

GEOGRAPHY OPTIONAL

UPSC MAINS

PAPER I & II

Geography Optional Syllabus, Mapped

The complete UPSC syllabus for Paper I and Paper II, unit by unit and topic by topic, laid out so you can see the whole subject at a glance.

Mains 2027 Edition · 2 papers · 20 units · 213 syllabus topics · 500 marks

2

Papers, 3 hours each

500

Marks (250 + 250)

20

Syllabus units

1

Compulsory India map question

HOW THE SYLLABUS IS ORGANISED

PAPER I

Principles of Geography

PHYSICAL GEOGRAPHY

- 01 Geomorphology
- 02 Climatology
- 03 Oceanography
- 04 Biogeography
- 05 Environmental Geography

HUMAN GEOGRAPHY

- 06 Perspectives in Human Geography
- 07 Economic Geography
- 08 Population and Settlement Geography
- 09 Regional Planning
- 10 Models, Theories and Laws in Human Geography

PAPER II

Geography of India

TEN UNITS, APPLIED TO INDIA

- 01 Physical Setting
- 02 Resources
- 03 Agriculture
- 04 Industry
- 05 Transport, Communication and Trade
- 06 Cultural Setting
- 07 Settlements
- 08 Regional Development and Planning
- 09 Political Aspects
- 10 Contemporary Issues

The syllabus at a glance

All 20 units on one page. Each bar shows how many separate topics UPSC lists in that unit: the breadth you have to cover, not how often it is asked.

PAPER I

Principles of Geography

116 topics

SECTION A · PHYSICAL GEOGRAPHY

	01 Geomorphology		18
	02 Climatology		14
	03 Oceanography		9
	04 Biogeography		10
	05 Environmental Geography		10

SECTION B · HUMAN GEOGRAPHY

	06 Perspectives in Human Geography		9
	07 Economic Geography		11
	08 Population and Settlement Geography		19
	09 Regional Planning		7
	10 Models, Theories and Laws in Human Geography		9

PAPER II

Geography of India

97 topics

	01 Physical Setting		10
	02 Resources		7
	03 Agriculture		16
	04 Industry		8
	05 Transport, Communication and Trade		7
	06 Cultural Setting		10
	07 Settlements		9
	08 Regional Development and Planning		9
	09 Political Aspects		8
	10 Contemporary Issues		13

How each paper is set

Both papers follow the same shape: eight questions of 50 marks in two sections, of which you answer five.

1

Q1 and Q5 are compulsory

One from each section, usually split into short parts of 10 marks.

2

Pick three more

From Q2–Q4 and Q6–Q8, with at least one from each section.

3

5 × 50 = 250 marks

Paper I and Paper II together count for 500 marks in the Mains merit.

PAPER I

Principles of Geography

250 marks · 3 hours

SECTION A · PHYSICAL GEOGRAPHY

Q1

50 marks
COMPULSORY

Q2

50 marks
OPTIONAL

Q3

50 marks
OPTIONAL

Q4

50 marks
OPTIONAL

SECTION B · HUMAN GEOGRAPHY

Q5

50 marks
COMPULSORY

Q6

50 marks
OPTIONAL

Q7

50 marks
OPTIONAL

Q8

50 marks
OPTIONAL

PAPER II

Geography of India

250 marks · 3 hours

SECTION A

Q1

50 marks
COMPULSORY

INCLUDES INDIA MAP

Q2

50 marks
OPTIONAL

Q3

50 marks
OPTIONAL

Q4

50 marks
OPTIONAL

SECTION B

Q5

50 marks
COMPULSORY

Q6

50 marks
OPTIONAL

Q7

50 marks
OPTIONAL

Q8

50 marks
OPTIONAL

Map question. The syllabus requires candidates to answer one compulsory map question on topics covered by Paper II. It comes on an outline map of India, so map practice belongs in your Paper II preparation from day one.

PAPER I

250 MARKS

3 HOURS

Principles of Geography

The concepts, processes and models of physical and human geography, studied at world scale.

SECTION A Physical Geography · 5 units

SECTION B Human Geography · 5 units

116 topics

SECTION A

Physical Geography



PAPER I · UNIT 01

Geomorphology

18 topics

Factors controlling landform development

Endogenetic and exogenetic forces

Origin and evolution of the earth's crust

Fundamentals of geomagnetism

Physical conditions of the earth's interior

Geosynclines

Continental drift

Isostasy

Plate tectonics

Recent views on mountain building

Vulcanicity

Earthquakes and tsunamis

Concepts of geomorphic cycles and landscape development

Denudation chronology

Channel morphology

Erosion surfaces

Slope development

Applied geomorphology: geohydrology, economic geology and environment



PAPER I · UNIT 02

Climatology

14 topics

Temperature and pressure belts of the world

Heat budget of the earth

Atmospheric circulation

Atmospheric stability and instability

Planetary and local winds

Monsoons and jet streams

Air masses and frontogenesis

Temperate and tropical cyclones

Types and distribution of precipitation

Weather and climate

Köppen's, Thornthwaite's and Trewartha's classification of world climates

Hydrological cycle

Global climatic change and role and response of man in climatic changes

Applied climatology and urban climate



PAPER I · UNIT 03

Oceanography

9 topics

Bottom topography of the Atlantic, Indian and Pacific Oceans

Temperature and salinity of the oceans

Heat and salt budgets

Ocean deposits

Waves, currents and tides

Marine resources: biotic, mineral and energy resources

Coral reefs, coral bleaching

Sea-level changes

Law of the sea and marine pollution



PAPER I · UNIT 04

Biogeography

10 topics

Genesis of soils

Classification and distribution of soils

Soil profile

Soil erosion, degradation and conservation

Factors influencing world distribution of plants and animals

Problems of deforestation and conservation measures

Social forestry

Agro-forestry

Wildlife

Major gene pool centres



PAPER I · UNIT 05

Environmental Geography

10 topics

Principle of ecology

Human ecological adaptations

Influence of man on ecology and environment

Global and regional ecological changes and imbalances

Ecosystems, their management and conservation

Environmental degradation, management and conservation

Biodiversity and sustainable development

Environmental policy

Environmental hazards and remedial measures

Environmental education and legislation

SECTION B

Human Geography



PAPER I · UNIT 06

Perspectives in Human Geography

9 topics

Areal differentiation

Regional synthesis

Dichotomy and dualism

Environmentalism

Quantitative revolution and locational analysis

Radical, behavioural, human and welfare approaches

Languages, religions and secularisation

Cultural regions of the world

Human development index



PAPER I · UNIT 07

Economic Geography

11 topics

World economic development: measurement and problems

World resources and their distribution

Energy crisis

The limits to growth

World agriculture: typology of agricultural regions

Agricultural inputs and productivity

Food and nutrition problems

Food security

Famine: causes, effects and remedies

World industries: locational patterns and problems

Patterns of world trade



PAPER I · UNIT 08

Population and Settlement Geography

19 topics

POPULATION

Growth and distribution of world population

Demographic attributes

Causes and consequences of migration

Concepts of over-, under- and optimum population

Population theories

World population problems and policies

Social well-being and quality of life

Population as social capital

SETTLEMENTS

Types and patterns of rural settlements

Environmental issues in rural settlements

Hierarchy of urban settlements

Urban morphology

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 urbanisation

Sustainable development of cities



PAPER I · UNIT 09

Regional Planning

7 topics

Concept of a region

Types of regions and methods of regionalisation

Growth centres and growth poles

Regional imbalances

Regional development strategies

Environmental issues in regional planning

Planning for sustainable development



PAPER I · UNIT 10

Models, Theories and Laws in Human Geography

9 topics

Systems analysis in human geography

Malthusian, Marxian and demographic transition models

Central place theories of Christaller and Lösch

Perroux and Boudeville

Von Thünen's model of agricultural location

Weber's model of industrial location

Rostow's model of stages of growth

Heartland and Rimland theories

Laws of international boundaries and frontiers



COMPLETE NOTES PDF

Notes for every Paper I and Paper II unit

₹1,180 ~~₹1,600~~

Get the Notes →

PAPER II

250 MARKS

3 HOURS

Geography of India

The same ideas applied to India: its physical setting, resources, economy, people, settlements, planning and geopolitics.

10 units 97 topics 1 compulsory map question



PAPER II · UNIT 01

Physical Setting

10 topics

Space relationship of India with neighbouring countries

Structure and relief

Drainage system and watersheds

Physiographic regions

Mechanism of Indian monsoons and rainfall patterns

Tropical cyclones and western disturbances

Floods and droughts

Climatic regions

Natural vegetation

Soil types and their distributions

BUILDS ON PAPER I

Geomorphology

Climatology

Biogeography



PAPER II · UNIT 02

Resources

7 topics

Land

Surface and groundwater

Energy

Minerals

Biotic and marine resources

Forest and wildlife resources and their conservation

Energy crisis

BUILDS ON PAPER I

Economic Geography

Oceanography

Biogeography



PAPER II · UNIT 03

Agriculture

16 topics

Infrastructure: irrigation, seeds, fertilisers, power

Institutional factors: landholdings, land tenure and land reforms

Cropping pattern

Agricultural productivity

Agricultural intensity

Crop combination

Land capability

Agro- and social forestry

Green revolution and its socio-economic and ecological implications

Significance of dry farming

Livestock resources and white revolution

Aquaculture

Sericulture, apiculture and poultry

Agricultural regionalisation

Agro-climatic zones

Agro-ecological regions

BUILDS ON PAPER I

Economic Geography

Models (Von Thünen)



PAPER II · UNIT 04

Industry

8 topics

Evolution of industries

Locational factors of cotton, jute, textile, iron and steel, aluminium, fertiliser, paper, chemical and pharmaceutical, automobile, cottage and agro-based industries

Industrial houses and complexes including public sector undertakings

Industrial regionalisation

New industrial policies

Multinationals and liberalisation

Special Economic Zones

Tourism including eco-tourism

BUILDS ON PAPER I

Economic Geography

Models (Weber)



PAPER II · UNIT 05

Transport, Communication and Trade

7 topics

Road, railway, waterway, airway and pipeline networks and their complementary roles in regional development

Growing importance of ports on national and foreign trade

Trade balance

Trade policy

Export processing zones

Developments in communication and information technology and their impacts on economy and society

Indian space programme

BUILDS ON PAPER I

Economic Geography



PAPER II · UNIT 06

Cultural Setting

10 topics

Historical perspective of Indian society

Racial, linguistic and ethnic diversities

Religious minorities

Major tribes, tribal areas and their problems

Cultural regions

Growth, distribution and density of population

Demographic attributes: sex ratio, age structure, literacy rate, workforce, dependency ratio, longevity

Migration (inter-regional, intra-regional and international) and associated problems

Population problems and policies

Health indicators

BUILDS ON PAPER I

Perspectives in Human Geography

Population and Settlement



PAPER II · UNIT 07

Settlements

9 topics

Types, patterns and morphology of rural settlements

Urban developments

Morphology of Indian cities

Functional classification of Indian cities

Conurbations and metropolitan regions

Urban sprawl

Slums and associated problems

Town planning

Problems of urbanisation and remedies

BUILDS ON PAPER I

Population and Settlement



PAPER II · UNIT 08

Regional Development and Planning

9 topics

Experience of regional planning in India

Five Year Plans

Integrated rural development programmes

Panchayati Raj and decentralised planning

Command area development

Watershed management

Planning for backward area, desert, drought-prone, hill and tribal area development

Multi-level planning

Regional planning and development of island territories

BUILDS ON PAPER I

Regional Planning



PAPER II · UNIT 09

Political Aspects

8 topics

Geographical basis of Indian federalism

State reorganisation

Emergence of new states

Regional consciousness and inter-state issues

International boundary of India and related issues

Cross-border terrorism

India's role in world affairs

Geopolitics of South Asia and Indian Ocean realm

BUILDS ON PAPER I

Models (Heartland, Rimland, boundaries)

Oceanography



PAPER II · UNIT 10

Contemporary Issues

13 topics

ECOLOGICAL ISSUES

Environmental hazards: landslides, earthquakes, tsunamis, floods and droughts, epidemics

Issues relating to environmental pollution

Changes in patterns of land use

Principles of environmental impact assessment and environmental management

Population explosion and food security

Environmental degradation

Deforestation, desertification and soil erosion

Problems of agrarian and industrial unrest

Regional disparities in economic development

Concept of sustainable growth and development

Environmental awareness

Linkage of rivers

Globalisation and Indian economy

BUILDS ON PAPER I

Environmental Geography

Geomorphology

Note in the syllabus. Candidates will be required to answer one compulsory map question pertinent to subjects covered by this paper.



PYQ SOLUTIONS

820 solved PYQs across all 20 units, 2013–2026

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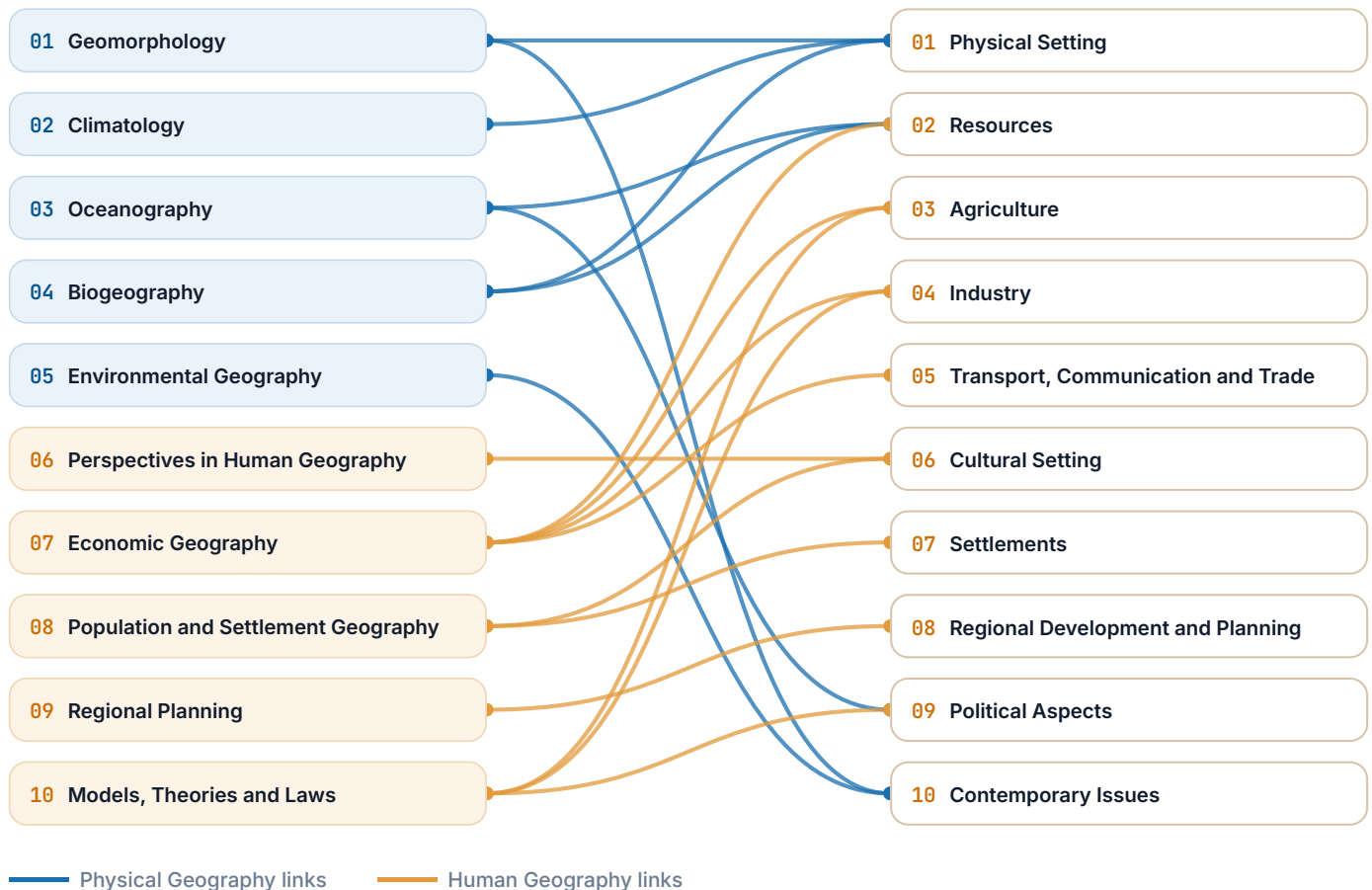
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How Paper I feeds Paper II

Paper II is Paper I applied to India. Each line joins a Paper I unit to the Paper II unit where the same ideas come back, so one round of reading serves both papers.

PAPER I · PRINCIPLES OF GEOGRAPHY

PAPER II · GEOGRAPHY OF INDIA



SAME SYLLABUS IDEA, BOTH PAPERS

CLIMATOLOGY

Monsoons and jet streams



PHYSICAL SETTING

Mechanism of Indian monsoons and rainfall patterns

POPULATION AND SETTLEMENT GEOGRAPHY

Functional classification of towns



SETTLEMENTS

Functional classification of Indian cities

REGIONAL PLANNING

Growth centres and growth poles; regional imbalances



REGIONAL DEVELOPMENT AND PLANNING

Experience of regional planning in India; planning for backward areas

MODELS, THEORIES AND LAWS

Heartland and Rimland theories; laws of international boundaries



POLITICAL ASPECTS

International boundary of India; geopolitics of South Asia and Indian Ocean realm

ENVIRONMENTAL GEOGRAPHY

Environmental hazards and remedial measures



CONTEMPORARY ISSUES

Environmental hazards: landslides, earthquakes, tsunamis, floods and droughts

Cover this syllabus with LotusArise

Two resources built on this exact syllabus: notes to learn every unit, and solved previous year questions to practise writing them.

COMPLETE NOTES PDF

Geography Optional Complete Notes · Paper I & II

Syllabus-mapped notes for UPSC Mains, written for concept clarity, revision and answer writing.

- ✓ Physical, Human and Indian Geography notes
- ✓ World and India mapping notes for the map question
- ✓ Topic-wise previous year questions



SCAN TO OPEN

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Geography Optional 300+ Score Pack with PYQ Solutions

Model answers to UPSC Geography Optional questions from 2013 to 2026, arranged topic-wise across all 20 syllabus units.

- ✓ 820 solved PYQ model answers, Paper I and Paper II
- ✓ 20 unit-wise PYQ pattern analysis and strategy reports
- ✓ Diagrams and maps drawn inside the answers



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