

PAPER I- PRINCIPLES OF GEOGRAPHY

Geomorphology

Universe and Solar system Planets

Theories of Origin Of The Earth

Latitude And Longitude | Standard Time Zone

Geological Time Scale

Interior Of The Earth | Core, Mantle And Crust

Geomagnetism & Geomagnetic Reversal

Earthquake Causes And Effects

Seismic Waves And Earth's Interior

Geosyncline Theory

Continental Drift Theory

Isostasy & Theories of Isostasy

Seafloor Spreading Theory

Plate Tectonics Theory

Theories of Mountain Building, Recent Views on Mountain Building

Geomorphic Processes: Endogenic And Exogenic

Endogenic Forces: Epeirogenic And Orogenic

Exogenic Forces: Denudation & Weathering

Volcanism And Volcanic Landforms

Slope elements and Slope development

Denudation Chronology

Geomorphic Cycles & Davis Cycle of Erosion

Penck Model of Cycle of Erosion

Erosional Surfaces: Peneplains, Pediplains, Panplains

Channel Morphology

Fluvial Landforms

Marine Landforms

Karst Landforms

Glacial Landforms

Periglacial Landforms

Desert Landforms (Arid)

Applied Geomorphology

TOTAL HOURS

CLIMATOLOGY

Origin of Atmosphere

Composition And Structure Of The Atmosphere

Temperature Belts Of Earth

Temperature Inversion: Types & Effects On Weather

Heat Budget Of Earth

Pressure Belts Of The Earth

Wind And Wind Types

Clouds And Its Types

Precipitation: Types Of Precipitation & Types Of Rainfall

Tropical Cyclones & Tornado

Air mass

Fronts and Types of Fronts

Temperate Cyclones (Extratropical cyclone)

Jet Streams

Koppen climate classification system

Thornthwaite Climatic Classification

Trewartha Climatic Classification

Climatic Regions Of World

Global climatic change and role of man

Applied Climatology

TOTAL HOURS

OCEANOGRAPHY

Ocean Relief Features- Bottom features of pacific,India,Atlantic

Ocean Waves, Tides

Ocean Current

Ocean Salinity

Temperature Distribution of Oceans

Oceanic Resources And Deposits

El Nino And La Nina

Coral Reefs & Coral Bleaching, Theories of Origin of Coral Reefs

Sea level Changes, Oceans Issues and Threats, Ocean Pollution (Marine Pollution)

United Nations Convention on the Law of the Sea

TOTAL HOURS

BIOGEOGRAPHY

Soil Genesis, Soil forming Processes & Factors

Soil Properties - Physical, Chemical & Biological, Soil Profile (Soil Horizons)

Soil Classification & Distribution of Soil in World

Soil Erosion, Degradation, and Conservation

Problems of deforestation and conservation measures

Social forestry and Agroforestry

World distribution of Plants and Animals, Factors Influencing Distribution of Plants & Animals,

Wildlife, Problems of Wildlife & Wildlife Conservation

Major Gene Pool Centres

TOTAL HOURS

ENVIRONMENTAL GEOGRAPHY

Fundamental Concepts and Principles of Ecology, Biotic Regions (or) Biomes of the World, Human Ecological Adaptations

Influence of Man on Ecology and Environment

Global and Regional Ecological changes and Imbalances

Ecosystem Management and Conservation

Environmental degradation

Environmental Management, Environmental Conservation

Biodiversity and sustainable development

Environmental Policy

Environmental Legislations

Environmental Education

Environmental Hazards and remedial measures

TOTAL HOURS

PERSPECTIVES IN HUMAN GEOGRAPHY

Evolution Of Geographical Thought

Aerial Differentiation

Regional Synthesis

Dichotomy and Dualism

Quantitative Revolution

Locational Analysis

Behavioural Approach (Behaviouralism)

Humanistic Approach (Humanism)

Radical Approach (Radicalism)

Welfare Approach

Environmentalism

Cultural Regions of the World

Languages Religions and Secularization

Human Development Index

TOTAL HOURS

ECONOMIC GEOGRAPHY

World economic development, World agriculture & World industries.

World economic development: measurement and problems

World Resources & Distribution

World Industries: Locational Patterns and Problems

Patterns of world trade

World Agriculture: typology of agricultural regions, Agricultural inputs and productivity

Food and nutrition problems
Food Security
Famine - Causes and Effects
Energy Crisis
Limits to Growth Model
TOTAL HOURS

POPULATION AND SETTLEMENT GEOGRAPHY

integrated study of Paper 1(Part B) and Paper 2 i.e. "Regional Planning" of Human Geography {Paper 1(Part B)} with Regional Development and Planning (Chapter 8) of Geography of India.

Growth & Distribution of World Population
Population distribution in the world
Population Growth in India
Factors influencing population distribution and density
Population in India: Distribution & Density
World Migration: Causes and Consequences, Migration in India

Theories of Migration
Optimum Population Theory
Social well-being and Quality of life
Population as Social Capital

PAPER II: Historical Perspective of Indian Society, Racial, linguistic and ethnic diversities, Religious minorities

Major tribes of India
Tribal Areas and their Problems in India
Cultural Regions of India
Introduction to Settlement Geography
Rural Settlements: Morphology
Rural Settlements: Types
Rural Settlements: Patterns
Environmental issues in rural settlements
Hierarchy of urban settlements
Urban Morphology
Urban Morphology of Indian Cities
Concepts of primate city and rank-size rule
Functional classification of towns
Sphere of urban influence, Rural-Urban Fringe, Satellite towns

Problems and remedies of urbanization, Sustainable development of cities

Central Place Theory
Conurbations and metropolitan regions
TOTAL HOURS

REGIONAL AND DEVELOPMENTAL PLANNING

integrated study of Paper 1(Part B) and Paper 2 i.e. "Regional Planning" of Human Geography {Paper 1(Part B)} with Regional Development and Planning (Chapter 8) of Geography of India.

Concept of Region, Types of regions

Methods of regionalization

Growth centers and growth poles

Regional imbalances, Theories of Regional Imbalance

Regional development strategies

Environmental issues in regional planning,

PAPER II: Planning for sustainable development, Planning as a tool for regional imbalance ,
Experience of Regional Planning: Five Year Plans

Backward Area Planning, Hill Area Development, Drought Prone Area Development, Tribal Area Development, Regional planning and development of island territories Integrated rural development programmes, Command area development, Multi-level planning & Decentralised Planning

TOTAL HOURS

MODELS AND THEORY

System Analysis In Geography

Malthusian Demographic Theory

Marxian Demographic Theory

Demographic Transition Theory

Central Place theories of Christaller and Losch

Von Thunen Model Of Agricultural Location

Weber Model Of Industrial Location

Heartland And Rimland theory

Perroux and Boudeville

Rostow's Model of Stages of Growth

Laws Of International Boundaries And Frontiers

Organic State Theory (Friedrich Ratzel)

TOTAL HOURS

PAPER II - GEOGRAPHY OF INDIA

PHYSICAL SETTING

L-1 : Indian Geographical Extent and Frontiers

L-2 : Rock System Of India (Archaean, Purana, Dravidian & Aryan)

L-3 : Himalayas Formation & Structure of Himalayas Himalayan Ranges - Greater, Middle, Shiwaliks

L-6 : Mountain Passes Of India

L-7 : Important Hill Ranges of India

L-8 : Indo-Gangetic-Brahmaputra Plains
L-9 : Indian Peninsular Plateau (Deccan Plateau)
L-10 : Western And Eastern Ghats, Western And Eastern Coastal Plains

L-12 : Indian Islands - Andaman & Nicobar, Lakshadweep

Indian River System (Drainage Systems of India)

L-13 : Ganga River System

L-14 : Yamuna River System

L-15 : Brahmaputra River System

L-16 : Indus River System

L-17 : Mahanadi River System

L-18 : Godavari River System

L-19 : Krishna River System

L-20 : Cauvery(Kaveri) River System

L-21 : East Flowing Rivers

L-22 : West Flowing Rivers (Narmada, Tapi, etc.)

L-23 : Mechanism of Indian Monsoon

L-25 : western disturbances

L-26 : Floods

L-27 : Droughts

L-28 : Climatic regions of India Koeppen's Classification of Climatic regions of India

L-30 : Natural vegetation of India

L-31 : Soil types and their distributions

L-32 : Important Glaciers in India

L-33 : List of Mountain Ranges in India

L-34 : Important Tribes of India

TOTAL HOURS

RESOURCES

L-1 : Mineral Resources: Iron Ore distribution in India

L-2 : Manganese Ore Distribution in India

L-3 : Copper, Nickel & Chromite Distribution in India

L-4 : Bauxite Distribution in India

L-5 : Lead, Zinc, Tungsten & Pyrites Distribution

L-6 : Uranium and Thorium Distribution in India

L-7 : Gold & Silver Distribution in India

L-8 : Diamond & Graphite Distribution in India

L-9 : Non-Metallic - Mica, Limestone, Dolomite, Asbestos & other

L-10 : Energy Resources - Coal Reserves in India (Coal Mines)

L-11 : Energy Resources - Natural Gas Reserves in India

L-12 : Energy Resources - Petroleum Reserves in India

L-13 : Renewable energy: Hydroelectric Power
L-14 : Renewable energy: Wind Energy
L-15 : Renewable energy: Solar Energy
L-16 : Renewable energy: Geothermal Energy
L-17 : Renewable energy: Ocean Energy
L-18 : Renewable energy: Biomass Energy
L-19 : Land Resources of India
L-20 : Wildlife Resources in India
L-21 : Forest Resources in India
L-22: Water Resources in India
L-23 : Biotic and marine resources
L-24 : Energy crisis
TOTAL HOURS

AGRICULTURE

L-1 : Salient Features of Indian Agriculture
L-2 : Cropping Systems
L-3 : Determinants/Factors Influencing Agriculture
L-4 : Irrigation
L-5 : Seeds
L-6 : Fertilizers
L-7 : Power (Energy)
L-8 : Landholdings, land tenure and land reforms
L-9 : Cropping Intensity
L-10 : Cropping Pattern
L-11 : Agricultural productivity, Agricultural Efficiency
L-12 : Crop Combination
L-13 : Crop Classification
L-14 : Land Capability
L-15 : Social Forestry and Agroforestry
L-16 : Green Revolution
L-17 : White Revolution
L-18 : Blue Revolution
L-19 : Sericulture
L-20 : Apiculture
L-21 : Horticulture
L-22 : Poultry Farming
L-23 : Dryland agriculture
L-24 : Agricultural regionalization
L-25 : Agro-climatic zones
L-26 : Agroecological Regions
TOTAL HOURS

INDUSTRY

L-1 : Evolution of industries
L-2 : Locational factors
L-3 : Classification of Industries
L-4 : Cotton textile industry
L-5 : Jute industry
L-6 : Iron and Steel Industry
L-7 : Automobile Industry
L-8 : Aluminium Industry
L-9 : Fertilizer Industry
L-10 : Paper Industry
L-11 : Chemical and pharmaceutical Industry
L-12 : Drugs and Pharmaceuticals industry
L-13 : Small Scale & Cottage Industry
L-14 : Industrial houses
L-15 : Industrial Complexes
L-16 : Industrial Regions of India (Industrial rationalisation)
L-17 : Economic Planning, Planning Commission, Niti Ayog
L-18 : List of all Five Year Plans
L-19 : Liberalisation, Privatisation , and Globalisation
L-20 : Public Sector Reforms
L-21 : Disinvestment
L-22 : Multinationals in India (MNCs)
L-23 : Special Economic Zones
L-24 : Tourism including eco-tourism
L-25 : Major Sea Ports in India
TOTAL HOURS

TRANSPORT, COMMUNICATION AND TRADE

L-1 : Road Transport
L-2 : Railways
L-3 : Ports and Waterways
L-4 : Growing importance of Ports and Sagarmala Project
L-5 : Airways
L-6 : Pipelines
L-7 : Export processing zones
L-8 : Balance of Trade (Trade balance)
L-9 : Foreign Trade Policy of India
L-10 : Developments in communication and information technology

L-11 : Indian Space Program
TOTAL HOURS

POLITICAL ASPECT

This section of Geography Optional is mainly current affairs based.

- L-1 : Overview of Political Geography
- L-2 : Geographical basis of Indian federalism
- L-3 : State Reorganization in India
- L-4 : Demand for New States in India
- L-5 : Regional Consciousness and National Integration
- L-6 : Inter-State Water Disputes in India
- L-7 : International boundary of India and related issues
- L-8 : International Water Disputes and Agreements
- L-9 : Cross border terrorism
- L-10 : India's role in world affairs
- L-11 : Geopolitics of South Asia and Indian Ocean realm
- L-12 : Heartland and Rimland theory
- L-13 : Organic State Theory (Friedrich Ratzel)
- TOTAL HOURS

CONTEMPORARY ISSUES

- L-1 : Landslide: Types, Causes, Impact & Remedial steps
- L-2 : Earthquake Causes and Effects
- L-3 : Tsunami and its causes & Tsunami Warning Systems
- L-4 : Floods: Causes, Impact & Measures
- L-5 : Drought: Types, Causes & Consequences
- L-6 : Changes in Pattern of land use in India
- L-7 : Environmental Impact Assessment (EIA)
- L-8 : Deforestation: Problems and Conservation measures
- L-9 : Soil Erosion, Degradation, and Conservation
- L-10 : Problems of Agrarian and Industrial unrest
- L-11 : Regional disparities in economic development
- L-12 : Concept of sustainable growth and development
- L-13 : Environmental awareness
- L-14 : Interlinking of River: Issues and Challenges
- L-15 : Globalisation and Indian economy