Social region of Haryana. **Note: Test**	**Revision**
GEO – 404 Urbanisation in India **Dr Sanjeev Goel**	**Unit I** History of urbanization in India Processes of urbanization: Socio-cultural, political, economic and geographical processes **Note: Assignment-I**	**Unit II** Patterns of urbanization: settlement structure, level of urbanization, criteria of measurement and spatial patterns of urbanization in India. Recent trends of urbanization in India. **Note: Assignment-II**	**Unit III** Urban regions of India: case studies of metropolitan regions of Delhi, Mumbai, Kolkata and Chennai. Contemporary Urban issues: Urban poverty, slums and urban renewal, urban infrastructure and solid waste management.	**Unit IV** Role of urbanization in economic and social change. SEZ : Concept, policies and consequences. National urbanization policy **Note: Test**	**Revision**
GEO – 405 Fundamentals of GIS **Dr. Ganeshwari**	**Unit I** 1. GIS: concept, definition and development. **Note: Assignment-I**	**Unit I** 2. Hardware and software requirements for GIS environment 3. Data for GIS : (i) Spatial data and their sources (ii) Non –spatial data and their sources; (iii) data structure: vector and raster **Note: Assignment-II**	**Unit I** 4. Data Base Management System; Sources of errors in GIS database **Note: Assignment-II**	**Unit II** 5. Map, scale and map projection: Need of projection, spherical co-ordinate system and properties. 6. Integration of Remote Sensing data into GIS and its application in resource mapping, urban management and real time mapping	**Unit II** 7. Current issues in GIS. **Note: Test**