

Jai Narain Vyas University, Jodhpur

MPET-2015

GEOGRAPHY

Unit-A

Meaning, objectives, types, significance and ethic of research, Problems of geographical research, identification of problematic areas, Sources and natures of data to be used, Preparation of questioner. Basic techniques of collecting primary data through interviews, Hypothesis and Preparation of research projects and writing of reports. Preparation of field reports, How to write Ph.D. thesis. Spatial data classification and sampling problems. Need for sampling, types of sampling, sample size and sampling area. Selected techniques of spatial analysis, methods of measuring concentration and dispersal of economic activities. Nearest Neighbour analysis, Regional interaction analysis. gravity potential, inter-regional flow-analysis, Methods of delimiting regions economic industrial regions, planning regions, agricultural regions. Regional population analysis, population projection, population migration projection; Network analysis, Techniques of urban analysis with reference to land use. population and hinterland relationship delimiting sphere of city influence. Determining of core and marginal areas. Techniques of Map Analysis, Morphometric analysis, Drainage basin analysis, Slope analysis analysis of biogeochemical cycles, Integrated Area Development planning. Fundamentals of Computers:- Operating Systems, use of software(MS office/Auto CAD),Internet uses.

Unit-B

Historical perspective of relevant field of research/reviews of the subjects

Consultations of Concerned Literature:- Book/Journals and Blue Literature

Preparation of Manuscripts style manual/ editing/ online submission of ms/central

article tracking system(CATS) abstract/summary; introduction: Material & Methods; Results and Discussions, Citations/ References; editing & track

Change, Scientific conduct/ ethics and Impact factors, Social relevance of research.

Unit-C

Concept of Ideology, Evaluation of Geographical ideas, Geography in ancient period, contribution of Greeks, Arab Geographers: Dark age in Geography, Renaissance in Geography Geography in Medieval period. Discoveries in the world.

Geography in Modern period, contribution of Kant, Humboldt, Ritter and Ratzel;

Schools of Geographical thought; German, French, Russian, British, American

and Indians. Concept of Dichotomies in Geography, Industrial Revolution,

Concept of landscape, land use analysis.

Growth of population and resources distribution as well as Technology innovation

and political hegemony. During Colonial Period, Changing

resource base and socio-economic conditions according to prevailing objective

situation- local to global.

Communication Revolution, Organization of space in globalized world, Concept

of post modern era, Recent trends in Geographical research, concept of Social

well being:- special reference to third world countries with reference to developmental disparities.

Unit-D

Nature and scope of Geomorphology, Fundamental concepts-Geological structures and landforms, uniformitarianism, multi-cyclic and polygenetic evolution of landscapes, concept of threshold, Environmental change-climatic

change and geochronological methods-documentary

evidence, artifacts, major horizons, dendrochronology, pollen, thermoluminescence.

Earth movements- epeirogenic, orogenic and earth movements. Forces of crustal

instability, isostasy, plate tectonics, seismicity, vulcanicity, orogenic structures with

reference to the evolution of Himalaya. Orogenic Processes: Concept of gradation, Agents and processes of gradation, causes, types and classification of

weathering, mass movement erosional, and depositional processes and resultant

landforms and soil formation,

slope evolution, down wearing, parallel retreat and slope replacement models.

Geomorphic processes, dynamics of fluvial, glacial, Aeolian, marine, and karst

processes and resulting landforms complexities in geomorphological processes,

Erosion surfaces- techniques of identification and correlation,

Nature and scope of climatology and its relationship with meteorology.

Composition, mass and structure of the atmosphere. Isolation 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. Tropical, temperate and high latitude weather

systems- concept of air mass and atmospheric disturbances, .

ocean atmospheric interaction- EL Nino, southern oscillation (ENSO) and La Nina,

Monsoon winds, norwesters, and cyclones Tropical Temperatic phenomena

climate of India and its controls: Western disturbances Climatic Classification of

Koppen, and Thornthwaite. Major climates of the world- tropical.

Unit-E

Model in agricultural land use concept, need and principles, Von Thünen's agricultural location theory. Preparation, planning and monitoring of a detailed Performa for land use surveys. Food storage technology, Green revolution in India. Live-stock combination, Dairy development, Agro forestry importance, status and scope in India. Agricultural statistics and their mapping. Measurements of the levels of agricultural development-Concept and methodology. Agricultural regionalization-Concept, methods of delimitation.

Historical development of remote sensing as a technology-Relevance of remote sensing in Geography-Concepts and basics: Energy source, energy and radiation principles, energy interactions in the atmosphere and earth surface features, remote sensing systems: platforms, sensors and radiation records. Tools and Techniques, Cartography, Digital Mapping. Means/Mode/Median, GIS, GPS, Air photos and photogrammetry: Elements of photographic system: types, scales and ground coverage, resolution, radiometric characteristics, films, filters, aerial cameras, film exposures, geometric fundamentals of pohto grammetry: elements of vertical photographs, relief displacement, image, parallax, stereoscopic, orthophotos, airphoto interpretation: shape, size, pattem, tone, texture, shadows, site