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General Studies

Practice Questions

GS Paper 1

Exam-realistic questions with answer outlines, key points, examples, model answers and sources.

80

QUESTIONS · MODEL ANSWERS

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UPSC Mains Practice Questions — GS Paper 1

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80 practice questions, each with an answer outline, key points, examples, a model answer and sources. Organised into the following sections:

Ancient India — 6 questions
Medieval India — 6 questions
Modern Indian History — 12 questions
Geography — 12 questions
Post-Independence India — 6 questions
Climatology — 3 questions
Indian Society — 24 questions
Biogeography — 2 questions
Economic Geography — 4 questions
World Geography — 5 questions

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How to use this book

Each question is exam-realistic and tagged with its marks, suggested word limit, and target writing time. Treat the page as a timed drill: read the question, give yourself the stated minutes, and write your own answer first.

Then check yourself against:

- **Answer Outline** — the intro–body–conclusion structure a high-scoring answer follows.
- **Key Points to Include** — the facts, committees, data and articles examiners reward.
- **Examples & Case Studies** — specific instances to make the answer concrete.
- **Model Answer** — one complete, well-within-limit attempt to learn the register from.
- **Sources** — where to read more and verify.

Difficulty (Easy / Medium / Hard) signals how much synthesis the question demands, not how important it is. Work across all sections for full syllabus coverage.

Contents

01 Ancient India · 6

02 Medieval India · 6

03 Modern Indian History · 12

04 Geography · 12

05 Post-Independence India · 6

06 Climatology · 3

07 Indian Society · 24

08 Biogeography · 2

09 Economic Geography · 4

10 World Geography · 5

GS PAPER 1

Ancient India

6 practice questions

Q1

The Harappan civilisation was as much a hydraulic and town-planning achievement as a craft economy. Examine the archaeological evidence from Mohenjodaro, Dholavira and Lothal in support of this view.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | INDUS VALLEY CIVILISATION

ANSWER OUTLINE

Introduction: Place the Indus / Harappan civilisation in the Bronze Age (c. 2600–1900 BCE) and frame the dual claim — urban planning plus craft specialisation.

Body — three dimensions: (1) Hydraulic engineering: Great Bath at Mohenjodaro, Dholavira's sixteen reservoirs, Lothal dockyard. (2) Town planning: grid streets, citadel–lower town division, covered drains, standardised baked bricks (1:2:4 ratio). (3) Craft and trade economy: shell from Nageshwar, carnelian beads from Chanhudaro, weights in 16-ratios, Meluhha seals at Mesopotamian sites.

Conclusion: The Harappan achievement was an integrated urban system; recent excavations at Rakhigarhi and Sinauli are extending, not overturning, this picture.

KEY POINTS TO INCLUDE

- Civilisation dated c. 2600–1900 BCE, mature phase
- Great Bath, Mohenjodaro — first known public ritual tank
- Dholavira (Kutch) — sixteen reservoirs, three-fold city plan
- Lothal (Gujarat) — tidal dockyard, bead factory
- Standardised baked bricks in 1:2:4 ratio
- Weights in binary then decimal multiples (1, 2, 4, 8…)
- Meluhha trade with Sargonid Mesopotamia
- R.S. Sharma — stratified urban society
- Rakhigarhi (Haryana) — largest Harappan site

EXAMPLES & CASE STUDIES

- Mohenjodaro — Great Bath, Great Granary
- Dholavira — stepwell reservoirs, signboard

- Lothal — dockyard, bead workshop
- Chanhudaro — carnelian beadmaking
- Nageshwar — shell ornament production
- Rakhigarhi — cemetery and aDNA evidence

MODEL ANSWER

Introduction:

The mature Harappan civilisation (c. 2600–1900 BCE) belongs to the Bronze Age horizon stretching from Mohenjodaro to Lothal. Far from being only a craft economy, it was, as R.S. Sharma argued, a stratified urban order whose hydraulic engineering and town-planning achievements were as visible as its workshops.

Hydraulic engineering:

The Great Bath at Mohenjodaro, with bitumen lining and a sophisticated drainage outlet, is the earliest known public ritual tank in South Asia. Dholavira in Kutch ran a near-total water-harvesting urbanism — sixteen rock-cut reservoirs in a semi-arid landscape — while Lothal's tidal dockyard on the Sabarmati delta enabled controlled navigation through a brick-walled basin.

Town planning:

Cities were laid on a grid with a fortified citadel and a lower town; baked bricks followed a uniform 1:2:4 ratio across the basin; covered drains with manholes ran beneath every street, and houses had latrines connected to public sewers. Dholavira's polished-stone "signboard" of ten characters above its northern gateway suggests civic signage at urban scale.

Craft and trade economy:

Chanhudaro specialised in carnelian beads, Nageshwar in shell ornaments worked from Turbinella pyrum; weights followed a binary-decimal system (1, 2, 4, 8, 16, 32); square steatite seals stamped "Meluhha" goods recovered from Sargonid Mesopotamia and the Persian Gulf entrepôts.

Conclusion:

The Harappan achievement was an integrated urban system, not a sum of crafts. Recent excavations at Rakhigarhi (the largest site) and Sinauli are extending — not overturning — this picture of planned cities resting on a craft and trade hinterland.

SOURCES

→Harappan Civilization: Sites, Society, and Decline Explained
→Harappan Architecture: Town Planning, Drainage, Great Bath
→NCERT — Themes in Indian History Part I

hydraulic civilisation | Great Bath | grid town planning | Meluhha | baked-brick standardisation | citadel and lower town | Lothal dockyard | craft specialisation

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Q2

Ashoka's Dhamma was less a religion and more a political-ethical code for a vast empire. Discuss with reference to the Major Rock Edicts.

10 MARKS | 150 WORDS | 9 MIN | EASY | MAURYAN EMPIRE

ANSWER OUTLINE

Introduction: Locate Ashoka (268–232 BCE) after the Kalinga War (c. 261 BCE) and define Dhamma as a civic-ethical code, distinct from sectarian Buddhism.

Body — three dimensions: (1) Political logic: holding together a multi-ethnic empire from Kandahar to Karnataka through shared ethical norms. (2) Content from edicts: non-violence, religious tolerance, respect for elders, ahimsa to animals, social welfare (RE I, II, XII, XIII). (3) Institutions: Dhamma Mahamattas, hospitals, road-side wells, animal welfare — Sarnath edict, Bhabru edict.

Conclusion: Romila Thapar's reading — Dhamma was a moral cement for the Mauryan state, not theological doctrine.

KEY POINTS TO INCLUDE

- Ashoka reigned 268–232 BCE
- Kalinga War c. 261 BCE — turning point in Major Rock Edict XIII
- Dhamma Mahamattas, officers of morality
- Major Rock Edict XII on religious tolerance
- Pillar Edicts in Brahmi script, Kharoshthi at Shahbazgarhi and Mansehra
- Aramaic and Greek edicts at Kandahar
- Sarnath edict warning Buddhist Sangha against schism
- Romila Thapar — Dhamma as imperial ethic

EXAMPLES & CASE STUDIES

- Major Rock Edict XIII — Kalinga remorse

- Major Rock Edict XII — religious tolerance
- Sarnath Schism Edict
- Kandahar bilingual Greek-Aramaic edict
- Bhabru edict to the Sangha

MODEL ANSWER

Introduction: Ashoka (r. 268–232 BCE), after the Kalinga War of c. 261 BCE, fashioned *Dhamma* not as Buddhism but as a civic-ethical code designed to bind a multi-ethnic empire that stretched from Kandahar to Karnataka.

Body: Major Rock Edict XIII records his remorse for Kalinga and renounces further conquest by war; Major Rock Edict XII enjoins mutual respect among all sects and forbids denigration of others' faiths; the Sarnath Schism Edict warns the Buddhist Sangha against division. Institutionally, Dhamma Mahamattas were appointed as morality officers, hospitals for humans and animals were funded, banyan trees and roadside wells were planted along imperial roads, and the bilingual Greek–Aramaic edict at Kandahar adapted the message to a Hellenistic frontier — proof that the code was empire-wide and trans-sectarian.

Conclusion: Romila Thapar's reading in *Asoka and the Decline of the Mauryas* stands: Dhamma was the moral cement of the Mauryan state, a political-ethical doctrine that outlived the empire it held together.

SOURCES

→Ashoka the Great (268 to 232 BCE): Kalinga, Dhamma and the Edicts
→Ashoka Pillar: Edicts, Lion Capital, and Architecture
→Romila Thapar, 'Ashoka and the Decline of the Mauryas' (Oxford University Press)

Dhamma | Mauryan polity | Dhamma Mahamattas | Major Rock Edicts | Kalinga War | religious tolerance | ahimsa | Romila Thapar

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Q3

The Rigvedic economy was pastoral in idiom but agrarian in practice. Examine with reference to irrigation, the kshetra and the role of women in early Vedic agriculture.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | VEDIC PERIOD

ANSWER OUTLINE

Introduction: Place the Rigvedic period c. 1500–1000 BCE in the Sapta Sindhu region. Pastoralism dominates the literary surface (gau-dhana, cattle-raid hymns) but archaeology and stray hymns reveal a working agrarian base.

Body — three dimensions: (1) Irrigation and field practice: avata (well), kulya (canal), khanitra (digging tool) in the Rigveda; ploughing references in book IV; barley (yava) as principal crop. (2) Kshetra and ritual: the kshetra-pati hymn (RV IV.57) personifies the field; Atharvaveda's kshetra-patni elevates the 'mistress of the field' as ritual presence; agricultural rites bind the household economy. (3) Continuity into Later Vedic: shift to Doab, iron axes (krishna ayas), expansion into Painted Grey Ware villages — agriculture moves from supplementary to principal. R.S. Sharma's 'Material Culture and Social Formations' anchors this transition.

Conclusion: The pastoral idiom of the Rigveda masks an emerging agrarian order whose deepening through the Later Vedic period laid the base for the second urbanisation.

KEY POINTS TO INCLUDE

- Rigvedic dating c. 1500–1000 BCE, Sapta Sindhu region
- Avata (well), kulya (canal), khanitra (digging tool) in Rigvedic text
- Yava (barley) as principal Rigvedic crop, dhanya in plural
- Kshetra-pati hymn RV IV.57 — deity of the field
- Atharvaveda kshetra-patni — ritual mistress of the field
- Later Vedic shift to Ganga-Yamuna Doab, c. 1000–600 BCE
- Krishna ayas (iron) enables forest clearance and ploughing
- Painted Grey Ware sites — Hastinapur, Atranjikhera
- R.S. Sharma — material base of social hierarchy

EXAMPLES & CASE STUDIES

- RV IV.57 — kshetra-pati hymn invoking the lord of the field
- Atharvaveda kshetra-patni — woman as ritual head of the field
- Yava and the Rigvedic plough (langala)
- Hastinapur — PGW village with iron implements
- Atranjikhera — early iron and rice cultivation evidence

MODEL ANSWER

Introduction:

The Rigvedic period (c. 1500–1000 BCE) in the Sapta Sindhu region is dominated on its literary surface by pastoralism — *gau-dhana*, cattle-raid hymns, *gavishti* for "search of cows" used as a metaphor for war. But, as R.S. Sharma argued in *Material Culture and Social Formations*, archaeology and stray hymns reveal a working agrarian base beneath the pastoral idiom.

Irrigation and field practice:

The Rigveda refers to *avata* (well), *kulya* (canal) and *khanitra* (digging tool). Book IV mentions ploughing; *yava* (barley) is the principal crop, *dhanya* appears in the plural. The plough (*langala*) and the harrow appear in technical vocabulary that pastoralists alone would not develop.

Kshetra and the role of women:

The *kshetra-pati* hymn (RV IV.57) personifies the field as a presiding deity; the Atharvaveda's *kshetra-patni* elevates the "mistress of the field" as ritual presence — evidence that women retained agricultural roles before later Vedic patriarchy hardened. Agricultural rites bound the household economy.

Continuity into Later Vedic:

The shift to the Ganga-Yamuna Doab (c. 1000–600 BCE) and the arrival of *krishna ayas* (iron) at Painted Grey Ware sites such as Hastinapur and Atranjikhera enabled forest clearance, ploughing of harder soils, and rice cultivation — agriculture moved from supplementary to principal.

Conclusion:

The pastoral idiom of the Rigveda masks an emerging agrarian order whose deepening through the Later Vedic period laid the material base for the second urbanisation of the sixth century BCE.

SOURCES

→Rigvedic Irrigation, Wells and Agriculture: How the Early Vedic Farmer Lived
→Kshetra-patni in the Atharvaveda: The Mistress of the Field and Vedic Agricultural Ritual
→R.S. Sharma, 'Material Culture and Social Formations in Ancient India' (Macmillan)

Rigveda | kshetra-pati | kshetra-patni | yava | Sapta Sindhu | Painted Grey Ware | Later Vedic | krishna ayas

Q4

Chola maritime expansion under Rajaraja I and Rajendra I converted the Bay of Bengal into a Chola lake. Examine the political economy and architectural footprint of this expansion.

10 MARKS | 150 WORDS | 9 MIN | EASY | CHOLA EMPIRE

ANSWER OUTLINE

Introduction: Rajaraja I (r. 985–1014) and his son Rajendra I (r. 1014–1044) projected Chola power from Tamil Nadu across Sri Lanka, the Maldives and into Southeast Asia.

Body — three dimensions: (1) Conquests: Rajaraja's annexation of north Sri Lanka (Polonnaruwa) and the Maldives; Rajendra's Ganga expedition (1019–24) earning the title Gangaikonda Cholan; the naval campaign of 1025 against the Srivijaya kingdom of Sumatra. (2) Political economy: Nagaram and the Manigramam merchant guild, Ainnurruvar (Five Hundred) network, trade in horses, spices, and cloth across the Indian Ocean. (3) Architecture as imperial statement: Brihadeeswara temple (1010 CE) at Thanjavur, Dakshina Meru; Gangaikonda Cholapuram capital and temple; bronze Natarajas of the Chola school.

Conclusion: The Cholas combined naval power, merchant capital and monumental architecture to make the medieval Tamil south a transregional civilisation.

KEY POINTS TO INCLUDE

- Rajaraja I r. 985–1014, Rajendra I r. 1014–1044
- Polonnaruwa annexed, renamed Jananatha Mangalam
- Ganga expedition 1019–24, Gangaikonda Chola
- Naval expedition against Srivijaya 1025
- Brihadeeswara temple Thanjavur, consecrated 1010 CE
- Ainnurruvar merchant guild, Manigramam corporation
- Nagaram urban trade settlements, ur and sabha local bodies
- Chola bronzes — Nataraja, lost-wax casting

EXAMPLES & CASE STUDIES

- Brihadeeswara temple Thanjavur — UNESCO World Heritage
- Gangaikonda Cholapuram — Rajendra's capital
- Srivijaya raid — Kedah, Sumatra targets
- Tiruvalangadu copper plates — dynastic record
- Chola Nataraja bronzes in Tamil Nadu temples

MODEL ANSWER

Introduction: Rajaraja I (r. 985–1014) and Rajendra I (r. 1014–1044) projected Chola power across Sri Lanka, the Maldives and Southeast Asia, converting the Bay of Bengal into a "Chola lake".

Body: Rajaraja annexed northern Sri Lanka, renaming Polonnaruwa as Jananatha Mangalam, and seized the Maldives. Rajendra's Ganga expedition (1019–24) earned him the title Gangaikonda Cholan and a new capital, Gangaikonda Cholapuram; his 1025 naval raid struck the Srivijaya ports of Kedah and Sumatra. The political economy rested on the Ainnurruvar (Five Hundred) and Manigramam merchant guilds operating through *nagaram* trade towns, alongside *ur* and *sabha* local bodies recorded in the Tiruvalangadu copper plates. Architecturally, the Brihadeeswara temple at Thanjavur (consecrated 1010, a UNESCO World Heritage Site), Gangaikonda Cholapuram and the lost-wax bronze Natarajas projected imperial sovereignty in stone and metal.

Conclusion: The Cholas combined naval power, merchant capital and monumental architecture — a transregional medieval Tamil civilisation reaching from Thanjavur to Sumatra.

SOURCES

→Raja Raja Chola I: The Emperor Who Built Brihadeeswara and a Bay of Bengal Empire
→Brihadeeswara Temple Thanjavur: Rajaraja Chola's Dakshina Meru
→Dravidian Temple Architecture: Features, Evolution, Dynasties

Rajaraja Chola | Rajendra Chola | Brihadeeswara | Gangaikonda | Srivijaya | Ainnurruvar | Dakshina Meru | Chola bronzes

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Q5

The Gupta period has been called India's 'Golden Age' more for its cultural synthesis than its political reach. Critically analyse.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | GUPTA EMPIRE

ANSWER OUTLINE

Introduction: The Gupta age (c. 319–550 CE) under Chandragupta I, Samudragupta, Chandragupta II and Skandagupta is conventionally framed as a classical golden age, a label that deserves disaggregation.

Body — three dimensions: (1) Cultural synthesis: Sanskrit literature peaks with Kalidasa's Abhijnanashakuntalam and Meghaduta, Vishakhadatta's Mudrarakshasa; Aryabhatiya (499 CE) defines astronomy and mathematics; Nalanda emerges as a mahavihara; classical sculpture at Sarnath, Deogarh, Udayagiri caves; decimal system formalised. (2) Political reach: Samudragupta's Allahabad pillar lists conquests but most southern kings remain tributary, not annexed; Hun invasions weaken Skandagupta; empire collapses by mid-6th century. (3) Limits and critique: D.N. Jha and R.S. Sharma point to early feudalism — land grants to Brahmanas and temples, decline of urban-monetary economy, hardening of varna and patriarchy as recorded in Smritis.

Conclusion: The Gupta age is golden in art, science and Sanskritic culture; politically it is a north-Indian classical revival whose social undercurrents preview medieval Indian feudalism.

KEY POINTS TO INCLUDE

- Gupta dynasty c. 319–550 CE
- Samudragupta's Allahabad Prashasti by Harisena
- Chandragupta II Vikramaditya, Iron Pillar of Mehrauli
- Kalidasa — Abhijnanashakuntalam, Meghaduta, Raghuvamsha
- Aryabhatiya 499 CE — value of pi, place-value notation
- Nalanda Mahavihara founded by Kumaragupta I
- Decline of urban centres — Kausambi, Mathura
- Hun invasions under Toramana and Mihirakula
- R.S. Sharma — Indian feudalism thesis
- Increased land grants (agraharas) to Brahmanas

EXAMPLES & CASE STUDIES

- Allahabad Prashasti — Samudragupta's digvijaya
- Iron Pillar of Mehrauli — rust-free metallurgy
- Aryabhatiya — pi to four decimals, earth's rotation
- Sarnath Buddha — classical Gupta sculpture
- Udayagiri caves, Vidisha — Vaishnava iconography
- Nalanda — emergence of monastic university

MODEL ANSWER

> **Introduction:**

The Gupta age (c. 319–550 CE), under Chandragupta I, Samudragupta, Chandragupta II Vikramaditya and Skandagupta, is conventionally framed as a classical "golden age". The label, as A.S. Altekar conceded and R.S. Sharma later refined, fits the cultural synthesis far better than the political reach of the dynasty.

Cultural synthesis:

Sanskrit literature peaked with Kalidasa's *Abhijnanashakuntalam*, *Meghaduta* and *Raghuvamsha*, and Vishakhadatta's *Mudrarakshasa*; Aryabhata's *Aryabhatiya* (499 CE) computed pi to four decimals and proposed the earth's rotation; Nalanda Mahavihara was founded under Kumaragupta I; classical sculpture matured at Sarnath (the seated Buddha), Deogarh (Dashavatara temple) and the Udayagiri caves near Vidisha with their early Vaishnava iconography; the decimal place-value system was formalised. Chandragupta II's Iron Pillar at Mehrauli still stands as testament to rust-resistant metallurgy.

Political reach:

Samudragupta's Allahabad Prashasti, composed by Harisena, lists conquests but most southern kings (Pallavas, Kuntalas) remained tributary rather than annexed. Hun invasions under Toramana and Mihirakula weakened Skandagupta's successors; the empire effectively dissolved by the mid-sixth century. Compared with the Mauryan or Mughal expanse, Gupta political reach was a north-Indian plateau, not a subcontinental peak.

Limits and critique:

D.N. Jha and R.S. Sharma point to early feudalism — proliferating land grants (*agraharas*) to Brahmanas and temples, decline of urban-monetary centres like Kausambi and Mathura, and the hardening of *varna* hierarchy and patriarchy in the Dharmashastras.

Conclusion:

The Gupta age is golden in art, science and Sanskritic culture; politically it is a classical revival whose social undercurrents preview, rather than escape, medieval Indian feudalism.

SOURCES

→Gupta Dynasty — Golden Age of India, Major Rulers and Cultural Achievements
→Indian Ancient History: Indus Valley to Gupta — Phases and Key Events
→R.S. Sharma, 'Indian Feudalism' (Macmillan)

Gupta golden age | Allahabad Prashasti | Kalidasa | Aryabhatiya | Nalanda | Indian feudalism | agrahara | Hun invasion

Q6

The Sangam polity of early Tamilakam was structured around three crowned kings and an elaborate code of patronage. Discuss with reference to Chera, Chola and Pandya kingdoms.

15 MARKS | 250 WORDS | 14 MIN | EASY | SANGAM AGE

ANSWER OUTLINE

Introduction: The Sangam age, c. 300 BCE to 300 CE, in the Tamil country south of Tirupati is documented in 2,300 odd poems compiled in the Ettutogai and Pattupattu.

Body — three dimensions: (1) Three crowned dynasties (Muvendar): Chera with capital Vanji and emblem palmyra, controlling Malabar pepper trade; Chola with Uraiyur and tiger emblem on Kaveri delta; Pandya with Madurai and fish emblem on the Vaigai. (2) Society and patronage: tinai ecological zones (kurinji, mullai, marudam, neithal, palai); bards (pulavar) sustained by puram poetry praising the king's munificence (kodai). (3) Trade: Muziris and Arikamedu connect with Roman empire — finds of Roman amphorae, Pliny on the pepper trade, Periplus of the Erythraean Sea.

Conclusion: The Sangam polity is a Tamil classical synthesis of clan kingship, ecological economy and Indian Ocean trade.

KEY POINTS TO INCLUDE

- Sangam period c. 300 BCE–300 CE in Tamilakam
- Ettutogai (Eight Anthologies) and Pattupattu (Ten Idylls)
- Chera capital Vanji, palmyra emblem, Malabar coast
- Chola capital Uraiyur, tiger emblem, Kaveri delta
- Pandya capital Madurai, fish emblem, Vaigai basin
- Tinai — five-fold ecological zone classification
- Puram poetry — heroic, public; akam poetry — interior, love
- Muziris and Arikamedu — Roman trade ports
- Periplus of the Erythraean Sea — 1st-century CE evidence

EXAMPLES & CASE STUDIES

- Karikala Chola — Kallanai (Grand Anicent) on Kaveri

- Senguttuvan of Cheras — Pattini cult
- Nedunjeliyan of Pandyas — Talaiyalanganam victory
- Muziris — pepper-trade emporium
- Tolkappiyam — earliest Tamil grammar

MODEL ANSWER

Introduction:

The Sangam age (c. 300 BCE–300 CE) in Tamilakam south of Tirupati is documented in around 2,300 poems compiled in the *Ettutogai* (Eight Anthologies) and *Pattupattu* (Ten Idylls), with the grammar preserved in Tolkappiyam, the earliest extant Tamil text. The polity was structured around three crowned dynasties — the *Muvendar* — and an elaborate patronage code.

The three crowned kings:

The Cheras held Vanji as capital, took the palmyra as emblem, and controlled the Malabar pepper coast. The Cholas, with Uraiyur and the tiger emblem, dominated the Kaveri delta; Karikala Chola built the Kallanai (Grand Anicut) across the Kaveri, still in use today. The Pandyas, with Madurai and the fish emblem, governed the Vaigai basin; Nedunjeliyan won the Talaiyalanganam battle commemorated in Sangam verse.

Society and patronage:

Tolkappiyam set out five *tinai* ecological zones — kurinji (hills), mullai (forest), marudam (cropland), neithal (coast) and palai (arid). *Puram* poetry praised kings and warriors; *akam* poetry treated interior emotion. Bards (*pulavar*) lived on royal *kodai* or munificence; Senguttuvan's sponsorship of the Pattini cult is a recorded instance of dynastic patronage.

Indian Ocean trade:

Muziris on the Chera coast and Arikamedu near Pondicherry connected with the Roman Empire; Pliny the Elder lamented Roman gold flowing east, and the first-century *Periplus of the Erythraean Sea* records pepper, beryl, pearls and fine cotton in the eastward trade.

Conclusion:

The Sangam polity was a Tamil classical synthesis of clan kingship, ecological economy and Indian Ocean trade — a distinct early state form, not derivative of north-Indian models.

SOURCES

- →Sangam Age: Literature, Society, and Polity of Early Tamilakam
- →Early Historical Tamilakam: Chera, Chola and Pandya
- →K.A. Nilakanta Sastri, 'A History of South India' (Oxford University Press)

Muvendar | Tamilakam | Ettutogai | tinai | puram | Muziris | Karikala | Periplus

GS PAPER 1

Medieval India

6 practice questions

Q7

The Bhakti movement was not a single stream but a series of regional responses, each shaped by its linguistic and social context. Examine with reference to Nirguna and Saguna traditions.

15 MARKS | 250 WORDS | 14 MIN | EASY | BHAKTI MOVEMENT

ANSWER OUTLINE

Introduction: Bhakti as a c. 7th-to-17th century devotional ferment, originating with the Alvars and Nayanars of Tamil country.

Body — three dimensions: (1) Nirguna stream: Kabir (Banaras weaver), Guru Nanak (Punjab), Dadu Dayal — rejection of idol worship, attack on caste, vernacular utterance. (2) Saguna stream: Tulsidas (Awadhi Ramcharitmanas), Surdas (Krishna bhakti, Braj), Mirabai (Rajasthan). (3) Regional and linguistic spread: Chaitanya in Bengal, Shankaradeva in Assam, the Varkari tradition of Maharashtra — Jnaneshwar, Namdev, Tukaram. Use of Awadhi, Braj, Marathi, Bengali, Punjabi against Sanskrit elitism.

Conclusion: Bhakti was India's first mass vernacular cultural movement, simultaneously religious, social and linguistic.

KEY POINTS TO INCLUDE

- Alvars and Nayanars in Tamil country, 7th–9th centuries
- Kabir Das, c. 1440–1518, weaver of Banaras
- Guru Nanak (1469–1539), founder of Sikhism
- Tulsidas' Ramcharitmanas in Awadhi, 16th century
- Surdas' Sursagar in Braj Bhasha
- Chaitanya Mahaprabhu, Gaudiya Vaishnavism in Bengal
- Shankaradeva's Eka Sarana Naam Dharma in Assam
- Varkari sant-poets — Jnaneshwar, Namdev, Tukaram of Maharashtra

EXAMPLES & CASE STUDIES

- Kabir— Bijak, dohas attacking caste and ritual
- Mirabai — Krishna padas in Rajasthani-Brij

- Tukaram — Marathi abhangas
- Andal among the Alvars — first woman bhakti voice
- Lal Ded — vakhs in Kashmiri

MODEL ANSWER

Introduction:

The Bhakti movement, originating with the Tamil Alvars and Nayanars of the 7th–9th centuries and crystallising across north India between the 13th and 17th centuries, was not a single doctrinal current but a federation of regional vernacular responses. It is broadly split into Nirguna (formless absolute) and Saguna (personalised deity) streams, each shaped by its linguistic and social context.

Nirguna stream:

Kabir (c. 1440–1518), the Banaras weaver, attacked caste hierarchy and Hindu and Islamic ritual alike through dohas collected in the *Bijak*; Guru Nanak (1469–1539) in Punjab founded the Sikh tradition on the same anti-iconic, anti-caste premise, his hymns later canonised in the Guru Granth Sahib; Dadu Dayal carried this strand into Rajasthan. Their idiom was vernacular and artisan-rooted.

Saguna stream:

Tulsidas's Awadhi *Ramcharitmanas*, Surdas's Braj-bhasha *Sursagar*, and Mirabai's Rajasthani-Braj *padas* personalised devotion to Rama and Krishna. The Saguna pole reached its emotional peak in Chaitanya Mahaprabhu's Gaudiya Vaishnavism in 16th-century Bengal, with its emphasis on collective *kirtan*.

Regional and linguistic spread:

Shankaradeva's Eka Sarana Naam Dharma anchored Assamese identity through *satras*; the Varkari tradition of Maharashtra — Jnaneshwar, Namdev, Eknath, Tukaram — produced abhangas in Marathi at Pandharpur; Andal among the Alvars and Lal Ded in Kashmiri added the earliest women's voices. Together they displaced Sanskrit ritual elitism.

Conclusion:

As David Lorenzen argues, Bhakti was India's first mass vernacular cultural movement — simultaneously religious, social and linguistic — whose plural streams converged only in their shared challenge to ritual hierarchy.

SOURCES

→Bhakti Movement in India: Origins, Saints, and Social Reform
→Kabir Das: The Weaver-Saint of Nirguna Bhakti
→NCERT — Themes in Indian History Part II

Nirguna | Saguna | Alvars | Nayanars | Varkari | vernacularisation | anti-caste | devotional poetry

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Q8

Akbar's Mansabdari system and his religious policy together built a more stable Mughal polity than military conquest alone could have produced. Critically analyse.

15 MARKS | 250 WORDS | 14 MIN | HARD | MUGHAL ADMINISTRATION

ANSWER OUTLINE

Introduction: Akbar (r. 1556–1605) consolidated Mughal rule less through battlefield expansion after 1576 than through institutional and ideological innovation.

Body — three dimensions: (1) Mansabdari system: zat and sawar ranks introduced 1577, mansabdars as a numbered nobility from Iranis, Turanis, Rajputs and Indian Muslims — broke factional dominance. (2) Land revenue — Todar Mal's Dahsala bandobast, 1580, ten-year average price-yield assessment. (3) Religious policy: abolition of jizya (1564), Rajput marriage alliances, Ibadat Khana debates (1575), Din-i-Ilahi (1582), sulh-i-kul as ruling principle.

Conclusion: Athar Ali's thesis — mansabdari plus sulh-i-kul gave the Mughal state its 17th-century resilience; the unravelling under Aurangzeb shows what their dilution cost.

KEY POINTS TO INCLUDE

- Mansab introduced 1577, zat for status, sawar for cavalry
- Iqta abolished, salary in cash or jagir
- Todar Mal's Dahsala bandobast, 1580
- Jizya abolished 1564, pilgrim tax abolished 1563
- Ibadat Khana at Fatehpur Sikri, 1575
- Din-i-Ilahi proclaimed 1582
- Sulh-i-kul as state ideology
- Composite Iranian-Turani-Rajput nobility

EXAMPLES & CASE STUDIES

- Raja Man Singh of Amer as mansabdar of 7,000

- Todar Mal's revenue circles — Bengal, Gujarat, Multan
- Marriage alliance with Harkha Bai of Amer
- Ibadat Khana debates with Jesuits Aquaviva and Monserrate
- Abul Fazl's Ain-i-Akbari as administrative record

MODEL ANSWER

Introduction:

Akbar (r. 1556–1605) consolidated Mughal rule less through battlefield expansion after 1576 than through twin institutional and ideological innovations. As M. Athar Ali argued in *The Mughal Nobility under Aurangzeb*, the mansabdari order and sulh-i-kul together gave the empire its 17th-century resilience.

Mansabdari and revenue:

The mansab introduced in 1577 ranked nobles by *zat* (status grade) and *sawar* (cavalry obligation); Raja Man Singh of Amer eventually rose to a mansab of 7,000. The iqta was abolished, with salaries paid in cash or through transferable jagirs. Todar Mal's Dahsala bandobast of 1580 used a rolling ten-year price-yield average to fix revenue, creating a fiscal base less exposed to single-season crop shocks.

Religious policy:

The pilgrim tax was abolished in 1563, jizya in 1564; the Rajput marriage alliance with Harkha Bai of Amer initiated a composite nobility. The Ibadat Khana at Fatehpur Sikri (1575) hosted Jesuits Rodolfo Aquaviva and Antonio Monserrate, Zoroastrians and Jains; Din-i-Ilahi was proclaimed in 1582; sulh-i-kul ("absolute peace") became the ruling state ideology.

Combined consequence:

The nobility ceased to be a single ethnic or sectarian bloc — Iranis, Turanis, Rajputs and Indian Muslims served on equal terms, as recorded by Abul Fazl in the *Ain-i-Akbari*. Loyalty flowed to a salaried imperial system, not to clan or creed.

Conclusion:

Aurangzeb's reversal of both — reimposing jizya in 1679 and squeezing the jagirs through the *jagirdari* crisis — produced the very fragmentation Akbar's design had averted, validating the claim that institutional and ideological architecture, not conquest alone, kept the Mughal polity stable.

SOURCES

→Akbar the Great: Reign, Administration, Din-i Ilahi and Legacy
→Mansabdari System: Akbar's Administrative Backbone of the Mughal Empire
→Mughal Empire: Timeline, Rulers and Administration

mansabdari | zat and sawar | dahsala | sulh-i-kul | Din-i-Ilahi | jizya abolition | composite nobility | Athar Ali

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Q9

The Delhi Sultanate's institutional core lay in its iqta system and standing army rather than in Persianate court culture. Examine with reference to the Khalji and Tughlaq experiments.

10 MARKS | 150 WORDS | 9 MIN | HARD | DELHI SULTANATE

ANSWER OUTLINE

Introduction: The Delhi Sultanate (1206–1526) survived five dynasties largely because of two structural pillars — the iqta as a revenue assignment and a centrally paid standing army — perfected by Alauddin Khalji and reworked by Muhammad bin Tughlaq.

Body — three dimensions: (1) Iqta reformed: Iltutmish introduced iqta, Balban consolidated, Alauddin Khalji (r. 1296–1316) shifted to direct cash payment, fixed price control in Delhi markets (shahna-i-mandi), measurement-based land revenue (kharaj) at 50 per cent. (2) Standing army: Alauddin's dagh (branding of horses) and chehra (descriptive roll) curbed corruption; permanent army of about 4.75 lakh paid in cash defended against Mongol invasions of 1297–1303. (3) Tughlaq experiments: Muhammad bin Tughlaq (1325–51) shifted capital from Delhi to Daulatabad, issued token currency in copper, raised taxation in the Doab — administrative ambition outran capacity. (4) Court culture supplemented but did not substitute these structures; Amir Khusrau wrote at Khalji and Tughlaq courts but Persianate culture without iqta and army would not have held the polity.

Conclusion: Satish Chandra reads the Sultanate as a war state administered through fiscal-military innovation; the Lodi decline (1451–1526) shows what happens when these structures weaken.

KEY POINTS TO INCLUDE

- Delhi Sultanate 1206–1526, five dynasties
- Iqta introduced by Iltutmish, restructured by Balban
- Alauddin Khalji r. 1296–1316 — market control, price fixing

- Kharaj at 50% of produce by measurement (masahat)
- Dagh and chehra — horse branding and soldier descriptive roll
- Standing army of ~4.75 lakh under Alauddin
- Mongol invasions defeated 1297–1303
- Muhammad bin Tughlaq's capital shift Delhi to Daulatabad 1327
- Token currency (copper for silver) experiment 1329–32
- Satish Chandra — Sultanate as fiscal-military state

EXAMPLES & CASE STUDIES

- Alauddin's shahna-i-mandi in Delhi
- Alai Darwaza built by Alauddin Khalji
- Tughlaqabad Fort built by Ghiyasuddin Tughlaq
- Daulatabad capital experiment 1327
- Token currency demonetisation 1332
- Ibrahim Lodi defeated at Panipat I, 1526

MODEL ANSWER

> **Introduction:** The Delhi Sultanate (1206–1526) survived five dynasties on two structural pillars — the *iqta* as revenue assignment and a centrally paid standing army — refined by Alauddin Khalji and stress-tested by Muhammad bin Tughlaq.
>
> **Body:** Iltutmish introduced the iqta and Balban consolidated it; Alauddin Khalji (r. 1296–1316) substituted cash payment, fixed Delhi market prices through *shahna-i-mandi*, and set *kharaj* at 50 per cent of produce by measurement. *Dagh* (horse branding) and *chehra* (descriptive roll of soldiers) ended muster fraud; the standing army of roughly 4.75 lakh defended against the Mongol invasions of 1297–1303. Muhammad bin Tughlaq's capital shift to Daulatabad (1327) and token currency experiment (1329–32) showed administrative ambition outrunning capacity. Persianate court culture — Amir Khusrau, Alai Darwaza — supplemented but did not substitute these fiscal-military structures.
>
> **Conclusion:** Satish Chandra reads the Sultanate as a war state administered through fiscal-military innovation; Lodi decline (1451–1526) confirms what dilution cost.

SOURCES

→Tughlaq Dynasty: Muhammad bin Tughlaq, Firoz Shah and Timur Invasion (1320-1414)
→Lodi Dynasty: Bahlol, Sikandar, Ibrahim Lodi and the Defeat at Panipat (1451-1526)
→Satish Chandra, 'Medieval India: From Sultanat to the Mughals' (Har-Anand)

iqta · kharaj · shahna-i-mandi · dagh and chehra · Alauddin Khalji · Muhammad bin Tughlaq · token currency · Daulatabad

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Q10

Vijayanagara was a Hindu rampart against Bahmani expansion, but its longevity depended on a Persianate military and a market-driven economy. Discuss.

10 MARKS | 150 WORDS | 9 MIN | EASY | VIJAYANAGARA EMPIRE

ANSWER OUTLINE

Introduction: Vijayanagara (1336–1646) under Harihara, Bukka, Krishnadevaraya and the Tuluvas held south India against the Bahmanis and their Deccan successor sultanates.

Body — three dimensions: (1) Ideological cover: founded by Vidyaranya of Sringeri, projected as protector of dharma, temple-city of Hampi with Virupaksha and Vitthala temples. (2) Persianate military: imported Turkish-Persian cavalry tactics, employed Muslim gunners, fortified frontier at Krishna-Tungabhadra. (3) Market economy: Domingos Paes and Abdur Razzaq describe Hampi as larger than Rome; nayankara system tied military service to land; merchant guilds and the Portuguese horse trade at Goa funded the army.

Conclusion: Vijayanagara collapsed at Talikota (1565) not because of religious decline but because the combined Deccan sultanates outweighed its frontier defence — the empire was Hindu in idiom but Indo-Islamic in administration.

KEY POINTS TO INCLUDE

- Vijayanagara founded 1336 by Harihara and Bukka
- Sangama, Saluva, Tuluva, Aravidu dynasties
- Krishnadevaraya r. 1509–1529, peak under Tuluvas
- Amaranayaka or nayankara system
- Domingos Paes and Abdur Razzaq's travel accounts
- Hampi capital — Virupaksha, Vitthala, Royal Enclosure
- Battle of Talikota January 1565, defeat by Deccan confederacy
- Portuguese horse trade via Goa

EXAMPLES & CASE STUDIES

- Krishnadevaraya's Amuktamalyada in Telugu

- Vitthala temple — stone chariot, musical pillars
- Hazara Rama temple — Ramayana reliefs
- Battle of Talikota — Aliya Rama Raya defeated
- Hampi sacked over six months in 1565

MODEL ANSWER

Introduction: Vijayanagara (1336–1646), founded by Harihara and Bukka under Vidyaranya of Sringeri, projected itself as a Hindu rampart against Bahmani expansion. Its longevity rested on Persianate military borrowings and a market-driven economy.

Body: Ideologically the Sangama, Saluva, Tuluva and Aravidu dynasties framed the empire as *dharma*'s protector — Hampi's Virupaksha and Vitthala temples (with the stone chariot and musical pillars), Krishnadevaraya's (r. 1509–1529) Telugu *Amuktamalyada*, and the Hazara Rama reliefs. Militarily, Vijayanagara adopted Turkish-Persian cavalry tactics, employed Muslim gunners, and fortified the Krishna-Tungabhadra frontier. The *amaranayaka* or *nayankara* system tied military obligations to land grants. Economically, Domingos Paes and Abdur Razzaq described Hampi as larger than Rome; merchant guilds and the Portuguese horse trade through Goa funded the army.

Conclusion: The Battle of Talikota in January 1565 ended Vijayanagara not through religious decline but because the combined Deccan sultanates outweighed its frontier defence — the empire was Hindu in idiom, Indo-Islamic in administration.

SOURCES

→Krishnadevaraya of Vijayanagara: The Tuluva King Who Built Hampi's Golden Age
→Battle of Talikota 1565: The Day Vijayanagara Fell and Hampi Was Sacked
→Bahmani Kingdom (1347–1527): Deccan's First Muslim Sultanate

Vijayanagara | Krishnadevaraya | nayankara | Hampi | Talikota | Tuluva | Amuktamalyada | Abdur Razzaq

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Q11

The Sufi silsilas were as much a sociological intervention as a spiritual movement in medieval India. Examine with reference to the Chishti and Suhrawardi orders.

15 MARKS | 250 WORDS | 14 MIN | HARD | SUFI MOVEMENT

ANSWER OUTLINE

Introduction: Sufism reached India in the late 12th century with Muinuddin Chishti's settlement at Ajmer (c. 1192). Four major silsilas — Chishti, Suhrawardi, Naqshbandi, Qadiri — translated Islamic mysticism into Indian idiom.

Body — three dimensions: (1) Chishti pattern: poverty, distance from state, music (sama), open kitchen (langar). Khwaja Muinuddin (Ajmer), Bakhtiyar Kaki (Delhi), Baba Farid (Pakpattan), Nizamuddin Auliya (Delhi), Nasiruddin Chiragh-i-Dilli, Bandanawaz Gesudaraz (Gulbarga). (2) Suhrawardi pattern: closeness to political power, accumulation of wealth, urban orientation — Bahauddin Zakariya at Multan accepted iqta from Iltutmish. (3) Sociological consequence: khanqahs as inter-religious meeting grounds, Hindavi vocabulary (Amir Khusrau as Nizamuddin's disciple), composite shrines drawing Hindu pilgrims at Ajmer and Pakpattan; Sufi malfuzat as social record. K.A. Nizami's 'Some Aspects of Religion and Politics in India during the Thirteenth Century' anchors the analysis.

Conclusion: The Sufi silsilas built a parallel civic infrastructure that supplemented the Sultanate state and shaped Indo-Islamic culture.

KEY POINTS TO INCLUDE

- Muinuddin Chishti at Ajmer c. 1192
- Four major silsilas — Chishti, Suhrawardi, Naqshbandi, Qadiri
- Chishti tenets — poverty, distance from state, sama
- Bahauddin Zakariya, Suhrawardi at Multan
- Nizamuddin Auliya at Delhi, d. 1325
- Amir Khusrau — Nizamuddin's disciple, Hindavi poet
- Malfuzat — Fawaid al-Fuad recording Nizamuddin's discourses
- Khanqahs — composite institutions, free kitchen
- K.A. Nizami — Sufi-state relations thesis
- Bandanawaz Gesudaraz at Gulbarga, Deccan spread

EXAMPLES & CASE STUDIES

- Ajmer Sharif dargah of Muinuddin Chishti
- Nizamuddin Auliya's dargah in Delhi
- Baba Farid — Punjabi-Sufi verses preserved in Guru Granth Sahib
- Fawaid al-Fuad compiled by Amir Hasan Sijzi

- Multan as Suhrawardi centre under Bahauddin Zakariya

MODEL ANSWER

Introduction:

Sufism reached India in the late twelfth century with Muinuddin Chishti's settlement at Ajmer around 1192. Four major *silsilas* — Chishti, Suhrawardi, Naqshbandi and Qadiri — translated Islamic mysticism into Indian idiom, but their reach was sociological as much as it was spiritual.

Chishti pattern:

The Chishtis cultivated voluntary poverty, deliberate distance from the state, *sama* (devotional music gatherings) and the *langar* or free community kitchen. The lineage — Muinuddin Chishti at Ajmer, Bakhtiyar Kaki in Delhi, Baba Farid at Pakpattan, Nizamuddin Auliya in Delhi (d. 1325), his successor Nasiruddin Chiragh-i-Dilli, and Bandanawaz Gesudaraz at Gulbarga in the Deccan — diffused the order across north India and the south alike.

Suhrawardi pattern:

The Suhrawardis took the opposite tack, accepting state patronage and resource. Bahauddin Zakariya at Multan accepted an iqta from Iltutmish; the order's wealth and urban orientation made it influential at the Sultanate court while keeping Sufism largely within elite urban circuits.

Sociological consequence:

Khanqahs functioned as inter-religious meeting grounds where the Sultan's writ was suspended; Amir Khusrau, Nizamuddin's disciple, forged a Hindavi vocabulary that became the seed of Urdu. Hindu pilgrims thronged Ajmer Sharif and Pakpattan; Baba Farid's Punjabi-Sufi verses were preserved in the Guru Granth Sahib. The *malfuzat* literature — particularly Amir Hasan Sijzi's *Fawaid al-Fuad*, recording Nizamuddin's discourses — preserves a social record far richer than dynastic chronicle.

Conclusion:

As K.A. Nizami argued in *Some Aspects of Religion and Politics in India during the Thirteenth Century*, the Sufi silsilas built a parallel civic infrastructure that supplemented the Sultanate state and shaped Indo-Islamic culture for centuries.

SOURCES

→Sufi Movement in India: Silsilas, Saints, and Syncretic Culture
→Qutub Minar: The Slave Dynasty's Victory Tower, the Iron Pillar, and the Quwwat-ul-Islam Complex

→K.A. Nizami, 'Some Aspects of Religion and Politics in India during the Thirteenth Century' (Oxford University Press)

Sufism | Chishti | Suhrawardi | khanqah | sama | malfuzat | Nizamuddin Auliya | Hindavi

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Q12

The collapse of the Marathas at Panipat in 1761 was less a defeat in battle than a failure of political imagination. Critically analyse.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | MARATHA CONFEDERACY

ANSWER OUTLINE

Introduction: The Third Battle of Panipat, 14 January 1761, between the Marathas under Sadashivrao Bhau and Ahmad Shah Abdali, ended Maratha primacy in north India for a decade.

Body — three dimensions: (1) Tactical errors: Bhau's heavy gun-and-baggage column was unsuited to fast cavalry warfare on Doab plains; the Maratha army of around 1.5 lakh, including pilgrims and camp followers, lost mobility. (2) Diplomatic isolation: alienation of Rohillas under Najib-ud-daula, failure to retain Awadh's Shuja-ud-daula, no Sikh or Jat alliance — Suraj Mal Jat withdrew over command disputes. (3) Strategic failure: the Marathas had treated north India as a tribute zone rather than building a federal polity; Peshwa Balaji Bajirao at Pune could not respond in time; Vishwasrao and Bhau both died.

Conclusion: Panipat 1761 broke Maratha imperial confidence; even after the Treaty of Salbai (1782) ended the First Anglo-Maratha War, the confederacy faced the British without a unified north Indian base.

KEY POINTS TO INCLUDE

- Third Battle of Panipat, 14 January 1761
- Sadashivrao Bhau vs Ahmad Shah Abdali
- Peshwa Balaji Bajirao at Pune
- Suraj Mal Jat withdrew over command dispute
- Najib-ud-daula Rohilla allied with Abdali
- Shuja-ud-daula of Awadh sided with Abdali
- Vishwasrao and Sadashivrao Bhau killed
- Treaty of Salbai 1782, end of First Anglo-Maratha War
- Maratha north-Indian collapse for c. 10 years

EXAMPLES & CASE STUDIES

- Sadashivrao Bhau's heavy artillery train
- Suraj Mal Jat — promised support, withdrew
- Najib-ud-daula — chief Indian-Muslim ally of Abdali
- Shamsher Bahadur, Holkar, Scindia among Maratha sardars
- Recovery under Mahadji Scindia by 1771 retaking Delhi

MODEL ANSWER

Introduction: The Third Battle of Panipat on 14 January 1761, between Sadashivrao Bhau and Ahmad Shah Abdali, ended Maratha primacy in north India for a decade. It was less a battlefield defeat than a failure of political imagination.

Body: Tactically, Bhau's heavy gun-and-baggage column, escorting around 1.5 lakh including pilgrims and camp followers, lost mobility against Abdali's fast cavalry on the Doab plain. Diplomatically, the Marathas alienated every potential ally — Najib-ud-daula's Rohillas joined Abdali, Shuja-ud-daula of Awadh sided with the invader, and Suraj Mal Jat withdrew over command disputes. Strategically, the Peshwa Balaji Bajirao treated north India as a tribute zone, not a federal polity; Vishwasrao and Bhau both died, and Pune was incapable of timely relief.

Conclusion: Mahadji Scindia retook Delhi by 1771, but the Treaty of Salbai (1782) confirmed that the confederacy now faced the British without a unified north-Indian base.

SOURCES

→Third Battle of Panipat 1761: How the Marathas Lost North India to Ahmad Shah Abdali
→Treaty of Salbai (1782): End of the First Anglo-Maratha War
→Stewart Gordon, 'The Marathas 1600–1818' (Cambridge University Press)

Third Panipat | Ahmad Shah Abdali | Sadashivrao Bhau | Maratha confederacy | Suraj Mal | Najib-ud-daula | Treaty of Salbai | Peshwa

GS PAPER 1

Modern Indian History

12 practice questions

Q13

The Revolt of 1857 was the last gasp of an old order rather than the first war of national independence. Evaluate.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | REVOLT OF 1857

ANSWER OUTLINE

Introduction: The 1857 Revolt began at Meerut on 10 May 1857 and spread across the Doab. Two competing readings — sepoy mutiny vs first war of independence — frame the historiographical debate.

Body — weigh evidence: (1) For 'old order' reading: leadership of Bahadur Shah II, Nana Saheb, Begum Hazrat Mahal, Rani Laxmibai — dispossessed feudal classes; grievances against Doctrine of Lapse (Jhansi, Satara, Awadh annexation 1856); confinement to Hindi belt, no participation from Madras, Bombay, Punjab Sikh rulers. (2) For 'first war' reading: V.D. Savarkar's 1909 thesis, S.B. Chaudhuri's social uprising thesis, Hindu-Muslim joint cause around the Emperor, mass civilian participation in Awadh and Rohilkhand. (3) Verdict: Bipan Chandra — it was neither a mutiny nor a national war, but a popular revolt without a national consciousness.

Conclusion: 1857 was a transformative inflection point — Crown Rule, end of EIC, Queen's Proclamation 1858 — even if not yet national.

KEY POINTS TO INCLUDE

- Revolt outbreak at Meerut, 10 May 1857
- Bahadur Shah II declared Emperor at Red Fort
- Doctrine of Lapse — Satara 1848, Jhansi 1853, Nagpur 1854
- Awadh annexation, 1856
- Greased cartridge of Enfield rifle as immediate cause
- Mangal Pandey, Barrackpore, 29 March 1857
- Nana Saheb at Kanpur, Tatya Tope, Kunwar Singh, Begum Hazrat Mahal
- Queen's Proclamation 1 November 1858, end of EIC rule
- V.D. Savarkar 'Indian War of Independence 1857', 1909
- Bipan Chandra — popular revolt without national character

EXAMPLES & CASE STUDIES

- Bahadur Shah II — nominal Mughal leadership
- Rani Laxmibai of Jhansi
- Begum Hazrat Mahal in Awadh
- Kunwar Singh of Jagdishpur, Bihar
- Punjab and Sikh princes' loyalty to the Crown
- Madras and Bombay armies remained quiet

MODEL ANSWER

Introduction: The Revolt of 1857, sparked at Meerut on 10 May, has been read both as a sepoy mutiny and, after V.D. Savarkar's 1909 tract, as the first war of independence.

Body: Its leadership — Bahadur Shah II at the Red Fort, Nana Saheb at Kanpur, Begum Hazrat Mahal in Awadh, Rani Laxmibai of Jhansi, Kunwar Singh of Jagdishpur — represented displaced feudal elites resisting Dalhousie's Doctrine of Lapse (Satara 1848, Jhansi 1853, Nagpur 1854) and the 1856 Awadh annexation. Geographically it was confined to the Hindi belt; the Madras and Bombay armies stayed quiet, and Punjab's Sikh rulers backed the Crown. Yet civilian Awadh and Rohilkhand show mass participation beyond a mutiny. Bipan Chandra reads it as a popular revolt without yet a national consciousness.

Conclusion: Whether old order or first war, 1857 transformed colonial governance — the Queen's Proclamation of 1 November 1858 ended Company rule and reshaped the next ninety years.

SOURCES

→Revolt of 1857: Causes, Events and Consequences
→Awadh Annexation 1856: Dalhousie's Pretext, Summary Settlement
→Bipan Chandra et al., 'India's Struggle for Independence' (Penguin)

Doctrine of Lapse | Subsidiary Alliance | Queen's Proclamation | Crown Rule | feudal grievance | popular revolt | national consciousness | sepoy mutiny

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Q14

Gandhi's Champaran Satyagraha (1917), Ahmedabad mill strike (1918) and Kheda Satyagraha (1918) together formed a method, not three separate experiments. Discuss.

10 MARKS | 150 WORDS | 9 MIN | EASY | GANDHIAN MOVEMENTS

ANSWER OUTLINE

Introduction: Three local agitations Gandhi led on his return from South Africa worked out the technique he would later scale nationally.

Body — three dimensions: (1) Issue-based mobilisation — indigo planters at Champaran, mill wages at Ahmedabad, revenue suspension at Kheda. (2) Constructive method — fact-finding survey, voluntary fast, settlement through arbitration. (3) Building a cadre — Rajendra Prasad, Brajkishore Prasad, Mahadev Desai, Vallabhbhai Patel groomed as lieutenants.

Conclusion: By 1919 Gandhi had a tested model — issue, satyagraha, arbitration, leadership pipeline — ready for the Rowlatt Satyagraha.

KEY POINTS TO INCLUDE

- Champaran indigo cultivation under tinkathia system
- Champaran Agrarian Act, 1918
- Ahmedabad mill workers' strike, Feb–Mar 1918, plague bonus dispute
- Anasuya Sarabhai's support at Ahmedabad
- Kheda revenue suspension, 1918, after crop failure
- Sardar Patel's emergence at Kheda
- Constructive programme: schools, sanitation in Champaran
- Direct training of Rajendra Prasad and Mahadev Desai

EXAMPLES & CASE STUDIES

- Champaran — Raj Kumar Shukla brings Gandhi from Lucknow Congress
- Tinkathia system of forced indigo on 3/20 land
- Patel as Gandhi's lieutenant at Kheda
- Anasuya Sarabhai — mill-owner's sister supporting workers

MODEL ANSWER

> **Introduction:** The three local agitations Gandhi led on his return from South Africa in 1917-18 were not separate experiments but a single, evolving method — the technique he would later scale across India.
>
> **Body:** Champaran (1917), prompted by Raj Kumar Shukla at the Lucknow Congress, attacked the tinkathia system of forced indigo through fact-finding survey and arbitration, yielding the Champaran Agrarian Act 1918. The Ahmedabad mill strike

(February–March 1918) over the plague bonus, supported by Anasuya Sarabhai, introduced the voluntary fast as a coercive moral instrument. Kheda Satyagraha (1918) refused revenue after crop failure and trained Vallabhbhai Patel as Gandhi's lieutenant. The shared template — issue identification, fact-finding, peaceful resistance, arbitration, and cadre building (Rajendra Prasad, Mahadev Desai) — was now portable.

Conclusion: By the Rowlatt Satyagraha of 1919, Gandhi had a tested Indian model ready for national deployment — proof, as Judith Brown argues, that scale began with three deliberate dress rehearsals.

SOURCES

→Champaran Satyagraha (1917): Gandhi's First Indian Satyagraha
→Kheda Satyagraha 1918: Gandhi's Second Mass Movement in India
→Bipan Chandra et al., 'India's Struggle for Independence' (Penguin)

satyagraha | tinkathia | arbitration | constructive programme | fact-finding | leadership cadre

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Q15

The Dandi March was a piece of political theatre as much as an act of civil disobedience. Examine its symbolic, strategic and international dimensions.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | CIVIL DISOBEDIENCE MOVEMENT

ANSWER OUTLINE

Introduction: The Dandi March (12 March to 6 April 1930) launched the Civil Disobedience Movement by walking 240 miles from Sabarmati Ashram to the Dandi sea coast in Gujarat.

Body — three dimensions: (1) Symbolic: salt as universal commodity, breaking a tax monopoly that fell hardest on the poorest — inverting Lord Salisbury's claim that salt was not a political issue. (2) Strategic: 78 chosen marchers, daily speaking halts, nation-wide replication on the West and East coasts — Sarojini Naidu at Dharasana, C. Rajagopalachari's Vedaranyam march. (3) International: world press coverage by United Press' Webb Miller, the Salt March as the moment Indian nationalism became a global news story; led to the Gandhi-Irwin Pact, 5 March 1931 and Gandhi's Second Round Table Conference visit.

Conclusion: Dandi turned an obscure tax into the most legible image of colonial injustice and made the Congress a global political actor.

KEY POINTS TO INCLUDE

- Dandi March 12 March to 6 April 1930, 240 miles
- 78 chosen satyagrahis from Sabarmati Ashram
- Eleven demands letter to Lord Irwin, 2 March 1930
- Salt tax dated to 1882, monopoly worth around 8% of revenue
- Dharasana salt works raid, 21 May 1930, led by Sarojini Naidu
- Vedaranyam Salt Satyagraha by C. Rajagopalachari
- Webb Miller's United Press dispatch on Dharasana
- Gandhi-Irwin Pact, 5 March 1931
- Second Round Table Conference, London, September 1931

EXAMPLES & CASE STUDIES

- Sarojini Naidu at Dharasana — lathicharge witnessed by Webb Miller
- C. Rajagopalachari's parallel Vedaranyam march in Tamil Nadu
- K. Kelappan's Payyanur salt march in Malabar
- No-tax campaign in Bardoli and Surat

MODEL ANSWER

Introduction:

The Dandi March, conducted from 12 March to 6 April 1930 over 240 miles from Sabarmati Ashram to the Gujarat coast, launched the Civil Disobedience Movement. Its genius lay in fusing political theatre with legal transgression — choosing a tax that fell hardest on the poorest as the symbol of colonial injustice.

Symbolic dimension:

The 1882 Salt Act made salt a state monopoly worth about 8 per cent of revenue, taxing a universal necessity. By breaking that law on a public beach, Gandhi inverted Lord Salisbury's claim that salt was not a political issue, dramatising the moral asymmetry between empire and peasant.

Strategic dimension:

Seventy-eight chosen satyagrahis walked with him, halting daily for speeches and recruitment; the march was replicated on every coast — Sarojini Naidu led the Dharasana raid (21 May 1930), C. Rajagopalachari ran the Vedaranyam march in Tamil Nadu, and K. Kelappan organised Payyanur in Malabar. The eleven-point letter to Lord Irwin on 2 March 1930 set the rhetorical stage.

International dimension:

Webb Miller's United Press dispatch on Dharasana made the lathi charges a global news story; for the first time, Indian nationalism had a worldwide audience. The Gandhi–Irwin Pact of 5 March 1931 followed, and Gandhi attended the Second Round Table Conference in September 1931.

Conclusion:

Dandi turned an obscure excise into the most legible image of colonial injustice and made the Indian National Congress a global political actor — Judith Brown's verdict that it converted satyagraha from method to spectacle is hard to dispute.

SOURCES

→Dandi March 1930: Gandhi's Salt Satyagraha, Route, 11 Demands and Impact
→Civil Disobedience Movement (1930–34): Salt March, Impact and UPSC Guide
→Gandhi-Irwin Pact 1931: Terms, Significance

salt tax | civil disobedience | Dharasana | Vedaranyam | Gandhi-Irwin Pact | Round Table Conference | political theatre | global publicity

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Q16

Why did the Quit India Movement of 1942 turn into a leaderless mass uprising, and what does that tell us about the maturity of Indian nationalism on the eve of independence? Discuss.

15 MARKS | 250 WORDS | 14 MIN | HARD | QUIT INDIA MOVEMENT

ANSWER OUTLINE

Introduction: The Quit India Movement, launched at Bombay on 8 August 1942 with Gandhi's 'Do or Die' call, became a leaderless uprising after the wholesale arrest of Congress leadership the next morning.

Body — three dimensions: (1) Causes of leaderlessness: Operation Zero Hour arrests; failure of Cripps Mission in March 1942 had radicalised even the moderates. (2) Form of the uprising: parallel governments at Ballia (Chittu Pandey), Tamluk (Tamralipta Jatiya Sarkar) in Midnapore, Satara (Prati Sarkar under Y.B. Chavan); communications sabotage, attacks on police stations — over 250 stations destroyed. (3) Significance: showed the depth of nationalist consciousness even without central leadership; convinced the British that the Raj could not be policed; led to the post-war Cabinet Mission of 1946.

Conclusion: Quit India confirmed Bipan Chandra's reading — Indian nationalism had become a mass force capable of acting without prompting from the top.

KEY POINTS TO INCLUDE

- Quit India Resolution at Gowalia Tank, Bombay, 8 August 1942
- Gandhi's 'Karenge ya Marenge' / Do or Die speech
- Cripps Mission failure, March 1942
- Arrest of entire Congress leadership, 9 August 1942
- Parallel governments at Ballia, Tamluk, Satara
- Tamralipta Jatiya Sarkar in Midnapore, 1942–44
- Underground leadership of Jayaprakash Narayan, Aruna Asaf Ali, Ram Manohar Lohia, Usha Mehta
- Usha Mehta's Congress Radio from Bombay
- Cabinet Mission, March 1946

EXAMPLES & CASE STUDIES

- Chittu Pandey's parallel government at Ballia, UP
- Y.B. Chavan and Nana Patil's Prati Sarkar at Satara
- Tamluk Jatiya Sarkar under Sushil Dhara and Matangini Hazra
- Aruna Asaf Ali hoisting flag at Gowalia Tank
- Usha Mehta's clandestine Congress Radio

MODEL ANSWER

> **Introduction:**
>
> The Quit India Movement, launched at Bombay's Gowalia Tank on 8 August 1942 with Gandhi's *karenge ya marenge* call, became a leaderless uprising overnight after the Congress leadership was arrested in Operation Zero Hour on 9 August 1942. Its character reveals the maturity of Indian nationalism on the eve of independence.
>
> **Causes of leaderlessness:**
>
> The failure of the Cripps Mission in March 1942 had radicalised even moderates; the Japanese advance to Imphal raised the spectre of imminent occupation. The pre-emptive arrest of Gandhi, Nehru, Patel, Azad and the entire Working Committee left the movement without a central command for three years.
>
> **Form of the uprising:**

Parallel governments emerged — Chittu Pandey's Ballia in UP, the Tamralipta Jatiya Sarkar at Tamluk in Midnapore under Sushil Dhara and Matangini Hazra, Y.B. Chavan and Nana Patil's Prati Sarkar at Satara. Over 250 police stations were attacked. Aruna Asaf Ali hoisted the flag at Gowalia Tank; Usha Mehta ran the clandestine Congress Radio from Bombay; Jayaprakash Narayan, Ram Manohar Lohia and Achyut Patwardhan led the underground.

Significance:

That parallel governments held administration in pockets without central direction showed nationalist consciousness had become structural. The Raj concluded it could not police India indefinitely — the Cabinet Mission of March 1946 followed directly.

Conclusion:

Quit India confirmed Bipan Chandra's reading that Indian nationalism had become a mass force capable of acting without prompting from the top. Independence after 1945 was a matter of timing, not of consent.

SOURCES

→Quit India Movement 1942: Cripps Failure, Do or Die, Parallel Governments
→Quit India Movement 1942: Events and Impact
→Bipan Chandra et al., 'India's Struggle for Independence' (Penguin)

Quit India | Do or Die | parallel government | Cripps Mission | leaderless uprising | Tamralipta | Prati Sarkar | Cabinet Mission

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Q17

Colonial land revenue settlements in the 19th century rewrote agrarian relations across India in three distinct moulds. Compare the Permanent Settlement, the Ryotwari and the Mahalwari systems.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | COLONIAL ECONOMY

ANSWER OUTLINE

Introduction: Between 1793 and 1833 the East India Company experimented with three revenue regimes that together covered most of British India and shaped agrarian society into the 20th century.

Body — three dimensions: (1) Permanent Settlement (1793, Bengal, Bihar, Orissa, parts of Madras): Cornwallis fixed land revenue forever with zamindars as proprietors; created absentee landlordism, sub-infeudation, indebtedness; the Sunset Law dispossessed older

zamindars. (2) Ryotwari (1820, Madras and Bombay): Thomas Munro and Captain Read settled directly with the cultivating ryot, revenue revised every 30 years, no intermediary — but revenue often set at 45–55% of gross produce, leading to chronic indebtedness and the Deccan Riots of 1875. (3) Mahalwari (1822, North-Western Provinces and Punjab): Holt Mackenzie and R.M. Bird settled with the village (mahal) treated as a corporate body, revenue collected through lambardars; revision every 20–30 years. (4) Common effect: cash revenue regardless of harvest, commercialisation of agriculture (cotton, indigo, opium), rise of moneylender, decline of village artisans — the Bengal famine of 1770 and Madras famine of 1876–78 expose the system's brittleness.

Conclusion: Bipan Chandra reads the three settlements as a single colonial project of revenue maximisation with regional variations; their structures echo into post-1947 land reform debates.

KEY POINTS TO INCLUDE

- Permanent Settlement 1793, Lord Cornwallis
- Sunset Law — zamindars dispossessed for default
- Ryotwari 1820, Thomas Munro, Madras and Bombay
- Mahalwari 1822, Holt Mackenzie, R.M. Bird, NWP and Punjab
- Lambardar as village revenue collector under mahalwari
- Revenue 45–55% of gross under ryotwari
- Commercialisation — indigo, cotton, opium
- Deccan Riots 1875 — Ahmednagar, Poona ryots vs moneylenders
- Bengal famine 1770, Madras famine 1876–78
- Bipan Chandra — revenue maximisation as single colonial project

EXAMPLES & CASE STUDIES

- Permanent Settlement — Bengal, Bihar, Orissa, parts of Madras
- Cornwallis's Sunset Law against zamindar defaulters
- Munro's ryotwari survey in Ceded Districts of Madras
- Holt Mackenzie's Regulation VII of 1822
- R.M. Bird's revision in NWP, 1833
- Deccan Agriculturalists' Relief Act 1879

MODEL ANSWER

> **Introduction:**

Between 1793 and 1833 the East India Company experimented with three revenue regimes that together covered most of British India and rewrote agrarian relations into the twentieth century.

Permanent Settlement (1793):

Lord Cornwallis fixed land revenue in perpetuity with zamindars as proprietors in Bengal, Bihar, Orissa and parts of Madras. The Sunset Law dispossessed zamindars who failed to pay by sunset on the due date. The result was absentee landlordism, sub-infeudation through dozens of intermediary tenures, and chronic peasant indebtedness.

Ryotwari (1820):

Thomas Munro and Captain Alexander Read settled directly with the cultivating *ryot* across Madras and Bombay, revising revenue every 30 years and dispensing with intermediaries. Yet revenue was often pitched at 45–55 per cent of gross produce, driving cultivators into the moneylender's hands; the Deccan Riots of 1875 forced the Deccan Agriculturalists' Relief Act of 1879.

Mahalwari (1822):

Holt Mackenzie's Regulation VII of 1822, refined by R.M. Bird in 1833, settled with the village or *mahal* as a corporate body in the North-Western Provinces and Punjab, with *lambardars* collecting revenue from co-sharers. Revision every 20–30 years preserved flexibility to seasonal failure.

Common effect:

All three demanded cash regardless of harvest, pushed commercial crops (indigo, cotton, opium), and produced devastating famine — the Great Bengal Famine of 1770 and the Madras famine of 1876–78. Bipan Chandra reads them as a single colonial project of revenue maximisation with regional variations.

Conclusion:

Their structural residues — landlordism, moneylender dominance and absentee proprietorship — echoed into the post-1947 zamindari abolition statutes and land ceiling legislation.

SOURCES

→Permanent Settlement 1793: Cornwallis, Zamindars and the Bengal Revenue Experiment
→Ryotwari System: Thomas Munro's Direct Settlement with the Cultivator
→Mahalwari System: Holt Mackenzie, R.M. Bird and the Village Settlement of North India

Permanent Settlement | Ryotwari | Mahalwari | zamindari | Sunset Law | lambardar | Thomas Munro | Deccan Riots

Q18

The Santhal Hool of 1855 was a peasant insurrection against the joint regime of moneylender, landlord and colonial state. Examine its causes, course and historical significance.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | TRIBAL MOVEMENTS

ANSWER OUTLINE

Introduction: The Santhal Hool of 30 June 1855 in the Damin-i-Koh region of present Jharkhand was led by Sido and Kanhu Murmu against dikus — outsider moneylenders, zamindars and Company officials.

Body — three dimensions: (1) Causes: Permanent Settlement had pushed Bengali zamindars and Bihari moneylenders into Santhal Pargana; usurious interest converted Santhal labour into bonded servitude (kamioti); revenue extraction by the Company. (2) Course: 30 June 1855 gathering at Bhognadih; declaration of self-rule; 60,000 Santhals mobilised; British declared martial law November 1855; suppressed by March 1856 with around 15,000–20,000 dead. (3) Aftermath and significance: creation of Santhal Pargana district 1856 with non-regulation status; protective tenancy law later codified in Santhal Pargana Tenancy Act 1876; inspired Birsa Munda's Ulgulan (1899–1900); Ranajit Guha's 'Elementary Aspects of Peasant Insurgency' treats it as paradigmatic.

Conclusion: The Hool foreshadowed every subsequent adivasi assertion in the Chota Nagpur Plateau and helped frame the protective tribal-land regime that survives in the Fifth Schedule.

KEY POINTS TO INCLUDE

- Santhal Hool, 30 June 1855, Bhognadih
- Sido and Kanhu Murmu, brothers Chand and Bhairav
- Damin-i-Koh region of Santhal Pargana
- Diku — outsider zamindars and moneylenders
- 60,000 Santhals mobilised, martial law November 1855
- Suppression by March 1856, c. 15,000–20,000 killed
- Santhal Pargana district created 1856, non-regulation
- Santhal Pargana Tenancy Act 1876

- Birsa Munda's Ulgulan 1899–1900 as successor
- Ranajit Guha, Subaltern Studies framing

EXAMPLES & CASE STUDIES

- Bhognadih declaration — 30 June 1855
- Tilka Manjhi's earlier resistance, 1784
- Damin-i-Koh as designated Santhal settlement
- Hool Diwas observed annually on 30 June
- Santhal Pargana Tenancy Act 1876 protections

MODEL ANSWER

> **Introduction:** The Santhal Hool of 30 June 1855, in the Damin-i-Koh region of present-day Jharkhand, was led by Sido and Kanhu Murmu against the *dikus* — outsider moneylenders, zamindars and Company officials.
>
> **Body:** The causes were structural — the Permanent Settlement drew Bengali zamindars and Bihari moneylenders into Santhal Pargana, usurious interest converted Santhal labour into bonded *kamioti*, and Company revenue extraction added a third layer. The Bhognadih declaration mobilised 60,000 Santhals; martial law was imposed in November 1855; by March 1856 some 15,000–20,000 Santhals had been killed. The aftermath was structurally important: the non-regulation Santhal Pargana district was created in 1856, codified later in the Santhal Pargana Tenancy Act 1876, and the revolt inspired Birsa Munda's Ulgulan (1899–1900). Ranajit Guha's *Elementary Aspects of Peasant Insurgency* treats it as paradigmatic subaltern resistance.
>
> **Conclusion:** The Hool foreshadowed every adivasi assertion in the Chota Nagpur Plateau and framed the protective tribal-land regime now in the Fifth Schedule.

SOURCES

→Santhal Tribe: India's Largest Adivasi Community, Culture, and the 1855 Rebellion
→Chota Nagpur Plateau: Geology, Patlands, Mineral Wealth, and Tribal Heartland
→Ranajit Guha, 'Elementary Aspects of Peasant Insurgency in Colonial India' (Oxford University Press)

Santhal Hool | Sido-Kanhu | Damin-i-Koh | Diku | adivasi insurgency | Santhal Pargana | Ranajit Guha | subaltern

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Q19

The 1905 partition of Bengal converted Curzon's administrative argument into a mass political movement. Examine the methods of the Swadeshi

movement and its enduring legacies.

15 MARKS | 250 WORDS | 14 MIN | EASY | SWADESHI MOVEMENT

ANSWER OUTLINE

Introduction: Lord Curzon's partition of Bengal on 16 October 1905 carved a Muslim-majority eastern province; the Congress response, the Swadeshi movement, was the first mass nationalist mobilisation.

Body — three dimensions: (1) Four-fold method: boycott of British goods; swadeshi production (Bengal Chemicals founded by P.C. Ray, 1901; Bengal National College 1906); national education through National Council of Education; passive resistance and atmasakti. (2) Leadership and spread: Surendranath Banerjee, Aurobindo Ghose, B.G. Tilak, Bipin Chandra Pal, Lala Lajpat Rai — the Lal-Bal-Pal extremist axis. Reached Maharashtra, Punjab, Madras. (3) Limits and legacies: Surat split of 1907; alienation of Muslim elite that fed the All-India Muslim League's formation at Dhaka, 30 December 1906; revolutionary terrorism stream — Anushilan Samiti, Jugantar; partition annulled 12 December 1911 with capital shift to Delhi. Sumit Sarkar's 'The Swadeshi Movement in Bengal 1903–1908' is the definitive treatment.

Conclusion: Swadeshi shifted Indian nationalism from petitions to participation and inaugurated boycott, vernacular politics, women's mobilisation and constructive work — every later mass movement borrowed from this template.

KEY POINTS TO INCLUDE

- Partition of Bengal effective 16 October 1905
- Curzon's stated reason — administrative efficiency
- Swadeshi-boycott-national education-passive resistance quartet
- P.C. Ray's Bengal Chemicals, 1901
- Bengal National College, 1906, Aurobindo Ghose as principal
- Lal-Bal-Pal as extremist leadership
- Surat split, December 1907
- Muslim League founded Dhaka, 30 December 1906
- Anushilan Samiti, Jugantar — revolutionary offshoots
- Partition annulled 12 December 1911, capital shifts to Delhi

EXAMPLES & CASE STUDIES

- Bonfire of foreign cloth at Calcutta Town Hall, August 1905
- Rabindranath Tagore's 'Amar Sonar Bangla' (1905)

- P.C. Ray's Bengal Chemicals as swadeshi industry
- Rakhi-bandhan as Hindu-Muslim solidarity, 16 October 1905
- Surat Congress split — moderates vs extremists
- King George V proclamation 1911 reversing partition

MODEL ANSWER

Introduction:

Lord Curzon's partition of Bengal of 16 October 1905 — defended as administrative efficiency, condemned by Indians as divide-and-rule — converted a bureaucratic reorganisation into the first mass nationalist mobilisation in modern Indian history. Sumit Sarkar's *The Swadeshi Movement in Bengal 1903–1908* remains the definitive scholarly account.

Four-fold method:

The movement deployed four interlocking techniques: boycott of British goods (dramatised by the Calcutta Town Hall bonfire of foreign cloth in August 1905), swadeshi production (P.C. Ray's Bengal Chemicals, founded 1901, was its industrial showcase), national education (Bengal National College in 1906, with Aurobindo Ghose as principal, backed by the National Council of Education), and *atmasakti* or passive resistance against colonial institutions.

Leadership and spread:

The Lal-Bal-Pal extremist axis — Lala Lajpat Rai, Bal Gangadhar Tilak, Bipin Chandra Pal — extended the agitation from Bengal to Punjab, Maharashtra and Madras. Rabindranath Tagore's *Amar Sonar Bangla* (1905) and the rakhi-bandhan ritual of 16 October 1905, tying Hindu and Muslim wrists, reframed political solidarity as cultural performance.

Limits and legacies:

The Surat split of December 1907 fractured the Congress; the All-India Muslim League was founded at Dhaka on 30 December 1906, partly in response to Hindu-coloured swadeshi rhetoric; revolutionary offshoots — Anushilan Samiti and Jugantar — moved underground. The partition was annulled on 12 December 1911 with the capital shift to Delhi.

Conclusion:

Swadeshi shifted Indian nationalism from petition to participation and inaugurated boycott, vernacular politics, women's mobilisation and constructive work — every

later mass movement, from Non-Cooperation to Civil Disobedience, borrowed from this template.

SOURCES

→Partition of Bengal 1905: Curzon's Plan, Swadeshi Response and Annulment
→Bipin Chandra Pal: Bengali Extremist, Lal-Bal-Pal Conscience and Father of Revolutionary Journalism
→All India Muslim League: Formation, Role in Partition and Key Leaders

Swadeshi | boycott | Lal-Bal-Pal | Surat split | Anushilan Samiti | Muslim League | Bengal Chemicals | Sumit Sarkar

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Q20

Dadabhai Naoroji's Drain Theory remains the foundational economic critique of colonialism. Trace its evolution and its influence on the moderate phase of Indian nationalism.

10 MARKS | 150 WORDS | 9 MIN | EASY | ECONOMIC NATIONALISM

ANSWER OUTLINE

Introduction: Dadabhai Naoroji (1825–1917) presented the Drain Theory in 'Poverty and Un-British Rule in India' (1901), having argued the case since the 1860s before the East India Association in London.

Body — three dimensions: (1) The thesis: Home Charges, expatriate salaries, India Office expenditure, unrequited exports drained surplus to Britain; Naoroji estimated the drain at £30–40 million per year. (2) Reinforcement: R.C. Dutt's 'Economic History of India' (1902–04) extended the deindustrialisation argument; M.G. Ranade analysed Indian poverty as structural; Romesh Dutt's data underpinned the Indian National Congress's demands. (3) Political impact: gave the moderate phase (1885–1905) an evidence-based critique to confront imperial rule; demands for Indianisation of services, reduced military expenditure, currency reform; later weaponised by extremists into the boycott of British goods.

Conclusion: The Drain Theory turned colonial economics into a moral indictment; Bipan Chandra notes that no national movement before or since has had so durable an economic critique at its foundation.

KEY POINTS TO INCLUDE

- Dadabhai Naoroji 1825–1917, Grand Old Man of India
- 'Poverty and Un-British Rule in India' 1901

- Drain estimated at £30–40 million per year
- Home Charges, India Office, pensions, unrequited exports
- R.C. Dutt's 'Economic History of India' 1902–04
- M.G. Ranade — Indian Political Economy
- Moderate phase Congress 1885–1905
- First Indian elected to British Parliament, 1892
- Bipan Chandra — Drain Theory as foundational critique

EXAMPLES & CASE STUDIES

- Naoroji's £30 million estimate at INC, 1896
- Home Charges component analysed by R.C. Dutt
- G.K. Gokhale's budget speeches in Imperial Council
- Demand for Indianisation of ICS in 1893
- Royal Commission on Indian Expenditure (Welby) testimony, 1896–1900

MODEL ANSWER

> **Introduction:** Dadabhai Naoroji (1825–1917), the "Grand Old Man of India", set out the Drain Theory in *Poverty and Un-British Rule in India* (1901), having argued the case before the East India Association in London from the 1860s.
>
> **Body:** The thesis identified Home Charges, expatriate salaries, India Office expenditure, pensions and unrequited exports as channels draining surplus to Britain; Naoroji estimated the drain at £30–40 million a year. R.C. Dutt's *Economic History of India* (1902–04) extended the argument into deindustrialisation; M.G. Ranade framed Indian poverty as structural. The cumulative effect was political — the moderate Congress (1885–1905) acquired an evidence-based critique that powered G.K. Gokhale's budget speeches in the Imperial Council, demands for Indianisation of the ICS, and testimony before the Welby Royal Commission (1896–1900).
>
> **Conclusion:** Bipan Chandra notes that no national movement before or since has had so durable an economic critique at its foundation; the boycott of 1905 weaponised what the moderates had documented.

SOURCES

→Dadabhai Naoroji: Grand Old Man of India and Drain Theory
→Gopal Krishna Gokhale: Life, Servants of India Society and Political Legacy
→Bipan Chandra, 'The Rise and Growth of Economic Nationalism in India' (People's Publishing House)

Drain Theory | Home Charges | unrequited exports | Dadabhai Naoroji | R.C. Dutt | moderate phase | economic nationalism | Indianisation

Q21

Chauri Chaura was both a tactical failure and a strategic insight. Examine why Gandhi withdrew the Non-Cooperation Movement in February 1922 and its long-term consequences.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | NON-COOPERATION MOVEMENT

ANSWER OUTLINE

Introduction: On 4 February 1922, at Chauri Chaura in Gorakhpur, a Congress procession was fired on; the crowd retaliated, burning a police station and killing 22 policemen. Gandhi withdrew the Non-Cooperation Movement on 12 February 1922.

Body — three dimensions: (1) Withdrawal logic: Gandhi's commitment to ahimsa as non-negotiable; fear that mass violence would invite repression and lose moral legitimacy; Bardoli Resolution suspending the movement. (2) Tactical failure: provoked Motilal Nehru, C.R. Das, Subhas Bose to break away into Swaraj Party (1923) for council entry; Khilafat movement collapsed; Hindu-Muslim solidarity began to fray. (3) Strategic insight: prepared the cadre for disciplined satyagraha, leading to Bardoli (1928), Civil Disobedience (1930) — Shahid Amin's 'Event, Metaphor, Memory' shows the local memory of Chauri Chaura was reclaimed differently by national narrative.

Conclusion: The withdrawal was unpopular but established the Gandhian principle that the method must remain non-violent even when the masses outrun the leader.

KEY POINTS TO INCLUDE

- Chauri Chaura, Gorakhpur, 4 February 1922
- 22 policemen killed, police station burnt
- Withdrawal announced 12 February 1922, Bardoli Resolution
- Non-Cooperation launched September 1920
- Khilafat-Non-Cooperation Hindu-Muslim platform collapsed
- Swaraj Party formed 1923, council entry strategy
- Motilal Nehru, C.R. Das lead Swaraj Party
- Shahid Amin — 'Event, Metaphor, Memory' (1995)

EXAMPLES & CASE STUDIES

- Bardoli Resolution, Working Committee, February 1922
- Gandhi's six-year sentence for sedition, March 1922
- Swaraj Party council entry from 1923
- Khilafat exhaustion after Turkey abolished Caliphate, 1924
- 172 villagers convicted, 19 hanged for Chauri Chaura

MODEL ANSWER

Introduction: On 4 February 1922 at Chauri Chaura in Gorakhpur, a Congress procession that had been fired upon retaliated, burning a police station and killing 22 policemen. Gandhi withdrew the Non-Cooperation Movement on 12 February 1922 through the Bardoli Resolution.

Body: Withdrawal followed from Gandhi's non-negotiable commitment to *ahimsa* and his calculation that mass violence would invite repression and forfeit moral legitimacy. Tactically it provoked dissent — Motilal Nehru, C.R. Das and Subhas Bose broke away to form the Swaraj Party (1923) for council entry; the Khilafat alliance frayed and collapsed after Turkey abolished the Caliphate in 1924. Strategically, however, it preserved the Gandhian method for Bardoli (1928) and Dandi (1930). Shahid Amin's *Event, Metaphor, Memory* (1995) shows how local memory and nationalist narrative diverged over the same event.

Conclusion: The withdrawal was unpopular but established that non-violence must hold even when masses outrun the leader — the principle Gandhi never compromised again.

SOURCES

→Chauri Chaura Incident 1922: The Day Gandhi Stopped the Non-Cooperation Movement
→Quit India Movement 1942: Cripps Failure, Do or Die, Parallel Governments
→Bipan Chandra et al., 'India's Struggle for Independence' (Penguin)

Chauri Chaura | Bardoli Resolution | Non-Cooperation | Khilafat | Swaraj Party | ahimsa | Shahid Amin | Motilal Nehru

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Q22

Bardoli Satyagraha (1928) was a textbook of disciplined peasant mobilisation under colonial rule. Discuss the methods and the leadership that made it possible.

10 MARKS | 150 WORDS | 9 MIN | EASY | PEASANT MOVEMENTS

ANSWER OUTLINE

Introduction: The Bardoli Satyagraha of February–August 1928 in Surat district challenged a 22% revenue enhancement imposed by the Bombay Presidency.

Body — three dimensions: (1) Methods: no-tax campaign by 88,000 peasants of 137 villages; volunteer cadres (sevaks); social boycott of officials; village funds for affected families; preserved discipline through chowkidari and constructive programme. (2) Leadership: Vallabhbhai Patel, requested by Bardoli Taluk Conference; supported by Mahadev Desai, Narhari Parikh, Mithubehn Petit; Patel earned the title Sardar from women satyagrahis. (3) Outcome and significance: government-appointed Maxwell-Broomfield Inquiry reduced enhancement from 22% to 6.03%; land returned to dispossessed; established Patel as a national leader and a template for organised peasant satyagraha drawn upon in Civil Disobedience.

Conclusion: Sumit Sarkar reads Bardoli as proof that a disciplined regional satyagraha could compel a colonial state to negotiate, validating the Gandhian method between Chauri Chaura and Dandi.

KEY POINTS TO INCLUDE

- Bardoli Satyagraha February–August 1928
- 22% revenue enhancement by Bombay Presidency
- 88,000 peasants across 137 villages
- Vallabhbhai Patel as leader
- Mahadev Desai, Narhari Parikh, Mithubehn Petit as lieutenants
- No-tax campaign, social boycott of collaborators
- Maxwell-Broomfield Inquiry, 1929
- Enhancement reduced from 22% to 6.03%
- Patel earns 'Sardar' from Bardoli women

EXAMPLES & CASE STUDIES

- Bardoli Taluk Conference invitation to Patel, January 1928
- Patidar peasants as core constituency
- Mithubehn Petit's women's volunteer corps
- Maxwell-Broomfield Committee revision of revenue
- Mahadev Desai's 'The Story of Bardoli' (1929)

MODEL ANSWER

Introduction: The Bardoli Satyagraha of February–August 1928 in Surat district challenged a 22 per cent revenue enhancement imposed by the Bombay Presidency and became the textbook for disciplined peasant mobilisation under colonial rule.

Body: Methods combined a no-tax campaign by 88,000 peasants across 137 villages, volunteer cadres (*sevaks*) trained for social boycott of revenue officials, village funds for affected families, and a constructive programme of schools and sanitation. Vallabhbhai Patel, invited by the Bardoli Taluk Conference in January 1928, led the campaign with Mahadev Desai, Narhari Parikh and Mithubehn Petit's women's volunteer corps. Outcome: the Maxwell-Broomfield Inquiry (1929) cut the enhancement from 22 per cent to 6.03 per cent, dispossessed land was restored, and Patel earned the title "Sardar" from Bardoli women.

Conclusion: Sumit Sarkar reads Bardoli as proof that a disciplined regional satyagraha could compel a colonial state to negotiate, validating the Gandhian method between Chauri Chaura and Dandi.

SOURCES

- →Bardoli Satyagraha 1928: Background, Sardar Patel's Role and Outcome
- →Sardar Vallabhbhai Patel: Selflessness, Courage and the Iron Discipline of Public Service
- →Sumit Sarkar, 'Modern India 1885–1947' (Macmillan)

Bardoli Satyagraha | Sardar Patel | no-tax campaign | Patidar | Mahadev Desai | Mithubehn Petit | Maxwell-Broomfield | Surat

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Q23

The Self-Respect Movement reshaped Tamil society more profoundly than any contemporary northern reform initiative. Examine its ideology, methods and political legacy.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | SOCIAL REFORM

ANSWER OUTLINE

Introduction: The Self-Respect Movement was launched by E.V. Ramaswamy 'Periyar' in 1925 in the Madras Presidency, after he broke from the Congress at the Kanchipuram conference over the Vaikom Satyagraha and Brahmin domination.

Body — three dimensions: (1) Ideology: rationalist critique of caste hierarchy; rejection of Brahminism as a structure not a community; gender equality; atheism or non-theistic

ethics; Suya Mariyathai Iyakkam ('self-respect') as freedom from inherited subordination. (2) Methods: Suya Mariyathai marriages without Brahmin priests (Madras Marriage Validation Act 1968 later legalised them); inter-caste dining; widow remarriage; women's right to education and divorce; pamphlets in Tamil through Kudi Arasu (1925) and Viduthalai (1937). (3) Political legacy: merger with Justice Party in 1944 forming Dravidar Kazhagam; ideological parent of DMK (1949) and later AIADMK (1972); shaped Tamil Nadu's reservation policy — 69% reservation upheld through inclusion in Ninth Schedule.

Conclusion: The Self-Respect Movement converted social reform into a political programme that the Republic of India has had to accommodate through constitutional special provisions.

KEY POINTS TO INCLUDE

- Self-Respect Movement launched 1925 by E.V. Ramaswamy
- Vaikom Satyagraha 1924–25 as immediate trigger
- Suya Mariyathai marriages without Brahmin priests
- Madras Marriage Validation Act 1968
- Kudi Arasu (1925) and Viduthalai (1937) periodicals
- Merger with Justice Party 1944 — Dravidar Kazhagam
- DMK founded 1949 by C.N. Annadurai
- Tamil Nadu 69% reservation, Ninth Schedule
- Anti-Hindi agitations 1937–40 and 1965

EXAMPLES & CASE STUDIES

- Vaikom Satyagraha 1924–25, Kerala temple entry
- Periyar burning Manusmriti 1953
- Madras Marriage Validation Act 1968
- Annadurai's Anti-Hindi agitation 1965
- Communal G.O. 1921 and reservation in Madras

MODEL ANSWER

> **Introduction:** E.V. Ramaswamy "Periyar" launched the Self-Respect Movement in 1925 in the Madras Presidency, after breaking from Congress at the Kanchipuram conference over the Vaikom Satyagraha and Brahmin domination.
>
> **Body:** Ideologically, the movement attacked Brahminism as structure not community, advanced gender equality and rationalist non-theistic ethics, and framed *Suya Mariyathai Iyakkam* ("self-respect") as freedom from inherited subordination.

Methods included Self-Respect marriages without Brahmin priests (validated by the Madras Marriage Validation Act 1968), inter-caste dining, widow remarriage, and a vernacular print campaign through *Kudi Arasu* (1925) and *Viduthalai* (1937). The 1944 merger with the Justice Party formed Dravidar Kazhagam, ideological parent of the DMK (1949) and AIADMK (1972). Politically, Tamil Nadu's 69 per cent reservation, protected under the Ninth Schedule, is its constitutional residue.

Conclusion: The movement converted social reform into a political programme that the Republic of India has had to accommodate through constitutional special provisions.

SOURCES

- →Self-Respect Movement and Periyar E. V. Ramaswamy Naicker: Full UPSC Notes with Timeline, Ideology and Legacy
- →Social and Tribal Movements in India: Self-Respect, Tebhaga, Parsi and Religious Reform
- →M.S.S. Pandian, 'Brahmin and Non-Brahmin: Genealogies of the Tamil Political Present' (Permanent Black)

Self-Respect Movement | Periyar | Suya Mariyathai | Dravidar Kazhagam | anti-Brahminism | Justice Party | Vaikom | Kudi Arasu

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Q24

The Cabinet Mission Plan of 1946 was the last serious effort to keep India united. Examine its provisions, the reasons for its failure and the path it left to partition.

15 MARKS | 250 WORDS | 14 MIN | HARD | PATH TO PARTITION

ANSWER OUTLINE

Introduction: The Cabinet Mission, comprising Pethick-Lawrence, Stafford Cripps and A.V. Alexander, arrived in March 1946 to negotiate the transfer of power. Its plan of 16 May 1946 was the last constitutional design that preserved a single Indian Union.

Body — three dimensions: (1) Provisions: rejection of Pakistan; three-tier federation — Union centre with defence, foreign affairs, communications; Groups A (Hindu majority), B (Punjab, NWFP, Sind, Baluchistan), C (Bengal, Assam) deciding their subjects; Constituent Assembly elected by Provincial Assemblies; interim government on representative basis. (2) Acceptance and breakdown: Congress accepted Constituent Assembly clauses but rejected mandatory grouping; Muslim League accepted full plan then withdrew on 29 July 1946 after Nehru's Bombay press conference on 10 July suggesting grouping was not

binding; League called Direct Action Day 16 August 1946 — Great Calcutta Killings followed. (3) Path to partition: Wavell's interim government September 1946; Mountbatten Plan 3 June 1947; Indian Independence Act 18 July 1947; Radcliffe Boundary Award.

Conclusion: Sumit Sarkar's reading is that the Cabinet Mission's grouping clause was conceptually unworkable; whether handled differently it could have produced a loose Indian federation is one of the most discussed counterfactuals in modern Indian history.

KEY POINTS TO INCLUDE

- Cabinet Mission arrived March 1946 — Pethick-Lawrence, Cripps, Alexander
- Cabinet Mission Plan of 16 May 1946
- Pakistan rejected, three-tier federation proposed
- Groups A, B, C with sectional subjects
- Nehru's Bombay press conference 10 July 1946
- Muslim League withdrew 29 July 1946
- Direct Action Day 16 August 1946
- Great Calcutta Killings — 4,000 dead in three days
- Wavell's Interim Government, September 1946
- Mountbatten Plan 3 June 1947, Indian Independence Act 18 July 1947

EXAMPLES & CASE STUDIES

- Pethick-Lawrence — Secretary of State for India
- Stafford Cripps — earlier 1942 Mission failure
- Jinnah's Direct Action call on 16 August 1946
- Constituent Assembly first sitting 9 December 1946
- Radcliffe Award presented 17 August 1947

MODEL ANSWER

> **Introduction:**
>
> The Cabinet Mission — Pethick-Lawrence, Stafford Cripps and A.V. Alexander — arrived in March 1946 to negotiate the transfer of power. Its plan of 16 May 1946 remains the last constitutional design that preserved a single Indian Union.
>
> **Provisions:**
>
> The plan rejected outright Pakistan and proposed a three-tier federation: a Union centre confined to defence, foreign affairs and communications; three Groups — A (Hindu-majority provinces), B (Punjab, NWFP, Sind, Baluchistan) and C (Bengal,

Assam) — that would decide their own subjects; a Constituent Assembly elected by Provincial Assemblies; and an interim government on a representative basis.

Acceptance and breakdown:

The Congress accepted the Constituent Assembly clauses but rejected mandatory grouping. The Muslim League accepted the full plan and then withdrew on 29 July 1946 after Nehru's Bombay press conference on 10 July suggested grouping was not binding. Jinnah called Direct Action Day for 16 August 1946; the Great Calcutta Killings followed — about 4,000 dead in three days. Wavell formed the Interim Government in September 1946; the Constituent Assembly first sat on 9 December 1946.

Path to partition:

The Mountbatten Plan of 3 June 1947, the Indian Independence Act of 18 July 1947, and the Radcliffe Boundary Award presented on 17 August 1947 completed the slide to partition.

Conclusion:

Sumit Sarkar reads the grouping clause as conceptually unworkable; whether different handling could have produced a loose Indian federation remains among the most discussed counterfactuals in modern Indian history.

SOURCES

→Cabinet Mission 1946: Plan, Members and UPSC Notes
→Muhammad Ali Jinnah: Political Career, Two-Nation Theory and Partition Role
→Sumit Sarkar, 'Modern India 1885–1947' (Macmillan)

Cabinet Mission | Grouping clause | Direct Action Day | Interim Government | Mountbatten Plan | Radcliffe Award | Calcutta Killings | Pethick-Lawrence

GS PAPER 1

Geography

12 practice questions

Q25

The distribution of Indian soils is the silent geographer of Indian agriculture. Discuss with reference to alluvial, black, red and laterite soils.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | PHYSICAL — INDIAN SOILS

ANSWER OUTLINE

Introduction: The ICAR-NBSS&LUP classifies Indian soils into eight major orders; four account for almost the whole cropped area.

Body — three dimensions: (1) Alluvial — Indo-Gangetic plain, khadar and bhangar, supports wheat-rice cropping in Punjab, Haryana, UP. (2) Black or regur — Deccan Trap weathering, montmorillonite clay, self-ploughing, supports cotton in Maharashtra, Gujarat, MP. (3) Red and laterite — leached, iron-rich, low fertility, on Tamil Nadu, Karnataka, Kerala uplands; laterites support cashew and rubber. (4) Limits: soil erosion (5.3 billion tonnes/year per ICAR), salinity in canal-irrigated Punjab, organic carbon below 0.5% in over 60% of districts.

Conclusion: The Soil Health Card Scheme (2015) is the policy attempt to match crop choice to soil reality.

KEY POINTS TO INCLUDE

- Eight major soil orders by ICAR-NBSS&LUP, Nagpur
- Alluvial soil — c. 40% of land, Indo-Gangetic plain
- Khadar (new) and bhangar (old) alluvium
- Black soil (regur) — Deccan Trap basalt weathering
- Montmorillonite clay self-ploughing, retains moisture
- Black soil cotton belt — Maharashtra, Gujarat, MP
- Red soil — south Indian peninsula, iron-rich
- Laterite soils — high rainfall, alternating wet-dry, Kerala, Karnataka
- Soil Health Card Scheme launched 19 February 2015
- Soil erosion 5.3 billion tonnes per year (ICAR)

EXAMPLES & CASE STUDIES

- Punjab-Haryana wheat-rice on alluvial khadar
- Vidarbha cotton belt on regur
- Tamil Nadu red soil and millet cultivation
- Kerala laterite supporting cashew, rubber
- Sundarbans saline alluvium

MODEL ANSWER

Introduction: The ICAR-NBSS&LUP (Nagpur) classifies Indian soils into eight major orders, of which four — alluvial, black, red and laterite — underwrite almost the entire cropped area.

Body: Alluvial soils cover the Indo-Gangetic plain, split into older bhangar and newer khadar, sustaining the Punjab–Haryana–UP wheat-rice belt. Black regur, weathered from the Deccan Trap, is rich in montmorillonite clay and self-ploughs in summer cracks, anchoring cotton in Vidarbha and Khandesh. Red soils dominate the southern peninsula, supporting Tamil Nadu's millet tracts. Laterite, formed by alternating wet–dry leaching, carries cashew and rubber in Kerala and Karnataka. Soil erosion of 5.3 billion tonnes a year (ICAR) and organic carbon under 0.5 per cent across most districts now strain this base.

Conclusion: The Soil Health Card Scheme of 19 February 2015 is the policy attempt to match crop choice to soil reality at the farm gate.

SOURCES

→Black Soil (Regur): Formation, Properties, Distribution, and Why Cotton Loves It
→Indian Physical Geography Map — Relief, Drainage, Climate, Vegetation, Soils
→ICAR-NBSS&LUP, Nagpur

alluvial | regur | laterite | khadar | bhangar | montmorillonite | Soil Health Card | NBSS&LUP

Q26

The Himalayan and Peninsular drainage systems differ not just in age and origin but in their hydrology and economic value to India. Examine.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | ECONOMIC AND RESOURCE GEOGRAPHY — RIVERS AND WATER

ANSWER OUTLINE

Introduction: India's rivers fall into two systems shaped by the country's split physiography — young Himalayas in the north, ancient Deccan plateau in the south.

Body — three dimensions: (1) Origin and age: Himalayan rivers are antecedent, predating Himalayan uplift (Indus, Brahmaputra cut transverse gorges); Peninsular rivers (Godavari, Krishna, Cauvery) flow on a pre-Cambrian plateau. (2) Hydrology: Himalayan rivers are perennial — snowmelt plus monsoon; Peninsular are seasonal, monsoon-fed, with deep gradient-graded courses. (3) Economic value: Himalayan rivers supply 80% of India's usable surface water, support Indo-Gangetic agriculture, hydropower potential; Peninsular rivers support irrigation in deltas (Krishna-Godavari, Cauvery), inland navigation limited.

Conclusion: The two drainage systems sit behind India's most political river disputes — Indus Waters Treaty (1960), Cauvery Tribunal, Krishna allocation — because their hydrology defines who has water to share.

KEY POINTS TO INCLUDE

- Himalayan rivers — Indus, Ganga, Brahmaputra systems
- Antecedent drainage — rivers older than mountains they cut
- Peninsular rivers — Godavari (longest peninsular, 1,465 km), Krishna, Cauvery, Narmada, Tapi
- Westward-flowing peninsular rivers: Narmada, Tapi, in rift valleys
- Indus Waters Treaty 1960 with Pakistan
- Cauvery Water Disputes Tribunal, award 2007
- Krishna and Godavari delta agriculture
- Himalayan rivers supply about 80% of India's usable surface water

EXAMPLES & CASE STUDIES

- Brahmaputra's Great Bend at Namcha Barwa
- Godavari — 'Dakshina Ganga'
- Narmada and Tapi in rift valleys flowing west
- Sardar Sarovar Project on Narmada
- Bhakra-Nangal on Sutlej

MODEL ANSWER

Introduction: India's two river systems were shaped by a split physiography — the young Himalayas in the north and the Pre-Cambrian Deccan plateau in the south.

Body: Himalayan rivers (Indus, Ganga, Brahmaputra) are antecedent, cutting transverse gorges older than the mountains they pierce — the Brahmaputra's Great Bend at Namcha Barwa is the textbook case. Peninsular rivers (Godavari, the longest at 1,465 km, Krishna, Cauvery) flow over a stable, gradient-graded crustal block. Hydrologically, Himalayan rivers are perennial — fed by snowmelt and monsoon — and supply about 80 per cent of India's usable surface water, sustaining Indo-Gangetic agriculture and Bhakra-Nangal hydropower on the Sutlej. Peninsular rivers are monsoon-fed and seasonal; Narmada and Tapi flow west through rift valleys; the Krishna-Godavari and Cauvery deltas anchor southern irrigation.

Conclusion: These hydrological asymmetries explain India's sharpest water disputes — the Indus Waters Treaty (1960), the Cauvery Tribunal award (2007), and the contested Krishna allocation.

SOURCES

→Indian Physical Geography Map — Relief, Drainage, Climate, Vegetation, Soils
→Tributaries of Ganga: Complete List of Left Bank and Right Bank Rivers
→Narmada River: Source, Length, Tributaries, Sardar Sarovar Dam and Narmada Bachao Andolan

antecedent drainage | perennial | seasonal | rift valley | hydropower | delta | Indus Waters Treaty | Peninsular plateau

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Q27

India sits on the boundary of two tectonic plates and the consequences for hazard governance are not limited to earthquakes. Discuss.

10 MARKS | 150 WORDS | 9 MIN | EASY | PLATE TECTONICS AND INDIA

ANSWER OUTLINE

Introduction: The Indian plate, drifting north at about 5 cm per year, collides with the Eurasian plate along the Himalaya and the Indo-Burmese arc.

Body — three dimensions: (1) Direct hazards: earthquakes — Bhuj 2001 (Mw 7.7), Sikkim 2011 (Mw 6.9), Doda 2013, Nepal-Bihar 2015 (Mw 7.8). (2) Coupled hazards: tsunami from the Sumatra-Andaman 2004 quake (Mw 9.1–9.3), landslides in Uttarakhand 2013, glacial

lake outburst floods. (3) Long-run consequences: the Himalayas as monsoon barrier and water tower; subduction below Indonesia generating the Ring of Fire phenomena.

Conclusion: Plate tectonics defines India's natural-hazard map; Seismic Zone IV and V cover a third of the country.

KEY POINTS TO INCLUDE

- Indian plate drifting north c. 5 cm/year
- Bhuj earthquake, 26 January 2001, Mw 7.7
- Indian Ocean Tsunami, 26 December 2004, Mw 9.1–9.3
- Sikkim earthquake, 18 September 2011, Mw 6.9
- Nepal-Bihar earthquake, 25 April 2015, Mw 7.8
- Seismic Zones IV and V cover about 30% of India
- Ring of Fire — Pacific plate margins
- Indo-Burmese subduction arc

EXAMPLES & CASE STUDIES

- Kachchh seismicity, 2001 Bhuj
- Andaman-Nicobar 2004 tsunami impact
- Joshimath subsidence and Himalayan instability
- Sikkim 2011 quake along the Himalayan front

MODEL ANSWER

> **Introduction:** The Indian plate, drifting north at about 5 cm a year, collides with the Eurasian plate along the Himalaya and the Indo-Burmese arc — a tectonic position that drives more than earthquakes.
>
> **Body:** Direct seismic hazards include Bhuj (26 January 2001, Mw 7.7), Sikkim (18 September 2011, Mw 6.9) and the Nepal-Bihar earthquake (25 April 2015, Mw 7.8). Coupled hazards extend further — the Sumatra-Andaman quake of 26 December 2004 (Mw 9.1–9.3) generated the Indian Ocean tsunami; the 2013 Uttarakhand floods and recurrent glacial lake outburst floods reflect the same collision tectonics. Long-run consequences include the Himalayas acting as monsoon barrier and water tower, and the Indo-Burmese subduction arc feeding Ring of Fire seismicity that affects the Andaman and Nicobar islands.
>
> **Conclusion:** Seismic Zones IV and V cover roughly 30 per cent of India — plate tectonics, not policy choice, defines India's natural-hazard map.

SOURCES

→Plate Tectonics Theory: Continental Drift, Seafloor Spreading, and Boundaries
→Earthquake Causes and Types: Elastic Rebound, Seismic Waves, and India's Zones
→Indian Ocean Tsunami 2004

Indian plate | subduction | Ring of Fire | seismic zones | tsunami | Himalayan tectonics | Indo-Burmese arc | GLOF

Q28

The Chota Nagpur Plateau is India's mineral storehouse and its tribal heartland; this overlap explains both its development potential and its conflicts. Discuss.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | ECONOMIC AND RESOURCE GEOGRAPHY

ANSWER OUTLINE

Introduction: The Chota Nagpur Plateau, covering Jharkhand and parts of Odisha, Chhattisgarh, West Bengal and Bihar, hosts India's densest concentration of mineral reserves and its largest tribal population belt.

Body — three dimensions: (1) Mineral base: Jharia and Bokaro coalfields, Singhbhum copper belt, Noamundi iron ore, Hazaribagh mica, Kodarma bauxite — over 40% of India's mineral reserves by value. (2) Tribal heartland: Santhal, Munda, Oraon and Ho communities; Birsa Munda's Ulgulan, 1899–1900; the Santhal Hool, 1855–56. (3) Conflict overlay: Forest Rights Act 2006 implementation, displacement from Jharia coalfield, Niyamgiri verdict (2013) on Vedanta and the Dongria Kondh, the protracted left-wing extremism corridor.

Conclusion: The plateau is where India's resource economy and constitutional commitments to Scheduled Tribes are tested in the same square kilometres.

KEY POINTS TO INCLUDE

- Chota Nagpur Plateau — Jharkhand, parts of Odisha, Chhattisgarh, WB, Bihar
- Jharia and Bokaro coalfields
- Singhbhum copper, Noamundi iron ore
- Mica belt at Kodarma, Hazaribagh
- Bauxite at Lohardaga, Gumla
- Santhal Hool, 1855–56
- Birsa Munda's Ulgulan, 1899–1900

- Niyamgiri Supreme Court verdict, 2013
- Forest Rights Act 2006 — IFR, CFR, gram sabha consent
- About 8.6% of India's population is ST (Census 2011)

EXAMPLES & CASE STUDIES

- Tata Steel Jamshedpur, 1907 — founded on Singhbhum iron
- Bokaro Steel Plant, 1965 — Soviet collaboration
- Niyamgiri — Dongria Kondh gram sabhas reject Vedanta bauxite mining
- PESA Act 1996 in scheduled tribal areas
- Birsa Munda — Janjatiya Gaurav Divas, 15 November

MODEL ANSWER

> **Introduction:** The Chota Nagpur Plateau — Jharkhand and parts of Odisha, Chhattisgarh, West Bengal and Bihar — holds India's densest concentration of mineral reserves and its largest tribal population belt.
>
> **Body:** Its mineral base includes the Jharia and Bokaro coalfields, the Singhbhum copper belt, Noamundi iron ore, Hazaribagh-Kodarma mica and Lohardaga bauxite — over 40 per cent of India's mineral reserves by value, the base for Tata Steel Jamshedpur (1907) and Bokaro Steel (1965). Tribally, it is the heartland of the Santhal, Munda, Oraon and Ho communities, who staged the Santhal Hool (1855-56) and Birsa Munda's Ulgulan (1899-1900). The overlap fuels conflict — Jharia displacement, the Niyamgiri Supreme Court verdict of 2013 affirming Dongria Kondh gram sabha consent, and a protracted left-wing-extremism corridor that PESA (1996) and the Forest Rights Act (2006) have only partly addressed.
>
> **Conclusion:** The plateau is where India's resource economy and its Fifth Schedule commitments are tested on the same hectare.

SOURCES

→Chota Nagpur Plateau: Geology, Patlands, Mineral Wealth, and Tribal Heartland
→Forest Rights Act (FRA) 2006: Provisions, Rights, Gram Sabha Powers
→Birsa Munda: Tribal Leader, Ulgulan Movement and Legacy

mineral storehouse | Singhbhum | Jharia | Ulgulan | Niyamgiri | FRA | PESA | displacement

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Q29

India sits on three crustal blocks with very different seismic histories, and earthquake risk in India is concentrated where the population is rising

fastest. Examine the geomorphology and the policy response.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | PHYSICAL — GEOMORPHOLOGY AND HAZARDS

ANSWER OUTLINE

Introduction: The Indian subcontinent is built from three structural blocks — the active Himalayan thrust belt, the stable Peninsular shield (the Indian craton with Deccan Trap cover), and the Indo-Gangetic foredeep. Each has a distinct seismic signature.

Body — three dimensions: (1) Tectonic causes: ongoing collision of the Indian Plate moving north at 5 cm/year against the Eurasian Plate generates the Himalayan thrust; intra-plate stresses in the peninsula along the Narmada-Son lineament produced Latur (1993, M 6.4) and Koyna (1967, M 6.5). (2) Bureau of Indian Standards seismic zoning: Zone V (Kashmir, NE, parts of Gujarat, A&N) — very high risk; Zone IV (Delhi NCR, Mumbai metro, parts of UP, Bihar); Zone III (Chennai, Bengaluru), Zone II — low risk. Around 59% of India's land falls in Zone III or higher. (3) Policy gap: NDMA Earthquake Guidelines 2007 require structural compliance with IS 1893; municipal enforcement weak; National Building Code 2016 not adopted by all states; retrofitting limited; Kashmir 2005, Sikkim 2011, Doda 2013, Manipur 2016 illustrate continuing exposure. NDRF and INSAT-3DS provide post-event response.

Conclusion: The shift India needs is from response to risk-informed urban planning along the Himalayan front and in Zone IV megacities.

KEY POINTS TO INCLUDE

- Indian Plate movement c. 5 cm/year
- Three structural blocks — Himalaya, Indo-Gangetic foredeep, Peninsular shield
- Narmada-Son lineament as peninsular weakness
- BIS IS 1893 seismic zoning, four zones (II–V)
- 59% of Indian land in Zone III or higher
- Bhuj 2001 (M 7.7), Latur 1993 (M 6.4), Koyna 1967 (M 6.5)
- Kashmir 2005, Sikkim 2011, Nepal 2015 spillover
- NDMA Earthquake Guidelines 2007
- National Building Code 2016
- INSAT-3DS for disaster warning

EXAMPLES & CASE STUDIES

- Bhuj earthquake 2001, 20,000 deaths
- Latur earthquake 1993 in stable craton

- Koyna 1967 — reservoir-induced seismicity
- Nepal earthquake April 2015, M 7.8
- Delhi NCR in Zone IV — population over 30 million

MODEL ANSWER

Introduction:

The Indian subcontinent rides on three structural blocks — the active Himalayan thrust belt, the stable Peninsular shield with its Deccan Trap cover, and the Indo-Gangetic foredeep — each carrying a distinct seismic signature shaped by the Indian Plate's persistent northward drift at about 5 cm per year.

Tectonic causes: The continuing Indian-Eurasian collision drives the Main Boundary and Main Central thrusts; the Bhuj earthquake of 2001 (M 7.7, over 20,000 deaths) showed Kachchh rift reactivation, while Latur 1993 (M 6.4) and Koyna 1967 (M 6.5, reservoir-induced) exposed intra-plate stresses along the Narmada-Son lineament inside the supposedly stable peninsular craton.

Zoning and exposure: The Bureau of Indian Standards (IS 1893) places Kashmir, the North-East, parts of Gujarat and the Andamans in Zone V; Delhi NCR, Mumbai metro, parts of Uttar Pradesh and Bihar in Zone IV; Chennai and Bengaluru in Zone III. Around 59% of India's landmass falls in Zone III or higher, yet population growth is fastest precisely in Zone IV megacities such as Delhi NCR with over 30 million.

Policy gap: NDMA Earthquake Guidelines 2007 mandate IS 1893 compliance and the National Building Code 2016 prescribes retrofit norms; enforcement at municipal level is weak and the Code is not adopted across all states. Kashmir 2005, Sikkim 2011 and Nepal 2015 confirm continuing exposure; NDRF and INSAT-3DS only handle response.

Conclusion:

India must shift from post-event response to risk-informed urban planning — enforce IS 1893 retrofit along the Himalayan front, audit Zone IV megacity stock, and integrate microzonation into municipal approvals.

SOURCES

→Earthquake Causes and Types: Elastic Rebound, Seismic Waves, and India's Zones
→National Disaster Response Force (NDRF): Battalions, Mandate, and Deployment
→Geological Survey of India, Seismotectonic Atlas of India and its Environs

seismic zoning | Himalayan thrust | Narmada-Son lineament | IS 1893 | BIS | NDMA | intra-plate earthquake | Koyna

Q30

The Himalayan ranges are not a single mountain wall but a layered geological-ecological complex with distinct hydrological roles. Examine with reference to the Greater, Lesser and Outer Himalaya.

10 MARKS | 150 WORDS | 9 MIN | EASY | PHYSICAL — HIMALAYAN SYSTEM

ANSWER OUTLINE

Introduction: The Himalaya runs 2,500 km from the Indus gorge in the west to the Brahmaputra bend in the east, formed by ongoing collision of the Indian and Eurasian plates since c. 50 million years ago.

Body — three dimensions: (1) Greater Himalaya (Himadri): 6,000+ metres, perpetually snow-clad, source of the great glaciers — Gangotri (29 km), Siachen, Zemu; feeds Indus, Ganga, Brahmaputra. (2) Lesser Himalaya (Himachal): 3,500–4,500 metres, Pir Panjal, Dhauladhar, Mahabharat ranges; hosts hill stations and lateral valleys (Kashmir, Kangra, Kullu); critical zone for landslides. (3) Outer Himalaya (Shivalik): 900–1,200 metres, Tertiary sedimentary, terai-bhabar belt and duns (Dehradun, Patli Dun); prone to flash floods and bhabar percolation. Trans-Himalayan ranges — Zanskar, Ladakh, Karakoram — lie north of the Greater Himalaya; the Karakoram has K2 (8,611 m) and Siachen.

Conclusion: The layered Himalaya operates as a single climatic, hydrological and ecological system — any one disturbance (e.g., Kedarnath floods 2013) reverberates through all three zones.

KEY POINTS TO INCLUDE

- Himalaya 2,500 km Indus to Brahmaputra
- Indian Plate–Eurasian Plate collision c. 50 Ma
- Greater Himalaya (Himadri) — Gangotri, Siachen glaciers
- Lesser Himalaya (Himachal) — Pir Panjal, Dhauladhar
- Outer Himalaya (Shivalik) — Tertiary, terai-bhabar
- Trans-Himalaya — Zanskar, Ladakh, Karakoram
- K2 (8,611 m) in Karakoram, 2nd highest
- Duns — Dehradun, Patli Dun, Kotli Dun
- Kedarnath flood 2013 — multi-zone disaster

EXAMPLES & CASE STUDIES

- Gangotri glacier — source of Bhagirathi
- Siachen glacier — 70 km, world's longest non-polar
- Pir Panjal as Kashmir Valley's southern wall
- Dehradun, Patli Dun as Shivalik valleys
- Karakoram Highway through Khunjerab Pass

MODEL ANSWER

Introduction: The Himalaya stretches 2,500 km from the Indus gorge in the west to the Brahmaputra bend in the east, raised by ongoing Indian-Eurasian collision since about 50 million years ago.

Body: The Greater Himalaya or Himadri, above 6,000 m and perpetually snow-clad, holds Gangotri (29 km, source of the Bhagirathi) and Siachen (about 70 km, longest non-polar glacier), feeding the Indus, Ganga and Brahmaputra. The Lesser Himalaya or Himachal (3,500–4,500 m) — Pir Panjal, Dhauladhar, Mahabharat ranges — carries hill stations and lateral valleys such as Kashmir, Kangra and Kullu, concentrating landslide and seismic risk. The Outer Himalaya or Shivalik (900–1,200 m) of Tertiary sediments hosts the terai-bhabar belt and duns like Dehradun and Patli Dun, prone to flash floods. The Trans-Himalayan Zanskar-Ladakh-Karakoram complex lies northward, containing K2 at 8,611 m.

Conclusion: Kedarnath 2013 confirmed that all three zones operate as a single hydrological system — any high-altitude shock cascades downstream within hours.

SOURCES

→Himalaya Mountain: Formation, Ranges, Rivers, Passes and UPSC Notes
→Karakoram Range: K2, Siachen, Trans-Himalayan Geography, and Strategic Significance
→Mountain Passes of India: Himalayan, Northeast, and Western Ghats Routes Explained

Himadri | Himachal | Shivalik | Karakoram | Pir Panjal | Gangotri | duns | terai-bhabar

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Q31

Cloudbursts in the Himalayan states are becoming more frequent and more destructive in a warming climate. Examine their causes, recent occurrences and the gaps in India's early-warning framework.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | PHYSICAL — HYDRO-METEOROLOGICAL HAZARDS

ANSWER OUTLINE

Introduction: A cloudburst is defined by IMD as rainfall above 100 mm in an hour over a small area (10 sq km). Himalayan cloudbursts are concentrated in July–September.

Body — three dimensions: (1) Physical causation: orographic lifting along Lesser and Greater Himalaya, moisture supply from south-west monsoon and western disturbances, urbanisation of hill slopes; rising upper-tropospheric temperature with climate change increases moisture-holding capacity (about 7% per °C, Clausius-Clapeyron). (2) Recent events: Kedarnath 16–17 June 2013 (over 5,000 deaths); Leh 5 August 2010; Chamoli 7 February 2021 (combined glacial-cloudburst event); Wayanad landslide 30 July 2024 in Western Ghats; Sikkim glacial lake outburst flood October 2023. (3) Policy framework: C-FLOOD model (CWC); NDMA Cloudburst Guidelines 2020; INSAT-3DS imagery; National Mission for Sustaining Himalayan Ecosystem (one of eight NAPCC missions); Doppler radars deployed in Mukteshwar, Kufri, Joshimath; but sub-district resolution forecasts still patchy.

Conclusion: The Disaster Management Amendment Act 2024 mandates State Disaster Mitigation Funds — implementation will determine whether Himalayan communities live with these events or face them blind.

KEY POINTS TO INCLUDE

- IMD definition — >100 mm/hour over
- Concentration in July–September monsoon
- Clausius-Clapeyron — 7% more moisture per °C warming
- Kedarnath 16–17 June 2013, >5,000 deaths
- Leh cloudburst 5 August 2010
- Chamoli combined hazard 7 February 2021
- Wayanad landslide 30 July 2024
- Sikkim GLOF October 2023, South Lhonak Lake
- C-FLOOD model (CWC), INSAT-3DS
- Disaster Management (Amendment) Act 2024

EXAMPLES & CASE STUDIES

- Kedarnath flood — Char Dham circuit
- Leh 2010 — Indus valley flash flood
- South Lhonak GLOF — Teesta-III dam destroyed

- Doppler radar at Mukteshwar (UK)
- National Mission for Sustaining Himalayan Ecosystem (NMSHE)

MODEL ANSWER

Introduction: The India Meteorological Department defines a cloudburst as rainfall exceeding 100 mm in one hour over an area under 10 sq km, concentrated in July–September across the Himalaya.

Body: Orographic lifting along the Lesser and Greater Himalaya combines with south-west monsoon and western-disturbance moisture; Clausius-Clapeyron physics adds about 7% atmospheric moisture per degree of warming, raising frequency and intensity. Kedarnath (16–17 June 2013, over 5,000 deaths), Leh (5 August 2010), Chamoli (7 February 2021), the Wayanad landslide (30 July 2024) and the South Lhonak GLOF that destroyed Teesta-III (October 2023) confirm the trend. The C-FLOOD model (CWC), NDMA Cloudburst Guidelines 2020, Doppler radars at Mukteshwar and Kufri and INSAT-3DS provide a base, but sub-district nowcasting is patchy.

Conclusion: Implementing the State Disaster Mitigation Funds mandated by the Disaster Management (Amendment) Act 2024 is the test of whether Himalayan towns can move from response to anticipation.

SOURCES

→Cloudburst Flooding in India: C-FLOOD, Causes, and Disaster Response
→Disaster Management Act 2005 vs Amendment 2024: What Has Actually Changed
→INSAT-3DS: India's Geostationary Meteorological and Disaster-Warning Satellite Explained

cloudburst | orographic lift | Clausius-Clapeyron | Kedarnath flood | GLOF | C-FLOOD | INSAT-3DS | NDMA

Q32

India's mineral wealth is concentrated in the south-eastern peninsular shield — Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh. Examine this distribution and its socio-economic consequences.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | DISTRIBUTION OF NATURAL RESOURCES IN INDIA

ANSWER OUTLINE

Introduction: About 70% of India's coal, 80% of iron ore, 95% of bauxite and the bulk of manganese lie in the south-eastern Indian shield — Jharkhand, Odisha, Chhattisgarh, MP.

Body — three dimensions: (1) Geology — Archaean Dharwar and Cuddapah formations carry iron, manganese, gold; Gondwana coalfields (Damodar, Mahanadi, Son-Godavari valleys); East Coast bauxite of Eastern Ghats. (2) Hubs — Singhbhum iron-copper belt, Jharia-Raniganj coal, Bailadila iron, Korba coalfield, Damanjodi-Lanjigarh bauxite, Odisha's Kalahandi-Koraput. (3) Consequences — Chota Nagpur 'mineral storehouse' overlaps with tribal heartland; Naxal-affected Red Corridor parallels mineral belt; District Mineral Foundation (PMKKKY 2015) intended to channel mining revenue back.

Conclusion: The resource-development-conflict triangle requires PESA-compliant Gram Sabha consent, FRA recognition, and DMF transparency.

KEY POINTS TO INCLUDE

- Coal — 96% reserves in Gondwana basins; Damodar, Mahanadi, Godavari valleys
- Jharia (Jharkhand) — India's only coking coal
- Singhbhum copper-iron belt — TISCO, HCL
- Bailadila (Chhattisgarh) — high-grade hematite for Vizag Steel and Japan
- Odisha hosts ~33% of iron ore reserves (IBM 2020)
- Damanjodi-Lanjigarh bauxite, Odisha — NALCO, Vedanta
- Korba (Chhattisgarh) — largest coal town
- District Mineral Foundation under MMDR Amendment 2015
- PMKKKY — Pradhan Mantri Khanij Kshetra Kalyan Yojana 2015

EXAMPLES & CASE STUDIES

- Niyamgiri Bauxite case 2013 — Gram Sabha rejection
- POSCO Odisha project, withdrawn 2017
- Jharia coalfield mine fires — over 70 since 1916
- Kalahandi-Koraput-Bolangir (KBK) belt — backward but mineral-rich
- Hatti gold mines, Karnataka

MODEL ANSWER

> **Introduction:** Around 70% of India's coal, 80% of iron ore and 95% of bauxite, alongside the bulk of manganese, lie in the south-eastern peninsular shield — Jharkhand, Odisha, Chhattisgarh and Madhya Pradesh — the 'mineral storehouse' of Chota Nagpur.
>
> **Body:** Archaean Dharwar and Cuddapah formations carry iron, manganese and gold; Gondwana basins along the Damodar, Mahanadi and Son-Godavari valleys hold coal, with Jharia (Jharkhand) supplying India's only coking coal; Eastern Ghats yield East

Coast bauxite at Damanjodi-Lanjigarh. Mineral hubs concentrate in Singhbhum (iron-copper), Bailadila (high-grade hematite for Vizag Steel and Japan), Korba (largest coal town) and Kalahandi-Koraput-Bolangir. The socio-economic consequence is the resource-conflict overlap — the Red Corridor runs along the mineral belt; Niyamgiri (2013) saw Gram Sabha veto under FRA; POSCO Odisha was withdrawn in 2017. PMKKKY (2015) created the District Mineral Foundation to redirect mining revenue back.

Conclusion: Resolve the resource-development-conflict triangle through PESA-compliant Gram Sabha consent, FRA recognition and transparent DMF spending.

SOURCES

→Chota Nagpur Plateau: Geology, Patlands, Mineral Wealth, and Tribal Heartland
→Deccan Plateau: Geology, Extent, Physiographic Divisions, and Resource Base
→Indian Bureau of Mines — Mineral Yearbook 2022

Gondwana coal | Dharwar | Cuddapah | Chota Nagpur | DMF | PMKKKY | Red Corridor | Singhbhum

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Q33

India's forest cover is 7,15,343 sq km — 21.76% of the geographical area (ISFR 2021), but its distribution is uneven. Examine the regional pattern and the trade-offs between conservation and development.

10 MARKS | 150 WORDS | 9 MIN | EASY | DISTRIBUTION OF NATURAL RESOURCES — FORESTS

ANSWER OUTLINE

Introduction: India State of Forest Report (ISFR) 2021 — total forest cover 7,15,343 sq km (21.76%); tree cover 95,748 sq km; combined 24.62%. National Forest Policy 1988 target — 33%.

Body — three dimensions: (1) State-wise — Madhya Pradesh has the largest area (77,493 sq km), Mizoram the highest percentage (84.53%); Northeast holds about 23% of India's forest. (2) Drivers of variability — rainfall, terrain, tribal-Sixth-Schedule autonomy in NE, Western Ghats biodiversity hotspot. (3) Trade-offs — Forest (Conservation) Amendment Act, 2023 narrowed FCA coverage by exempting linear projects within 100 km of borders, raising NE concerns; FRA 2006 community forest rights vs 'compensatory afforestation' under CAMPA Fund (₹54,000 crore corpus).

Conclusion: Spatial inequality in forest cover overlaps with tribal regions — any forest-development trade-off must internalise community-rights costs under PESA and FRA.

KEY POINTS TO INCLUDE

- ISFR 2021 — forest cover 21.76%, tree cover 2.91%
- MP largest forest area — 77,493 sq km
- Mizoram highest forest percentage — 84.53%
- Arunachal Pradesh second largest area, Manipur high percentage
- Western Ghats and NE — biodiversity hotspots
- Forest (Conservation) Amendment Act 2023 — exemptions within 100 km of borders
- CAMPA Fund — Compensatory Afforestation Fund Act 2016, ₹54,000+ crore corpus
- National Forest Policy 1988 — 33% target
- FRA 2006 — Community Forest Resource rights

EXAMPLES & CASE STUDIES

- Mizoram, Arunachal, Meghalaya — Northeast dense forest
- Madhya Pradesh — central Indian sal forest
- Kerala Silent Valley — averted hydro project
- Niyamgiri bauxite refusal under FRA, 2013
- Hasdeo Aranya, Chhattisgarh — coal-vs-forest dispute

MODEL ANSWER

> **Introduction:** India State of Forest Report (ISFR) 2021 places forest cover at 7,15,343 sq km (21.76%) and tree cover at 95,748 sq km (2.91%), a combined 24.62% — short of the National Forest Policy 1988 target of 33%.
>
> **Body:** Distribution is sharply uneven. Madhya Pradesh holds the largest forest area at 77,493 sq km, Arunachal Pradesh is second, and Mizoram leads in percentage at 84.53%; the North-East holds about 23% of India's forest in 8% of geographical area. Drivers include rainfall, terrain, Sixth-Schedule autonomy in the North-East and the Western Ghats hotspot. Trade-offs sharpened with the Forest (Conservation) Amendment Act, 2023, which narrowed FCA coverage by exempting linear projects within 100 km of borders — contested in the North-East. CAMPA (corpus over Rs 54,000 crore) operationalises compensatory afforestation but cannot replace primary forest; Hasdeo Aranya and Niyamgiri (2013) illustrate FRA-based pushback.
>
> **Conclusion:** Forest geography overlaps tribal regions — any conservation-development trade-off must internalise PESA and FRA community-rights costs.

SOURCES

→Mangroves and Climate Resilience in India: Bio-Shields, Carbon and Coastal Livelihoods

→Indian Forest Act 1927: Categories, Powers, Amendments, UPSC Notes
→ISFR 2021 — Forest Survey of India

ISFR 2021 | FCA Amendment 2023 | CAMPA Fund | compensatory afforestation | Community Forest Resource | biodiversity hotspot | 33% target | FSI

Q34

India's groundwater accounts for 62% of irrigation and 85% of rural drinking water (CGWB), but the resource is being depleted faster than recharge. Examine the spatial pattern of groundwater stress.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | DISTRIBUTION OF NATURAL RESOURCES — WATER

ANSWER OUTLINE

Introduction: Groundwater meets 62% irrigation needs and 85% rural drinking water; India is the world's largest groundwater user (~245 BCM annually, ~25% of global use).

Body — three dimensions: (1) Spatial stress — CGWB Dynamic Assessment 2024: of 6,746 blocks/units assessed, 751 over-exploited (>100% extraction) and 206 critical; concentrated in Punjab, Haryana, Rajasthan, western UP, Tamil Nadu's Cauvery delta. (2) Drivers — free/subsidised power for tube wells, MSP-led paddy-wheat in northwest, sugarcane in Maharashtra; recharge falling as monsoon variability rises. (3) Policy — Atal Bhujal Yojana (2019, ₹6,000 crore) in seven states; Jal Shakti Abhiyan 'Catch the Rain'; PMKSY-Per Drop More Crop micro-irrigation push.

Conclusion: Switch to participatory groundwater management at panchayat level, decouple electricity subsidy from extraction, and align crop choice with aquifer recharge.

KEY POINTS TO INCLUDE

- Groundwater meets 62% irrigation, 85% rural drinking water (CGWB)
- India largest groundwater user — ~245 BCM/year
- CGWB Dynamic Assessment 2024 — 751 over-exploited, 206 critical blocks (of 6,746)
- Punjab, Haryana, western UP — over-exploitation hotspots
- Atal Bhujal Yojana 2019 — ₹6,000 crore, 7 states
- PMKSY-Per Drop More Crop for micro-irrigation
- Jal Shakti Abhiyan 2019, 'Catch the Rain' 2021
- Model Bill for Groundwater Management 2016
- Mihir Shah Committee Report 2016 on water reform

EXAMPLES & CASE STUDIES

- Punjab — paddy-wheat cycle and free agricultural power
- Cauvery Delta, Tamil Nadu — saltwater intrusion in coastal blocks
- Marathwada drought belt, Maharashtra — sugarcane stress
- Rajasthan western desert blocks — fossil aquifer depletion
- Andhra Pradesh APFAMGS — community-led groundwater management

MODEL ANSWER

Introduction:

Groundwater meets 62% of India's irrigation needs and 85% of rural drinking water (Central Ground Water Board). India is the world's largest groundwater user at about 245 BCM annually — roughly a quarter of global use — yet extraction is now outpacing recharge across much of the north-west and peninsular delta belts, threatening agrarian sustainability.

Spatial stress: The CGWB Dynamic Assessment 2024 evaluated 6,746 blocks and units: 751 were over-exploited (extraction above 100% of recharge) and 206 critical. Stress concentrates in Punjab, Haryana, Rajasthan, western Uttar Pradesh and Tamil Nadu's Cauvery delta. Punjab's paddy-wheat cycle on free agricultural power, Maharashtra's Marathwada sugarcane belt, and saltwater intrusion in Tamil Nadu's coastal blocks demonstrate distinct depletion drivers across the country.

Drivers: Subsidised electricity for tube wells, MSP-anchored water-intensive cropping in the north-west, declining recharge under monsoon variability and the Mihir Shah Committee Report (2016) diagnosis of fragmented water governance combine to drive the crisis. The Model Bill for Groundwater Management 2016 attempted a participatory framework but state adoption has been uneven.

Policy: Atal Bhujal Yojana (2019, Rs 6,000 crore, seven states) anchors community-managed aquifer plans; Jal Shakti Abhiyan's 'Catch the Rain' (2021) targets recharge; PMKSY-Per Drop More Crop promotes drip-sprinkler micro-irrigation; and Andhra Pradesh's APFAMGS programme demonstrates community-led aquifer management at scale.

Conclusion:

Decouple electricity subsidy from extraction, scale participatory groundwater management at the panchayat level, and align cropping choice with aquifer recharge to halt depletion before the country crosses irreversible thresholds.

SOURCES

→Peri-Urban Water Governance in India: The Missing Middle in Urbanisation
→Central Water Commission (CWC): UPSC Guide to India's Apex Water Resources Body
→Central Ground Water Board — Dynamic Ground Water Resources of India 2024

CGWB | over-exploited block | Atal Bhujal | groundwater stress | aquifer recharge | PMKSY | Mihir Shah | participatory management

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Q35

Geography decisively shapes settlement patterns — compact, semi-compact, hamleted and dispersed forms reflect terrain, water and security. Discuss with reference to the major settlement types in India.

10 MARKS | 150 WORDS | 9 MIN | EASY | EFFECTS ON HUMAN LIFE — SETTLEMENT PATTERNS

ANSWER OUTLINE

Introduction: Rural settlements are classified by site, situation and morphology. R.L. Singh (1972) classified Indian settlements into four broad types — compact, semi-compact, hamleted, dispersed.

Body — three dimensions: (1) Compact (nucleated) — flat alluvial plains of Punjab, Haryana, Western UP, eastern Bihar; security, social cohesion, water-well sharing. (2) Hamleted — Chhattisgarh, Jharkhand, Bastar, Madhya Pradesh — clusters around fields linked to a main settlement. (3) Dispersed — Himalayan slopes, Western Ghats, dense forests of NE; rugged terrain limits agglomeration; Meghalaya khasi villages, Kerala backwater paras. (4) Linear and ribbon — along rivers (Brahmaputra), roads, canals (Punjab) and coasts.

Conclusion: Settlement geography is a direct fingerprint of relief, hydrology and historical security needs — relevant for Smart Village, RURBAN and Pradhan Mantri Gram Sadak Yojana planning.

KEY POINTS TO INCLUDE

- R.L. Singh (1972) classification of rural settlements
- Compact — Indo-Gangetic plains, security, water-well cohesion
- Semi-compact — transitional belts, central India
- Hamleted — Chhattisgarh, Jharkhand, central plateau
- Dispersed — Himalayan slopes, Western Ghats, NE
- Linear settlements along rivers, roads, canals, coasts

- Christaller's central-place theory for urban hierarchy
- RURBAN Mission 2016 — Shyama Prasad Mukherjee Rurban
- PMGSY since 25 December 2000 — rural connectivity

EXAMPLES & CASE STUDIES

- Punjab — compact agricultural villages, 4,000–5,000 population
- Bastar — hamleted Adivasi clusters
- Meghalaya khasi villages on hill spurs — dispersed
- Kerala backwater paras linear settlements
- Assam chars — char-chapori riverine dispersed

MODEL ANSWER

Introduction: R.L. Singh (1972) classified Indian rural settlements into four broad morphological types — compact, semi-compact, hamleted and dispersed — each a fingerprint of terrain, water and security.

Body: Compact (nucleated) settlements cluster on the flat alluvial plains of Punjab, Haryana, western Uttar Pradesh and eastern Bihar, where defence concerns, social cohesion and shared well-water encouraged agglomeration; Punjab villages of 4,000–5,000 typify the form. Semi-compact transitional villages dot central India. Hamleted settlements scatter across Chhattisgarh, Jharkhand and Bastar, where multiple small clusters link to a parent village around scattered fields. Dispersed settlements characterise Himalayan slopes, Western Ghats, dense North-East forests and Meghalaya's Khasi hill-spur villages, where rugged terrain limits agglomeration; Kerala's backwater paras and Assam's char-chapori form linear and dispersed variants along rivers, roads and canals.

Conclusion: Settlement form follows physical geography; PMGSY (since 25 December 2000) and the Shyama Prasad Mukherjee Rurban Mission (2016) must read this map before drawing service plans.

SOURCES

→Indian Physical Geography Map — Relief, Drainage, Climate, Vegetation, Soils
→Urbanisation in India: Drivers, Challenges, Schemes and Way Forward
→Census of India 2011 — Rural-Urban Distribution

compact settlement | hamleted | dispersed | linear | R.L. Singh | central-place theory | RURBAN | PMGSY

Q36

Population distribution in India is geographically polarised — six states hold half the population while desert, hill and forest regions remain sparsely peopled. Examine the demographic geography with reference to density, growth and migration patterns.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | EFFECTS ON HUMAN LIFE — DEMOGRAPHIC GEOGRAPHY

ANSWER OUTLINE

Introduction: India's 2011 population was 1.21 billion; UN World Population Prospects 2024 puts 2024 estimate at 1.45 billion. National density 382/km² (Census 2011); huge regional disparity.

Body — three dimensions: (1) Density — Bihar 1,106/km², West Bengal 1,028, Kerala 859 vs Arunachal Pradesh 17/km², Mizoram 52, Sikkim 86; six states (UP, Maharashtra, Bihar, WB, MP, TN) hold ~50% of population. (2) Growth — Census 2011 decadal growth 17.7% (down from 21.5% in 2001); EAG states above 20%, southern states below 16%. (3) Migration — Census 2011 recorded 45.6 crore internal migrants (37.6% of population); Bihar-UP source corridor to Delhi-Mumbai-Punjab; PMGKY 2020 pandemic exposed migrant precarity.

Conclusion: Geography determines who is dense, who is sparse, and who moves — the 2027 Census will be the first to map this in 16 years.

KEY POINTS TO INCLUDE

- Census 2011 population 1.21 billion; UN WPP 2024 — 1.45 billion
- National density 382/km² (Census 2011)
- Bihar 1,106/km², Arunachal 17/km² — extreme range
- UP, Maharashtra, Bihar, WB, MP, TN hold ~50% of population
- Decadal growth 17.7% (Census 2011), down from 21.5%
- EAG states (Bihar, UP, MP, Rajasthan, Jharkhand, Chhattisgarh, Odisha)
- Internal migrants 45.6 crore (Census 2011 D-series)
- 84% of migration is intra-state (mostly marriage-driven for women)
- Census 2027 enumeration cleared 12 December 2025

EXAMPLES & CASE STUDIES

- Indo-Gangetic plain — densest belt
- Thar desert (Rajasthan) — sparse and arid
- Himalayan high-altitude — Ladakh, Lahaul-Spiti
- Brick-kiln migrants from Bihar to Punjab harvest

- Kerala's Gulf remittance corridor — out-migration leader

MODEL ANSWER

Introduction:

India's 2011 population stood at 1.21 billion; UN World Population Prospects 2024 estimates 1.45 billion in 2024, with national density at 382/sq km (Census 2011). Distribution is extreme — six states hold half the population while desert, hill and forest regions remain sparsely peopled.

Density: Bihar (1,106/sq km), West Bengal (1,028) and Kerala (859) lead, while Arunachal Pradesh (17), Mizoram (52) and Sikkim (86) lag. Six states — Uttar Pradesh, Maharashtra, Bihar, West Bengal, Madhya Pradesh and Tamil Nadu — hold approximately 50% of India's population. The Indo-Gangetic plain forms the densest belt while the Thar desert, Ladakh and Lahaul-Spiti remain almost empty.

Growth: Decadal growth was 17.7% in Census 2011, down from 21.5% in 2001. EAG states (Bihar, UP, MP, Rajasthan, Jharkhand, Chhattisgarh, Odisha) continue above 20%, while southern states stay below 16% — the demographic transition is uneven across the federation, with implications for delimitation post-2027.

Migration: Census 2011 D-series records 45.6 crore internal migrants — 37.6% of the population; 84% intra-state, much of it marriage-driven for women. Inter-state flows run from Bihar-UP source corridors to Delhi-Mumbai-Punjab destinations; brick-kiln migrants from Bihar to Punjab harvest illustrate the pattern; the PMGKY response in 2020 exposed migrant precarity; Kerala anchors the Gulf out-migration corridor.

Conclusion:

Geography determines who is dense, sparse and on the move; the 2027 Census will be the first authoritative map of this in 16 years — essential for service planning and federal delimitation.

SOURCES

→Indian Census History: From 1881 to the Deferred 2027 Cycle
→Reaping the Demographic Transition in India
→Census of India 2011 — Population Enumeration

population density | EAG states | decadal growth | internal migration | demographic dividend | Census 2027 | circular migration | WPP

GS PAPER 1

Post-Independence India

6 practice questions

Q37

Sardar Patel's integration of the princely states between 1947 and 1949 was a quieter revolution than Partition itself. Examine.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | INTEGRATION OF PRINCELY STATES

ANSWER OUTLINE

Introduction: At independence India inherited 565 princely states under the doctrine of paramountcy lapsed by the Indian Independence Act 1947.

Body — three dimensions: (1) Instrument of Accession: signed by all but three rulers by 15 August 1947; V.P. Menon as Patel's draftsman. (2) Hard cases: Junagadh — plebiscite, February 1948; Hyderabad — Operation Polo, 13–18 September 1948; Jammu and Kashmir — accession on 26 October 1947 after tribal invasion. (3) Method: persuasion plus privy purses (abolished 1971 by 26th Amendment), conversion of states into Part B states (1950) then full reorganisation in 1956.

Conclusion: Patel's integration converted a patchwork of princely sovereignties into a single constitutional union, without which the Constitution of 1950 could not have functioned.

KEY POINTS TO INCLUDE

- 565 princely states at independence
- Indian Independence Act 1947 lapsed paramountcy
- Instrument of Accession on Defence, External Affairs, Communications
- V.P. Menon as Secretary of the States Ministry
- Junagadh plebiscite, 20 February 1948
- Operation Polo, Hyderabad, 13–18 September 1948
- Jammu and Kashmir accession, 26 October 1947
- Privy purses abolished by 26th Amendment, 1971

EXAMPLES & CASE STUDIES

- Travancore — Sir C.P. Ramaswami's independence bid abandoned
- Bhopal — Nawab's delayed accession

- Hyderabad — Razakar resistance under Qasim Razvi
- Junagadh — Nawab's flight to Karachi

MODEL ANSWER

> **Introduction:** At independence India inherited 565 princely states whose paramountcy lapsed under the Indian Independence Act 1947, presenting Sardar Patel and V.P. Menon at the States Ministry with a near-impossible map.
>
> **Body:** The Instrument of Accession on Defence, External Affairs and Communications was signed by almost every ruler before 15 August 1947 through a mix of persuasion, privy purses and the threat of public opinion. Three hard cases were resolved by other means — Junagadh through the plebiscite of 20 February 1948, Hyderabad through Operation Polo (13–18 September 1948) against the Razakars under Qasim Razvi, and Jammu and Kashmir through the accession of 26 October 1947 after the tribal invasion. Patel then folded these states into Part B units in 1950, paving the way for the States Reorganisation Act 1956.
>
> **Conclusion:** Without this quieter revolution, neither the Constitution of 1950 nor linguistic federalism could have functioned.

SOURCES

→Sardar Vallabhbhai Patel: Iron Man of India
→Government of India Act 1935: Blueprint of the Indian Constitution
→V.P. Menon, 'The Story of the Integration of the Indian States' (Orient Longman)

Instrument of Accession | paramountcy | privy purses | Operation Polo | Part B states | States Ministry | V.P. Menon | integration

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Q38

The linguistic reorganisation of states in 1956 was both a democratic concession and a strategic risk. Critically analyse with reference to the Dar Commission, JVP Committee and Fazl Ali Commission.

15 MARKS | 250 WORDS | 14 MIN | HARD | LINGUISTIC STATES

ANSWER OUTLINE

Introduction: The States Reorganisation Act 1956 redrew India's internal map along linguistic lines, after a decade of contested commissions.

Body — weigh evidence: (1) Initial caution — Dar Commission, 1948, opposed linguistic states for fear of fragmentation; JVP Committee (Jawaharlal, Vallabhbhai, Pattabhi Sitaramayya), 1949, accepted same. (2) Trigger — Potti Sriramulu's fast-unto-death and Andhra Pradesh, 1953, the first linguistic state. (3) Reorganisation — Fazl Ali Commission, 1953–55; States Reorganisation Act, 1 November 1956, reorganised into 14 states and 6 UTs along language. (4) Trade-off — democratic legitimacy and administrative convenience won against feared Balkanisation; later challenges (Punjabi Suba 1966, Telangana 2014) showed linguistic principle had limits.

Conclusion: Selig Harrison's 1960 warning of 'dangerous decades' proved overstated; linguistic states became a tool of, not a threat to, Indian federalism.

KEY POINTS TO INCLUDE

- Dar Commission, 1948, against linguistic states
- JVP Committee, 1949
- Potti Sriramulu's 58-day fast, death on 15 December 1952
- Andhra Pradesh formed 1 October 1953
- Fazl Ali Commission appointed 22 December 1953, reported 1955
- States Reorganisation Act, 1 November 1956
- 14 states and 6 Union Territories created
- Punjabi Suba, 1 November 1966
- Telangana created 2 June 2014, 29th state
- Selig Harrison — 'India: The Most Dangerous Decades', 1960

EXAMPLES & CASE STUDIES

- Andhra Pradesh — first linguistic state
- Kerala formed by merging Malayalam-speaking Travancore-Cochin and Malabar
- Bombay split into Maharashtra and Gujarat, 1 May 1960
- Punjab trifurcated into Punjab, Haryana, HP, 1966

MODEL ANSWER

> **Introduction:**
>
> The States Reorganisation Act of 1 November 1956 redrew India's internal map along linguistic lines, after nearly a decade in which three commissions weighed democratic legitimacy against the post-Partition fear of fragmentation.
>
> **Initial caution:**

The Dar Commission (1948), led by Justice S.K. Dar, opposed linguistic states on the ground that immediate post-Partition fragility could not bear further fissures. The JVP Committee of Jawaharlal Nehru, Vallabhbhai Patel and Pattabhi Sitaramayya (1949) endorsed that caution, prioritising national integration over linguistic claim.

Trigger and reorganisation:

Potti Sriramulu's 58-day fast and death on 15 December 1952 forced the issue; Andhra Pradesh, the first linguistic state, was carved out on 1 October 1953. The Fazl Ali Commission (appointed 22 December 1953), with K.M. Panikkar and Hriday Nath Kunzru as members, designed a comprehensive scheme: 14 states and 6 Union Territories from 1 November 1956. Kerala merged Malayalam-speaking Travancore-Cochin and Malabar; Bombay was later split into Maharashtra and Gujarat on 1 May 1960; Punjab was trifurcated in 1966 to create Haryana and to elevate Himachal Pradesh.

Trade-off and limits:

Administrative convenience and democratic acceptance won; Selig Harrison's 1960 warning in *India: The Most Dangerous Decades* of imminent Balkanisation proved overstated. But subsequent demands — Punjabi Suba 1966, Telangana created on 2 June 2014 as the 29th state — showed the linguistic principle did not exhaust subnational claims.

Conclusion:

Linguistic reorganisation became a tool of, not a threat to, Indian federalism — a calculated democratic concession that absorbed identity politics within a single constitutional frame.

SOURCES

→Linguistic Diversity in India: A Complete UPSC Guide
→Regionalism in India — Causes, Forms, Impact and the Smaller States Debate
→Selig Harrison, 'India: The Most Dangerous Decades' (Princeton University Press)

linguistic states | Fazl Ali | Potti Sriramulu | JVP | Dar Commission | Balkanisation | States Reorganisation Act | federal map

Q39

Hindu Code Bills (1955–56) were Ambedkar's unfinished social-democratic project carried out under Nehru's first government. Examine their content

and limitations.

15 MARKS | 250 WORDS | 14 MIN | HARD | SOCIAL LEGISLATION

ANSWER OUTLINE

Introduction: The four Hindu Code Acts of 1955–56 — Hindu Marriage Act 1955, Hindu Succession Act 1956, Hindu Minority and Guardianship Act 1956, Hindu Adoption and Maintenance Act 1956 — were enacted by the first Lok Sabha after Ambedkar resigned in 1951 over their stalling.

Body — three dimensions: (1) Origins: Rau Committee (B.N. Rau, 1941) and Hindu Code Bill drafted by Ambedkar as Law Minister 1947–51; Constituent Assembly resistance from conservative members; President Rajendra Prasad's reservation; Ambedkar's resignation 27 September 1951. (2) Content: Hindu Marriage Act codified monogamy, allowed divorce; Hindu Succession Act gave daughters limited rights in coparcenary property (full coparcenary rights only after 2005 amendment); Adoption Act allowed adoption of a daughter; Guardianship Act made father natural guardian, mother only after him. (3) Limitations: applied only to Hindus, Sikhs, Jains, Buddhists, not to Muslims, Christians, Parsis — Uniform Civil Code under Article 44 still pending; many gender inequalities (Hindu Undivided Family taxation, Mitakshara coparcenary) corrected only by Hindu Succession (Amendment) Act 2005.

Conclusion: The Hindu Code laws were the largest single legislative intervention in personal law since 1947; their incomplete reach and gendered residues remain a constitutional unfinished agenda.

KEY POINTS TO INCLUDE

- Four Hindu Code Acts — 1955 and 1956
- Rau Committee 1941, Ambedkar Hindu Code Bill draft 1948
- Ambedkar resigns as Law Minister 27 September 1951
- Hindu Marriage Act 1955 — monogamy, divorce, inter-caste marriage
- Hindu Succession Act 1956 — limited coparcenary rights to daughters
- Hindu Minority and Guardianship Act 1956
- Hindu Adoption and Maintenance Act 1956
- Hindu Succession (Amendment) Act 2005 — equal coparcenary
- Article 44 Uniform Civil Code remains directive principle

EXAMPLES & CASE STUDIES

- Sardar Patel's death 1950 — political space for codification

- President Rajendra Prasad's letter of reservation
- Hindu Marriage Act monogamy provision Section 5
- Hindu Succession Amendment 2005, daughter as coparcener
- Shah Bano 1985, Triple Talaq 2019 — parallel Muslim personal law debates

MODEL ANSWER

Introduction:

The four Hindu Code Acts of 1955–56 — Hindu Marriage Act 1955, Hindu Succession Act 1956, Hindu Minority and Guardianship Act 1956, Hindu Adoption and Maintenance Act 1956 — were enacted by the first Lok Sabha after Ambedkar had resigned as Law Minister on 27 September 1951 over their stalling.

Origins:

B.N. Rau's Rau Committee of 1941 drafted the original Hindu Code Bill, which Ambedkar revised and introduced in 1948. Constituent Assembly resistance from conservatives, President Rajendra Prasad's letter of reservation, and the death of Sardar Patel in 1950 each shaped the political space — and the eventual breaking up of one omnibus bill into four sequential statutes.

Content:

The Hindu Marriage Act codified monogamy under Section 5, allowed divorce and inter-caste marriage. The Hindu Succession Act conferred limited rights on daughters in coparcenary property — full coparcenary equality came only with the 2005 amendment. The Adoption Act permitted adoption of a daughter; the Guardianship Act, however, retained the father as natural guardian and the mother only after him.

Limitations:

The Acts applied only to Hindus, Sikhs, Jains and Buddhists, leaving Muslim, Christian and Parsi personal law untouched; Article 44's Uniform Civil Code remains a directive principle. Hindu Undivided Family tax status and Mitakshara residues persisted; Shah Bano (1985) and the Triple Talaq Act (2019) extended the debate to parallel codes.

Conclusion:

The Hindu Code laws were the largest single legislative intervention in personal law since 1947; their incomplete reach and gendered residues remain a constitutional unfinished agenda.

SOURCES

→Hindu Code Bill: Ambedkar's Unfinished Project and the Four Acts That Rewrote Hindu Personal Law
→Dr B.R. Ambedkar: Life, Constitution, Constitutional Morality
→Granville Austin, 'Working a Democratic Constitution' (Oxford University Press)

Hindu Code Bill | Ambedkar | Hindu Marriage Act 1955 | Hindu Succession Act 1956 | coparcenary | Uniform Civil Code | Rau Committee | Nehru

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Q40

India's Indo-Pakistan wars between 1947 and 1971 reshaped the subcontinent's political map and its strategic doctrine. Trace this transformation.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | FOREIGN POLICY AND WARS

ANSWER OUTLINE

Introduction: Three full wars (1947–48, 1965, 1971) and one limited conflict (Kargil 1999) define India-Pakistan military history and the evolving Indian strategic doctrine.

Body — three dimensions: (1) 1947–48 Kashmir war: tribal-Pakistani invasion of October 1947; Maharaja Hari Singh's Instrument of Accession 26 October 1947; UN ceasefire 1 January 1949; established the Line of Control framework. (2) 1965 war: triggered by Operation Gibraltar; Indian counter-offensive in Punjab; Tashkent Declaration 10 January 1966 brokered by USSR; Lal Bahadur Shastri's coining of 'Jai Jawan Jai Kisan'. (3) 1971 Bangladesh war: Mukti Bahini, Indian intervention 3–16 December 1971; 93,000 Pakistani POWs; Indo-Soviet Treaty August 1971; Shimla Agreement 2 July 1972 converted ceasefire line into LoC and made Kashmir a strictly bilateral issue.

Conclusion: The wars established three doctrinal pillars — non-alignment with strategic autonomy, decisive conventional response, and post-1974 nuclear preparedness leading to Pokhran II in 1998.

KEY POINTS TO INCLUDE

- 1947–48 Kashmir war, Instrument of Accession 26 October 1947
- UN ceasefire 1 January 1949, UNCIP Resolutions
- 1965 war over Operation Gibraltar, Rann of Kutch prelude
- Tashkent Declaration 10 January 1966, Shastri's death
- 1971 Bangladesh Liberation War, 3–16 December 1971
- 93,000 Pakistani prisoners after Dhaka surrender

- Indo-Soviet Treaty 9 August 1971
- Shimla Agreement 2 July 1972, Line of Control
- Kargil War May–July 1999, Operation Vijay

EXAMPLES & CASE STUDIES

- Brigadier Mohammad Usman in Kashmir 1948
- Battle of Asal Uttar 1965
- Lt Gen Jagjit Singh Aurora at Dhaka surrender 1971
- Field Marshal Sam Manekshaw's command 1971
- Tiger Hill recapture, Kargil 1999

MODEL ANSWER

> **Introduction:** Three full wars between 1947 and 1971 reshaped the subcontinent's political map and the Indian strategic doctrine that emerged with it.
>
> **Body:** The 1947–48 Kashmir war followed the tribal-Pakistani invasion of October 1947; Maharaja Hari Singh's Instrument of Accession of 26 October 1947 brought J&K into the Union; the UN ceasefire of 1 January 1949 established the Line of Control framework. The 1965 war, triggered by Operation Gibraltar, saw Indian counter-offensives in Punjab and was closed by the Tashkent Declaration of 10 January 1966, brokered by the USSR, where Lal Bahadur Shastri died. The 1971 Bangladesh Liberation War, supported by the Mukti Bahini and the Indo-Soviet Treaty of 9 August 1971, ended on 16 December 1971 with 93,000 Pakistani POWs; the Shimla Agreement of 2 July 1972 made Kashmir a bilateral issue.
>
> **Conclusion:** These wars built three doctrinal pillars — strategic autonomy, decisive conventional response, and the nuclear preparedness that culminated in Pokhran II (1998).

SOURCES

→Pakistan India War: Complete List of Indo-Pak Wars and Conflicts
→Important Treaties of India: Comprehensive List with Years and Provisions
→Srinath Raghavan, '1971: A Global History of the Creation of Bangladesh' (Harvard University Press)

Indo-Pak wars | Instrument of Accession | Tashkent | Bangladesh liberation | Shimla Agreement | Line of Control | Mukti Bahini | Kargil

Q41

The Green Revolution and the White Revolution were technologically distinct but politically continuous projects of post-1947 Indian state. Compare their methods, regional spread and unintended consequences.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | AGRICULTURAL TRANSFORMATION

ANSWER OUTLINE

Introduction: Between 1965 and 1990 the Indian state turned a food-deficit, milk-importing economy into a wheat-rice surplus producer and the world's largest milk producer through two state-led technological revolutions.

Body — three dimensions: (1) Green Revolution: launched after the 1965–66 drought and PL-480 dependence; Norman Borlaug's Mexican wheat varieties (Lerma Rojo, Sonora 64) and IRRI's IR-8 rice introduced by M.S. Swaminathan; package programme of HYV seeds, chemical fertilisers, assured irrigation, MSP and FCI procurement after 1965; output of foodgrains rose from 74 million tonnes in 1966-67 to 211 million tonnes by 2001-02. (2) White Revolution: Operation Flood launched 13 January 1970 under Verghese Kurien; Anand pattern co-operative federated as Gujarat Co-operative Milk Marketing Federation (Amul); India became the world's largest milk producer in 1998. (3) Continuity and consequences: both used cooperative-state hybrid institutions and price support; Green Revolution concentrated in Punjab, Haryana, western UP — by-passed eastern India, dryland regions; led to groundwater depletion (CGWB data — 78% blocks in Punjab over-exploited), soil salinity, agrarian distress; White Revolution diffused widely but caused buffalo monoculture and bovine population pressure.

Conclusion: Both revolutions show that scale was achieved by state-cooperative scaffolding; sustaining them now requires correcting regional and ecological imbalances.

KEY POINTS TO INCLUDE

- Green Revolution from 1965–66 after PL-480 crisis
- M.S. Swaminathan introduced Mexican wheat varieties
- HYV seeds — Lerma Rojo, Sonora 64, IR-8 rice
- Foodgrain output: 74 mt (1966-67) to 211 mt (2001-02)
- Operation Flood, three phases, 1970–1996
- Verghese Kurien — Father of White Revolution
- Amul, Anand pattern, GCMMF model
- India world's largest milk producer since 1998
- Punjab groundwater — 78% blocks over-exploited (CGWB)
- M.S. Swaminathan and Borlaug — Nobel and Magsaysay lineage

EXAMPLES & CASE STUDIES

- Punjab wheat — yield doubled 1965–1975
- Amul dairy cooperative model in Anand
- National Dairy Development Board, 1965
- Rajiv-Longowal Accord 1985 and Punjab water sharing
- Swaminathan Commission Report 2004–06, MSP at C2+50%

MODEL ANSWER

Introduction:

Between 1965 and 1990 the Indian state converted a food-deficit, milk-importing economy into a wheat-rice surplus producer and the world's largest milk producer through two state-led technological revolutions — distinct in their science but politically continuous in their use of cooperative-state institutions and price support.

Green Revolution:

Launched after the 1965–66 drought and the humiliation of PL-480 wheat dependence, it imported Norman Borlaug's Mexican wheat varieties (Lerma Rojo, Sonora 64) and IRRI's IR-8 rice, deployed by M.S. Swaminathan. The package combined HYV seeds, chemical fertilisers, assured canal irrigation, a Minimum Support Price regime and FCI procurement. Foodgrain output rose from 74 million tonnes in 1966-67 to 211 million tonnes by 2001-02.

White Revolution:

Operation Flood, launched on 13 January 1970 under Verghese Kurien through the National Dairy Development Board (founded 1965), federated village dairy cooperatives on the Anand pattern; the Gujarat Co-operative Milk Marketing Federation became Amul. India became the world's largest milk producer in 1998.

Continuity and consequences:

Both relied on state-cooperative scaffolding and assured procurement. The Green Revolution concentrated in Punjab, Haryana and western Uttar Pradesh, bypassing eastern and dryland India; CGWB data show 78 per cent of Punjab's blocks now over-exploited, with rising soil salinity and distress visible in Vidarbha. The White Revolution diffused more widely but produced buffalo monoculture and bovine pressure on commons.

Conclusion:

> Both revolutions show that scale was achieved by state-cooperative scaffolding; sustaining them now requires correcting regional and ecological imbalances, as the Swaminathan Commission (2004–06) urged with its C2+50 per cent MSP formula.

SOURCES

→Green Revolution in India: HYV Seeds, Borlaug, Swaminathan, and the Wheat-Rice Transformation
→White Revolution in India: Operation Flood, Verghese Kurien, and the Anand Pattern
→M.S. Swaminathan: Green Revolution Architect, Swaminathan Commission, and Bharat Ratna 2024

Green Revolution | White Revolution | Operation Flood | Anand pattern | HYV | Borlaug | Verghese Kurien | M.S. Swaminathan

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Q42

The Emergency of 1975–77 and the 44th Amendment of 1978 together define what a constitutional democracy must not do. Discuss with reference to the protected scope of fundamental rights.

15 MARKS | 250 WORDS | 14 MIN | HARD | EMERGENCY AND CONSTITUTIONAL RECOVERY

ANSWER OUTLINE

Introduction: The National Emergency of 25 June 1975 to 21 March 1977 — proclaimed by President Fakhruddin Ali Ahmed on Prime Minister Indira Gandhi's advice — followed the Allahabad High Court judgment of 12 June 1975 setting aside her election. The 44th Amendment of 1978 by the Janata government rolled back its excesses.

Body — three dimensions: (1) Emergency abuses: detentions under MISA, suspension of fundamental rights (ADM Jabalpur 1976 held Article 21 could be suspended); censorship of press; 42nd Amendment (November 1976) called the 'mini-Constitution' added 'socialist, secular' to the Preamble, curtailed judicial review, lengthened Lok Sabha term. (2) Janata response: 44th Amendment, June 1978 — Article 352 amended so emergency can be declared only for 'armed rebellion' not 'internal disturbance'; written cabinet recommendation required; Article 359 amended so Article 20 and Article 21 cannot be suspended; Right to Property removed from Part III (Article 31 to Article 300A). (3) Constitutional legacy: Minerva Mills (1980) reinforced basic structure; ADM Jabalpur expressly overruled in Puttaswamy 2017; demonstrated that constitutional norms can be restored after rupture.

Conclusion: The Emergency–44th Amendment sequence remains the clearest empirical case in Indian constitutional history of democratic self-correction.

KEY POINTS TO INCLUDE

- Emergency declared 25 June 1975, revoked 21 March 1977
- Allahabad HC judgment 12 June 1975, Justice Jagmohanlal Sinha
- MISA detentions, Press Censorship Ordinance 1975
- ADM Jabalpur v Shivkant Shukla 1976, suspended Article 21
- 42nd Amendment November 1976 — 'mini-Constitution'
- 44th Amendment June 1978 — 'armed rebellion' requirement
- Article 20 and 21 cannot be suspended even in emergency
- Right to Property moved from Article 31 to Article 300A
- Minerva Mills 1980 — basic structure reaffirmed
- Puttaswamy 2017 overruled ADM Jabalpur

EXAMPLES & CASE STUDIES

- Indira Gandhi's election set aside 12 June 1975
- Shah Commission Report 1978 — three volumes
- Janata Party formation March 1977, Morarji Desai PM
- Jayaprakash Narayan's Sampoorna Kranti call, June 1974
- Forced sterilisation campaign under Sanjay Gandhi

MODEL ANSWER

Introduction:

The National Emergency of 25 June 1975 to 21 March 1977, proclaimed by President Fakhruddin Ali Ahmed on Prime Minister Indira Gandhi’s advice after Justice Jagmohanlal Sinha’s Allahabad High Court judgment of 12 June 1975 setting aside her election, and the 44th Amendment of June 1978 by the Janata government, together define what a constitutional democracy must not do.

Emergency abuses:

Detentions under MISA, press censorship, and ADM Jabalpur v. Shivkant Shukla (1976) — which held even Article 21 could be suspended — eroded fundamental rights. The 42nd Amendment of November 1976, dubbed the “mini-Constitution”, added “socialist, secular” to the Preamble, curtailed judicial review, and lengthened the Lok Sabha term. Forced sterilisation under Sanjay Gandhi compounded the executive overreach.

Janata response — 44th Amendment:

Article 352 was amended to require "armed rebellion" rather than "internal disturbance"; written Cabinet recommendation became mandatory. Article 359 was amended so that Articles 20 and 21 cannot be suspended even during emergency. The Right to Property was moved from Part III to Article 300A. The Shah Commission's three-volume report (1978) documented the period's abuses.

Constitutional legacy:

Minerva Mills (1980) reaffirmed the basic structure doctrine against the 42nd Amendment's encroachments. K.S. Puttaswamy v. Union of India (2017) expressly overruled ADM Jabalpur, restoring the inalienability of Article 21.

Conclusion:

The Emergency–44th Amendment sequence remains the clearest empirical case in Indian constitutional history of democratic self-correction — proof that constitutional norms can be restored after rupture, but only at deliberate institutional cost.

SOURCES

→Emergency in India (1975-77): Causes, Events and Aftermath
→44th Amendment 1978: Rolling Back the Emergency Excesses
→50 Years of the National Emergency (1975-2025): Lessons, Reforms and the 44th Amendment

Emergency 1975 | 44th Amendment | 42nd Amendment | MISA | ADM Jabalpur | Article 352 | basic structure | Shah Commission

GS PAPER 1

Climatology

3 practice questions

Q43

The Indian summer monsoon is not a single mechanism but a coupled system of ocean, atmosphere and orography. Examine the role of ENSO, the Indian Ocean Dipole and the Tibetan Plateau in shaping its variability.

15 MARKS | 250 WORDS | 14 MIN | HARD | INDIAN MONSOON

ANSWER OUTLINE

Introduction: The southwest monsoon, June to September, delivers about 75% of India's annual rainfall against a Long Period Average of 87 cm.

Body — three dimensions: (1) Atmosphere-ocean: ENSO — El Niño warm phase suppresses monsoon (2015, 2023 deficit years), La Niña typically enhances it (2020–22 triple-dip surplus). (2) IOD: discovered by N.H. Saji in 1999; positive IOD with warm western Indian Ocean offsets El Niño impact (1997, 2019). (3) Orography and circulation: Tibetan Plateau heating drives the Tibetan High and the easterly jet over peninsular India; the Mascarene High and Somali Jet supply moisture. The Western Disturbances govern winter precipitation.

Conclusion: Forecasting now treats the monsoon as a coupled system; IMD's dynamical Monsoon Mission model uses these teleconnections to issue Long Range Forecasts.

KEY POINTS TO INCLUDE

- SW monsoon June–September, c. 75% of annual rain
- IMD's LPA = 87 cm
- El Niño — warming of central-east equatorial Pacific suppresses monsoon
- La Niña — cool Pacific phase, 2020–22 triple dip
- Indian Ocean Dipole — Saji et al., Nature 1999
- Positive IOD offsets El Niño impact — 1997, 2019
- Tibetan Plateau heating, Tropical Easterly Jet
- Somali Jet (Findlater Jet)
- Mascarene High over southern Indian Ocean
- IMD Monsoon Mission, dynamical forecast model from 2012

EXAMPLES & CASE STUDIES

- 2015 El Niño drought year
- 2019 super positive IOD masking weak El Niño
- 2020–22 La Niña triple dip and excess monsoon
- 1997 IOD year with normal monsoon despite El Niño

MODEL ANSWER

Introduction:

The Indian southwest monsoon, from June to September, delivers about 75 per cent of the country's annual rainfall against an IMD Long Period Average of 87 cm. As P.R. Pisharoty and later T.N. Krishnamurthy argued, it is a coupled ocean-atmosphere-orography system, not a single mechanism — and forecasting must treat it as such.

Ocean-atmosphere coupling — ENSO:

El Niño warming in the central and eastern equatorial Pacific suppresses Indian rainfall by shifting the Walker circulation eastward; deficit monsoons of 2015 and 2023 illustrate the link. La Niña, the opposite cool Pacific phase, typically enhances rainfall — the 2020-22 "triple-dip" produced three consecutive surplus monsoons across India.

Indian Ocean Dipole:

Identified by N.H. Saji and colleagues in *Nature* (1999), a positive IOD — warm western and cool eastern Indian Ocean — can offset an El Niño's impact. The 1997 monsoon was normal despite a strong Pacific El Niño, and 2019 was a near-surplus year against a weak El Niño backdrop, both attributed to a strong positive IOD.

Orography and circulation:

Tibetan Plateau heating drives the Tibetan High and the Tropical Easterly Jet over peninsular India; the Mascarene High over the southern Indian Ocean and the Findlater (Somali) low-level jet supply moisture across the Arabian Sea. The Western Disturbances of the upper-level westerlies govern winter precipitation across northwest India.

Conclusion:

IMD's Monsoon Mission, operational since 2012, runs dynamical models incorporating these teleconnections to issue Long Range Forecasts. Treating the monsoon as a coupled system, not as a date on the calendar, is now the operational consensus.

SOURCES

→Indian Monsoon Explained: Southwest and Northeast Mechanisms
→El Niño Explained: ENSO Mechanics, Indian Monsoon Impact
→Indian Ocean Dipole (IOD): Saji's Discovery, Positive vs Negative Phases

ENSO | IOD | Tibetan High | Somali Jet | LPA | Mascarene High | teleconnection | Tropical Easterly Jet

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Q44

Cyclone tracks in the Bay of Bengal cause more death and damage than Arabian Sea cyclones despite the latter's growing intensity. Comment on the physical and human reasons.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | TROPICAL CYCLONES

ANSWER OUTLINE

Introduction: The Indian Ocean accounts for around 7% of global cyclones, but the Bay of Bengal's share of cyclones is roughly four times that of the Arabian Sea.

Body — three dimensions: (1) Physical reasons: warmer Bay SSTs above 28°C through year, low salinity from Ganga-Brahmaputra freshwater inflow boosting stratification, funnel-shaped coastline at the head of Bay amplifying storm surges. (2) Human reasons: high population density on Bengal-Odisha coast, low-lying delta of the Sundarbans, weaker housing stock; Andhra-Tamil Nadu coast densely settled. (3) Arabian Sea trend: warming has produced Ockhi 2017, Tauktae 2021, Biparjoy 2023 — IITM Pune attributes a 52% rise in intense Arabian Sea cyclones since 1982 to Indian Ocean warming.

Conclusion: Coastal vulnerability is rising on both seaboards; the IMD-NDMA Multi-Hazard Early Warning System and Odisha's near-zero-death cyclone shelters offer the operational model.

KEY POINTS TO INCLUDE

- Bay of Bengal cyclones c. 4x Arabian Sea historically
- Bay SSTs warmer (28–30°C), low salinity strengthens stratification
- Funnel-shaped Bay head amplifies storm surge
- Cyclone Phailin, October 2013, Odisha, near-zero deaths
- Cyclone Amphan, May 2020, Bengal coast
- Cyclone Ockhi, November 2017
- Cyclone Tauktae, May 2021, Gujarat
- Cyclone Biparjoy, June 2023, Gujarat

- IITM Pune study: 52% rise in intense Arabian Sea cyclones since 1982

EXAMPLES & CASE STUDIES

- Phailin (Odisha 2013) — evacuation success story
- Amphan (West Bengal 2020) — super cyclonic storm
- Tauktae (Gujarat 2021)
- Biparjoy (Gujarat 2023)

MODEL ANSWER

Introduction: The Indian Ocean accounts for about 7 per cent of global cyclones, and within it the Bay of Bengal historically generates roughly four times the Arabian Sea's cyclone load.

Body: Physically, Bay sea-surface temperatures stay above 28°C through most of the year, low salinity from Ganga-Brahmaputra freshwater inflow strengthens stratification, and the funnel-shaped coast at the head of the Bay amplifies storm surges. Humanly, dense settlement on the Bengal-Odisha-Andhra coast, low-lying delta land in the Sundarbans, and weaker housing stock raise mortality — Phailin (Odisha, October 2013) and Amphan (Bengal, May 2020) tested these vulnerabilities. The Arabian Sea is now warming sharply; IITM Pune attributes a 52 per cent rise in intense Arabian Sea cyclones since 1982 to Indian Ocean warming, evident in Ockhi (2017), Tauktae (2021) and Biparjoy (2023).

Conclusion: Odisha's near-zero-death evacuation model under the IMD-NDMA Multi-Hazard Early Warning System is now the operational benchmark for both seaboards.

SOURCES

→Indian Monsoon Explained
→IMD Cyclone e-Atlas (officially maintained record)

tropical cyclone | storm surge | Bay of Bengal | Arabian Sea | Indian Ocean warming | SST | early warning | delta vulnerability

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Q45

The Indian Ocean Dipole now rivals ENSO as a determinant of Indian monsoon variability. Examine the mechanism, phases and forecasting implications.

15 MARKS | 250 WORDS | 14 MIN | HARD | INDIAN MONSOON DRIVERS

ANSWER OUTLINE

Introduction: The Indian Ocean Dipole (IOD) was identified by N.H. Saji and colleagues in 1999 as a coupled ocean-atmosphere mode in the tropical Indian Ocean independent of ENSO.

Body — three dimensions: (1) Mechanism: defined by the Dipole Mode Index (DMI) — anomalous SST difference between the western (50°E–70°E, 10°S–10°N) and south-eastern (90°E–110°E, 10°S–0°N) tropical Indian Ocean. Positive IOD: warmer west, cooler east — enhances south-west monsoon rainfall in India. Negative IOD: reverse — suppresses monsoon. (2) Phases and case studies: 1997 positive IOD coincided with El Niño but still gave India near-normal rainfall; 2019 strong positive IOD compensated for weak El Niño, India had 110% of LPA; 2020 negative IOD pattern muted monsoon. (3) Forecasting: IMD's dynamic Monsoon Mission Coupled Forecasting System (MMCFS); NOAA Pacific buoy network; APEC Climate Center; needs better Indian Ocean RAMA buoy density; ENSO and IOD interaction in 'modoki' configurations remains under-modelled.

Conclusion: The IOD reduces the deterministic role of ENSO but increases the complexity of monsoon forecasting; better Indian Ocean observation infrastructure is the prerequisite for sub-seasonal predictions India's agriculture needs.

KEY POINTS TO INCLUDE

- IOD identified by N.H. Saji et al, Nature 1999
- Dipole Mode Index — SST anomaly difference
- Western box 50°E–70°E, eastern box 90°E–110°E
- Positive IOD — enhanced SW monsoon
- Negative IOD — weakened monsoon, drought tendency
- 2019 strong positive IOD, India 110% LPA
- ENSO independence — IOD operates in non-El Niño years
- IMD MMCFS — Monsoon Mission Coupled Forecasting System
- RAMA buoy array in Indian Ocean
- Modoki El Niño-IOD coupling under research

EXAMPLES & CASE STUDIES

- 1997 positive IOD vs strong El Niño — India saved
- 2019 IOD record peak DMI of +2.15
- 2020 La Niña + negative IOD — variable monsoon

- RAMA buoy array maintained by NOAA-IMD
- Australian black-summer fires 2019 — IOD linked drought

MODEL ANSWER

Introduction:

The Indian Ocean Dipole (IOD), identified by N.H. Saji and colleagues (Nature, 1999), is a coupled ocean-atmosphere mode independent of ENSO. By altering sea-surface temperature gradients across the tropical Indian Ocean, it has emerged as a powerful and increasingly recognised determinant of South-West monsoon rainfall variability over India.

Mechanism: The Dipole Mode Index measures the SST anomaly between a western box (50°E–70°E, 10°S–10°N) and a south-eastern box (90°E–110°E, 10°S–0°N). A positive IOD warms the west and cools the east, strengthening the cross-equatorial flow and enhancing monsoon convection over India; a negative IOD reverses the gradient and tends to suppress rainfall, often producing peninsular droughts.

Phases and evidence: The 1997 positive IOD offset a strong El Niño and left India near-normal rainfall; the record positive IOD of 2019 (DMI of +2.15) lifted seasonal totals to 110% of LPA despite a weak El Niño; the 2020 negative pattern muted recovery and contributed to Australia's Black-Summer drought, illustrating the basin-wide reach of the dipole.

Forecasting implications: The IMD's Monsoon Mission Coupled Forecasting System (MMCFS) and the RAMA buoy array maintained with NOAA have improved seasonal skill; yet ENSO-IOD interactions in El Niño Modoki years remain poorly modelled and observation density in the Indian Ocean is markedly thinner than in the Pacific.

Conclusion:

The IOD has weakened ENSO's deterministic grip on Indian monsoons but raised forecasting complexity — a denser RAMA array and finer coupled modelling are prerequisites for the sub-seasonal predictions Indian agriculture needs.

SOURCES

→Indian Ocean Dipole (IOD): Saji's Discovery, Positive vs Negative Phases, and Monsoon Impact
→Indian Monsoon Explained: Southwest and Northeast Mechanisms, Jet Streams, and the IMD LPA Framework
→India Meteorological Department, Monsoon Reports

Indian Ocean Dipole | DMI | Saji 1999 | ENSO independence | monsoon prediction | MMCFS | RAMA buoy | positive IOD

GS PAPER 1

Indian Society

24 practice questions

Q46

India's female labour-force participation rate rose from 23.3% in 2017-18 to 41.7% in 2023-24, but job quality has not improved at the same pace. Examine the role of unpaid care work and policy choices.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | WOMEN AND GENDER

ANSWER OUTLINE

Introduction: PLFS 2023-24 reports FLFPR at 41.7%, an 18-point rise in six years; the headline conceals a quality problem.

Body — weigh evidence: (1) Composition: most of the rise sits in unpaid family labour and self-employment in agriculture; salaried regular wage share for women fell to 15.9%. (2) Care burden: NSO Time Use Survey 2024 — women do 289 minutes a day of unpaid domestic work, men 88 minutes (3.3x gap). (3) Policy: Maternity Benefit Amendment 2017, Anganwadi crches under Mission Saksham Anganwadi, Code on Wages 2019, Lakhpati Didi scheme; missing pieces — universal childcare, paid eldercare, social security for gig and self-employed women.

Conclusion: Diane Elson's 'recognise, reduce, redistribute' frame for care work is the missing third pillar; without it, FLFPR rises will keep being counted, not paid.

KEY POINTS TO INCLUDE

- PLFS 2023-24: FLFPR 41.7%, up from 23.3% in 2017-18
- Women's regular wage share 15.9%, men's 23.5%
- Time Use Survey 2024 — women 289 min/day unpaid care, men 88 min
- Maternity Benefit Amendment 2017 — 26 weeks leave
- Code on Wages 2019, Code on Social Security 2020
- Mission Saksham Anganwadi and Poshan 2.0
- Lakhpati Didi target of 3 crore women
- Diane Elson's 'recognise, reduce, redistribute'
- U-shaped curve hypothesis in development economics

EXAMPLES & CASE STUDIES

- ASHA and Anganwadi workers — care labour outside wage system

- Self-Help Groups under Deendayal Antyodaya Yojana - NRLM
- Tamil Nadu MGNREGS — women over 50% of workdays
- Kerala's Kudumbashree network

MODEL ANSWER

Introduction:

The Periodic Labour Force Survey 2023-24 reports India's female labour force participation rate at 41.7 per cent, an 18-point rise from 23.3 per cent in 2017-18. The headline conceals a quality problem: the rise sits overwhelmingly in unpaid family labour, not in salaried regular wage employment.

Composition of the rise:

Most additional women workers are own-account workers and unpaid family helpers in agriculture; the regular wage and salaried share for women has fallen to 15.9 per cent against 23.5 per cent for men. The U-shaped curve hypothesis predicted a developmental rebound, but it has come through distress self-employment, not formal jobs.

Care burden:

The NSO Time Use Survey 2024 shows women perform 289 minutes a day of unpaid domestic and care work against 88 minutes for men — a 3.3-fold gap that no labour reform can outflank. ASHA and Anganwadi workers exemplify care labour that the wage system does not count.

Policy choices:

The Maternity Benefit (Amendment) Act 2017 extended leave to 26 weeks; the Code on Wages 2019 and Code on Social Security 2020 expanded coverage; Mission Saksham Anganwadi, Poshan 2.0 and the Lakhpati Didi scheme (3 crore women target) operate on the supply side. Missing pieces remain — universal childcare, paid eldercare, and social security for gig and self-employed women.

Conclusion:

Diane Elson's "recognise, reduce, redistribute" frame for care work is the missing third pillar; without it, rising FLFPR will keep being counted, not paid.

SOURCES

→Female Labour Force Participation in India: UPSC Guide
→Women, Unpaid Care Work and the Gender Gap: UPSC Indian Society Guide
→PLFS Annual Report 2023-24, MoSPI

FLFPR | PLFS | unpaid care | Time Use Survey | U-shaped curve | Maternity Benefit Act | Lakhpati Didi | recognise reduce redistribute

Q47

Indian urbanisation is generating wealth at one end and slums at the other. Examine the structural reasons for this dual outcome with reference to migration, housing and urban local governance.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | URBANISATION AND URBAN POOR

ANSWER OUTLINE

Introduction: India's urban share, last measured at 31.16% in Census 2011, is projected by the World Bank's 2025 report to reach about 951 million urban Indians by 2050.

Body — three dimensions: (1) Migration: 45.36 crore migrants in Census 2011, with rural-to-urban moves driving city growth. PRS data shows over 80% of urban informal workers are migrants. (2) Housing: National Buildings Organisation puts the urban housing shortage at 1.88 crore in 2012 with 95% in EWS and LIG; PMAY-Urban 2.0 (September 2024) sanctioned around 3.53 lakh houses by mid-2025. (3) Governance: 74th Constitutional Amendment 1992 devolved 18 functions to ULBs but state finance commissions remain weak; municipal own revenue is 1% of GDP against the global 7%.

Conclusion: The Isher Judge Ahluwalia HPEC 2011 report's estimate of ₹39 lakh crore in urban investment over 20 years is still the benchmark; without fiscal devolution to ULBs the dual city will harden.

KEY POINTS TO INCLUDE

- Census 2011: 31.16% urban; no Census since
- World Bank 2025 report — 951 million urban Indians by 2050
- Internal migrants 45.36 crore (Census 2011)
- Urban housing shortage 1.88 crore (NBO 2012)
- PMAY-Urban launched 25 June 2015; PMAY-U 2.0 September 2024
- 74th Constitutional Amendment 1992, Twelfth Schedule, 18 functions
- ULB own-revenue c. 1% of GDP
- Isher Judge Ahluwalia HPEC report, 2011 — ₹39 lakh crore over 20 years
- Mike Davis 'Planet of Slums' framing

EXAMPLES & CASE STUDIES

- Dharavi redevelopment in Mumbai
- Bengaluru's Mahadevapura ward, IT corridor adjacent to slums
- Delhi's informal settlements along the Yamuna khadar
- Chennai's resettlement at Perumbakkam after 2015 floods

MODEL ANSWER

Introduction:

India's urban share, last measured at 31.16 per cent in Census 2011, is projected by the World Bank's 2025 urban report to reach about 951 million urban Indians by 2050. As Mike Davis warned in *Planet of Slums*, the same growth engine can generate skyscrapers and informal settlements on adjacent plots — and India is now its leading test case.

Migration:

Census 2011 recorded 45.36 crore internal migrants; PRS Legislative Research data show over 80 per cent of urban informal workers are migrants. Bengaluru's Mahadevapura ward — an IT corridor abutting informal settlements — is the visible illustration of this dual pattern.

Housing:

The National Buildings Organisation estimated the urban housing shortage at 1.88 crore in 2012, with 95 per cent in the EWS and LIG categories. PMAY-Urban (launched 25 June 2015) and PMAY-U 2.0 (September 2024) have sanctioned around 3.53 lakh houses by mid-2025, but Dharavi redevelopment and the Chennai Perumbakkam resettlement after the 2015 floods show how supply still lags need.

Urban local governance:

The 74th Constitutional Amendment of 1992 devolved 18 functions to Urban Local Bodies via the Twelfth Schedule, but state finance commissions remain weak; municipal own revenue is about 1 per cent of GDP against the global benchmark of 7 per cent, starving cities of capital.

Conclusion:

Isher Judge Ahluwalia's HPEC 2011 estimate of ₹39 lakh crore in urban investment over 20 years remains the benchmark. Without genuine fiscal devolution to ULBs and an in-situ upgrading approach to slums, India's dual city will harden into permanence.

SOURCES

→Urbanisation in India: Drivers, Challenges, Schemes and Way Forward
→PMAY-Urban: Housing for All, 4 Verticals, CLSS and PMAY-U 2.0
→Migrants in India — Internal Migration, Interstate Workers and e-Shram

urbanisation | internal migration | PMAY-Urban | 74th Amendment | in-situ upgrading | ULB finance | informal economy | EWS-LIG housing

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Q48

A caste census could ground reservation in evidence or harden caste as a public category for another century. Critically analyse with reference to the Mandal Commission, Indra Sawhney and Census 2027.

15 MARKS | 250 WORDS | 14 MIN | HARD | CASTE, RESERVATION AND CENSUS

ANSWER OUTLINE

Introduction: The Union Cabinet approved caste enumeration in Census 2027 on 12 December 2025, the first full caste count since 1931, at an outlay of ₹11,718.24 crore.

Body — weigh evidence: (1) Case for evidence: Mandal Commission (1980) recommended 27% OBC reservation based on a 1931 figure of 52%; no fresh data since. Indra Sawhney (1992) drew the 50% ceiling. (2) Recent demand: Maratha, Patidar, Jat agitations, Bihar caste survey 2023, sub-classification verdict in State of Punjab v. Davinder Singh (2024). (3) Risks: classification chaos in Mandal-listed castes; risk of cementing caste in administration; SECC 2011 caste data never released. M.N. Srinivas' warning that counting hardens identity.

Conclusion: Andre Beteille's caution — measurement is not neutral; whether caste data delivers justice depends on whether it is used for graded outcomes or political arithmetic.

KEY POINTS TO INCLUDE

- Cabinet approval of caste enumeration for Census 2027, 12 December 2025
- Budget ₹11,718.24 crore for Census 2027
- Mandal Commission 1980, 27% OBC reservation
- OBC share derived from 1931 census as 52%
- Indra Sawhney v. Union of India 1992, 50% ceiling
- SECC 2011 caste data never released
- Bihar caste survey published 2 October 2023
- Sub-classification verdict in State of Punjab v. Davinder Singh, 1 August 2024

- 103rd Constitutional Amendment 2019, 10% EWS quota
- M.N. Srinivas on caste and modernity

EXAMPLES & CASE STUDIES

- Bihar caste survey — Yadavs 14.27%, EBCs 36.01%
- Karnataka Hindumat Survey, 2015, undisclosed
- Maharashtra Maratha quota and EWS overlap
- Tamil Nadu 69% reservation under Ninth Schedule

MODEL ANSWER

Introduction:

The Union Cabinet approved caste enumeration in Census 2027 on 12 December 2025 at an outlay of ₹11,718.24 crore — the first full caste count since 1931. The question is whether this will ground reservation in evidence or harden caste as a public category for another century.

Case for evidence:

The Mandal Commission (1980) recommended 27 per cent OBC reservation extrapolating from a 1931 figure of 52 per cent; no fresh count has updated that estimate. Indra Sawhney v. Union of India (1992) set the 50 per cent ceiling and mandated periodic review of creamy layer norms. The SECC 2011 caste data were collected but never released.

Recent demand:

Maratha, Patidar and Jat agitations, the Bihar caste survey (October 2023) showing Yadavs at 14.27 per cent and EBCs at 36.01 per cent, and the sub-classification verdict in State of Punjab v. Davinder Singh (1 August 2024) all rest on the absence of current data. The 103rd Amendment's 10 per cent EWS quota added an income-based layer the 50 per cent ceiling did not anticipate.

Risks:

M.N. Srinivas warned that counting hardens identity; Tamil Nadu's 69 per cent reservation under the Ninth Schedule shows how political arithmetic can outrun graded outcomes. Without published methodology, classification chaos in Mandal-listed castes is likely.

Conclusion:

> Andre Beteille's caution is decisive — measurement is not neutral. Whether the caste census delivers justice depends on whether it is used for graded outcomes or for electoral arithmetic.

SOURCES

→Caste Census in India: Census 2027, SECC, Article 340 and the 1931 Reset
→Analysis of Reservation in India (UPSC Polity)
→Census in India: Importance, Delay, Caste Census Debate and Way Forward

caste census | Mandal Commission | Indra Sawhney | 50% ceiling | sub-classification | SECC 2011 | OBC | creamy layer

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Q49

India's religious and linguistic diversity is a constitutional resource as much as a sociological fact. Evaluate the framework of secularism and linguistic federalism that protects it.

10 MARKS | 150 WORDS | 9 MIN | EASY | DIVERSITY, SECTS AND SECULARISM

ANSWER OUTLINE

Introduction: India has 22 scheduled languages (Eighth Schedule), six 'classical' languages, six major religions, and over 4,500 ethnic communities listed by the Anthropological Survey's People of India project.

Body — three dimensions: (1) Constitutional secularism: Article 25–28 freedom of religion, S.R. Bommai (1994) basic structure ruling, Indian model of 'principled distance' (Rajeev Bhargava). (2) Linguistic federalism: Eighth Schedule, States Reorganisation Act 1956, Official Languages Act 1963, three-language formula. (3) Sect and community pluralism: Lingayats and Veerashaivas, Ravidassia, Meiteis vs Kukis, Bohra and Khoja Ismaili sects — layered identities the state navigates through both protection and recognition.

Conclusion: Diversity is not merely tolerated but constitutionally engineered through Articles 29–30 minority rights and the federal scheme — it is a working political resource.

KEY POINTS TO INCLUDE

- 22 scheduled languages in Eighth Schedule
- Six 'classical languages' — Tamil (2004), Sanskrit (2005), Kannada and Telugu (2008), Malayalam (2013), Odia (2014)
- Articles 25–28 — freedom of religion

- Articles 29–30 — cultural and educational rights of minorities
- S.R. Bommai v. Union of India (1994) — secularism as basic structure
- Rajeev Bhargava — 'principled distance'
- States Reorganisation Act 1956
- Three-language formula in NEP 2020
- People of India Project, Anthropological Survey of India — 4,635 communities

EXAMPLES & CASE STUDIES

- Tamil Nadu — two-language formula in education
- Article 371A Naga customary law
- Khoja and Bohra personal-law jurisprudence
- Lingayat sub-sect autonomy debate, Karnataka

MODEL ANSWER

> **Introduction:** India has 22 scheduled languages in the Eighth Schedule, six "classical" languages, six major religions, and the Anthropological Survey's *People of India* project lists 4,635 communities — a diversity that is constitutionally engineered, not merely tolerated.
>
> **Body:** Constitutional secularism rests on Articles 25-28 (freedom of religion) and Articles 29-30 (cultural and educational rights of minorities); S.R. Bommai v. Union of India (1994) read secularism into the basic structure. Rajeev Bhargava terms the Indian model "principled distance" — neither strict separation nor establishment. Linguistic federalism flows through the States Reorganisation Act 1956, the Official Languages Act 1963 and the three-language formula reaffirmed in NEP 2020. Sectarian pluralism — Lingayat-Veerashaiva, Ravidassia, Bohra-Khoja Ismaili, Meitei-Kuki — is navigated through Article 371A (Naga customary law) and analogous special provisions.
>
> **Conclusion:** Diversity is not merely a sociological fact but a working political resource, secured by the federal scheme and minority rights jurisprudence.

SOURCES

→Salient Features of Indian Society: UPSC Indian Society Guide
→Secularism in India — Principled Distance, Sarva Dharma Samabhava
→Religious Diversity in India: UPSC Indian Society Guide

secularism | principled distance | Eighth Schedule | minority rights | linguistic federalism | sect | diversity | basic structure

Q50

India's age-old saying that 'the family is the social security of the poor' is breaking down. Examine the structural drivers of family change with reference to nuclearisation, ruralisation of ageing and rural-urban migration.

10 MARKS | 150 WORDS | 9 MIN | EASY | SALIENT FEATURES — FAMILY STRUCTURE

ANSWER OUTLINE

Introduction: Define the joint-family ideal and frame nuclearisation as the structural shift redefining Indian household life.

Body — three drivers: (1) Demography — average household size fell from 5.5 in 1981 Census to about 4.4 by NFHS-5 (2019-21); rising age at marriage. (2) Migration — nearly 71% of India's elderly live in villages (NSO, Elderly in India 2021) even as young workers move to cities, leaving 'skip-generation' households. (3) Economics — paid female labour, urban housing costs and the breakdown of joint property pool joint living.

Conclusion: The family has not collapsed; it has reorganised. State eldercare, the Maintenance and Welfare of Parents and Senior Citizens Act, 2007 and a long-term care system must now do what extended kin once did.

KEY POINTS TO INCLUDE

- Average household size 5.5 (1981) → 4.4 (NFHS-5, 2019-21)
- Old-age dependency ratio 10.9 (1961) → 15.7 (2021, NSO)
- 60-plus to rise from 10.5% in 2022 to 20.8% by 2050 (UNFPA India Ageing Report 2023)
- About 71% of India's elderly live in rural areas (NSO 2021)
- Maintenance and Welfare of Parents and Senior Citizens Act, 2007 makes maintenance a legal duty
- MGNREGA migration and urban pull weakening co-residence
- Feminisation of ageing — about 52% of elderly are women (NSO 2021)
- Joint Hindu Family weakened by partition of property and dowry

EXAMPLES & CASE STUDIES

- Kerala — 'skip-generation' households as youth migrate to the Gulf
- Punjab villages with NRI-elder parents living alone
- MWPSC Act tribunals in Maharashtra evicting non-maintaining children
- Urban gated-society elder-care services in Bengaluru and Pune

MODEL ANSWER

Introduction: The joint-family ideal once acted as informal social security, but the average Indian household has shrunk from 5.5 persons in the 1981 Census to about 4.4 by NFHS-5 (2019–21), signalling deep structural change.

Body: Three drivers explain the shift. Demographically, the 60-plus share will rise from 10.5% (2022) to 20.8% by 2050 (UNFPA India Ageing Report 2023) and age at marriage is rising. Migration matters: about 71% of India's elderly live in villages (NSO, Elderly in India 2021) even as young workers leave for cities, creating 'skip-generation' households in Kerala, Punjab and Bihar. Economically, paid female labour (FLFPR 41.7%, PLFS 2023-24), urban housing costs and partition of joint property pool weaken co-residence.

Conclusion: The family has not collapsed, it has reorganised; the Maintenance and Welfare of Parents and Senior Citizens Act, 2007 and a long-term care system must now do what extended kin once did.

SOURCES

→Senior Citizens in India — Ageing Society, MWPSC Act 2007 and Welfare Architecture
→Reaping the Demographic Transition in India: Strategy for the Dividend
→UNFPA India Ageing Report 2023

nuclearisation | joint family | feminisation of ageing | ruralisation of ageing | skip-generation | MWPSC Act | household size | intergenerational contract

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Q51

Communalism in India is less an inheritance of religious difference and more a modern political construction. Discuss with reference to the colonial legacy and post-1947 communal incidents.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | COMMUNALISM

ANSWER OUTLINE

Introduction: Define communalism as the political mobilisation of religion, distinct from religious diversity. Bipan Chandra's three-stage formulation — communal consciousness, liberal communalism, extreme communalism.

Body — three dimensions: (1) Colonial construction — separate electorates under the Indian Councils Act, 1909; the two-nation theory; partition violence of 1947 killing an estimated 0.2–2 million. (2) Post-1947 incidents — Ahmedabad 1969, Bhiwandi 1970, Sikh

massacre 1984, Mumbai 1992-93, Gujarat 2002, Muzaffarnagar 2013, Delhi February 2020 (53 dead per Delhi Police). (3) Drivers — fake news on social media, urban segregation, 'love jihad' and conversion laws in Uttar Pradesh and Madhya Pradesh.

Conclusion: Constitutional secularism (Articles 25–28, S.R. Bommai 1994 judgment), the Sachar Committee (2006) and the National Foundation for Communal Harmony are the institutional response; political will is the missing input.

KEY POINTS TO INCLUDE

- Bipan Chandra — three stages of communal consciousness
- Separate electorates from Indian Councils Act, 1909
- Partition 1947 — estimated 0.2 to 2 million deaths, 15 million displaced
- Anti-Sikh riots November 1984 — at least 2,733 killed in Delhi (Nanavati Commission)
- Mumbai riots December 1992 – January 1993 (Srikrishna Commission)
- Gujarat 2002 — about 1,044 killed (G.T. Nanavati & Akshay Mehta Commission)
- Sachar Committee Report 2006 on Muslim socio-economic status
- Communal Violence (Prevention, Control and Rehabilitation) Bill — pending
- S.R. Bommai v. Union of India (1994) — secularism as basic structure

EXAMPLES & CASE STUDIES

- Sachar Committee finding — Muslim share in central government services 4.9%
- Babri Masjid demolition 6 December 1992
- Muzaffarnagar riots September 2013 — over 60 killed
- Delhi northeast riots February 2020 — 53 killed (Delhi Police)
- Karnataka hijab row 2022, Udupi PU College

MODEL ANSWER

> **Introduction**:
>
> Communalism, as Bipan Chandra distinguished it, is the political mobilisation of religion — not religious diversity itself. He charted three stages: communal consciousness, liberal communalism and extreme communalism. Indian communalism is thus less an inherited religious quarrel than a modern political construction shaped by colonial categorisation and post-1947 mobilisation.
>
> **Colonial construction:** Separate electorates introduced by the Indian Councils Act, 1909 institutionalised religious identity in political representation; the two-nation

theory and the Communal Award of 1932 deepened it, culminating in the 1947 Partition that killed an estimated 0.2–2 million and displaced about 15 million.

Post-1947 incidents: Ahmedabad 1969 and Bhiwandi 1970 set the template; the anti-Sikh violence of November 1984 killed at least 2,733 in Delhi (Nanavati Commission); Mumbai 1992–93 (Srikrishna Commission) followed the Babri demolition of 6 December 1992; Gujarat 2002 saw around 1,044 killed (Nanavati-Mehta Commission); Muzaffarnagar 2013 and the Delhi north-east riots of February 2020 (53 dead, Delhi Police) extended the arc.

Modern drivers: Social-media disinformation, urban residential segregation (the Sachar Committee 2006 placed Muslim share in central services at just 4.9%), 'love jihad' narratives, the Karnataka hijab row at Udupi PU College in 2022, and anti-conversion laws in Uttar Pradesh, Madhya Pradesh and Karnataka sustain communal mobilisation across India.

Conclusion:

Constitutional secularism, affirmed in S.R. Bommai (1994), the Places of Worship Act 1991 and the National Foundation for Communal Harmony provide the institutional answer; political will to enforce them remains the missing variable.

SOURCES

→Communalism in India: Causes, Impact and Remedies
→Communal Violence in India: Causes, Major Incidents and Government Response
→Places of Worship Act, 1991: Provisions, Exceptions, Secularism and UPSC Notes

communalism | separate electorates | two-nation theory | Sachar Committee | S.R. Bommai | political mobilisation | Srikrishna Commission | Nanavati Commission

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Q52

India's Total Fertility Rate has fallen to 1.9 — below replacement level — yet the country's working-age share is still rising. Explain this paradox and assess what it means for the demographic dividend.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | POPULATION — DEMOGRAPHIC DIVIDEND

ANSWER OUTLINE

Introduction: NFHS-5 (2019-21) put India's TFR at 1.9 against the replacement rate of 2.1; the country crossed below replacement around 2020 even as the working-age (15–59) share continues to rise — the demographic momentum effect.

Body — three dimensions: (1) Lag mechanics — past high fertility produced today's youth bulge; median age is 28.4 (UNFPA 2023), working-age population peaking around 2041. (2) Heterogeneity — Bihar TFR 3.0, UP 2.4, vs Kerala 1.8, Tamil Nadu 1.8; the dividend is regionally uneven. (3) Risks — jobless growth, FLFPR jumped from 23.3% (PLFS 2017-18) to 41.7% (PLFS 2023-24) but mostly in unpaid self-employment.

Conclusion: The window closes by 2055 (SRS 2024 trajectory). Without a skilling and care-economy push, India risks ageing before it gets rich.

KEY POINTS TO INCLUDE

- NFHS-5 (2019-21) — All-India TFR 1.9, below replacement 2.1
- Bihar TFR 3.0, Uttar Pradesh 2.4, Meghalaya 2.9 — northern outliers
- Kerala 1.8, Tamil Nadu 1.8, West Bengal 1.6 — well below replacement
- Working-age share peaks around 2041, dividend window closes by 2055
- Median age 28.4 years (UNFPA India Ageing Report 2023)
- Demographic momentum from past high fertility — Sample Registration System 2024
- FLFPR rose 23.3% (2017-18) to 41.7% (2023-24, PLFS)
- 60-plus share to double to 20.8% by 2050

EXAMPLES & CASE STUDIES

- Bihar — youngest median age, highest TFR
- Kerala — already ageing, 60-plus share above 16%
- Tamil Nadu — early demographic transition
- Punjab — falling TFR plus out-migration of youth

MODEL ANSWER

> **Introduction:** NFHS-5 (2019–21) placed India's Total Fertility Rate at 1.9 — below the replacement rate of 2.1 — yet the working-age share (15–59) keeps rising. This is the classic demographic-momentum effect documented by SRS 2024.
>
> **Body:** Past high fertility produced today's youth bulge; the median age is 28.4 (UNFPA India Ageing Report 2023) and the working-age population is projected to peak around 2041 before tapering by 2055. The trend is regionally uneven: Bihar TFR 3.0, Uttar Pradesh 2.4 and Meghalaya 2.9 contrast with Kerala 1.8, Tamil Nadu 1.8 and West Bengal 1.6 — southern states have already aged into demographic deficit while northern outliers still drive natural increase. Female labour-force participation rose from 23.3% (PLFS 2017-18) to 41.7% (PLFS 2023-24), but mostly in unpaid self-employment.

> **Conclusion:** Without rapid skilling and care-economy investment, India risks ageing before it gets rich — the dividend window will close by mid-century.

SOURCES

- →India's Demographic Dividend Is Closing: The SRS 2024 Wake-Up Call
- →Reaping the Demographic Transition in India
- →NFHS-5 India Report — IIPS

TFR 1.9 | replacement fertility | demographic momentum | youth bulge | demographic dividend | median age | SRS 2024 | ageing before rich

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Q53

India's female labour-force participation rose from 23.3% in 2017-18 to 41.7% in 2023-24, but unpaid care work fell barely at all. Examine the care-economy argument with reference to the Time Use Survey and the Mahila Samman scheme architecture.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | WOMEN AND CARE ECONOMY

ANSWER OUTLINE

Introduction: FLFPR (15+) jumped to 41.7% by PLFS 2023-24; yet the Time Use Survey 2019 shows women spend 299 minutes/day on unpaid domestic services vs 97 for men — a 3:1 gap.

Body — three dimensions: (1) Quality — most of the rise is in unpaid family-farm or own-account self-employment, not waged jobs; agricultural feminisation. (2) Care burden — TUS-2019: women 134 min/day on care of children/elderly/sick vs 76 for men; 53.7% of e-Shram registrants female. (3) Policy — Mission Shakti's Sambal (safety) + Samarthya (empowerment) pillars; PMMVY ₹5,000 maternity benefit; creche provisions under the Code on Social Security; Anganwadi as a care infrastructure.

Conclusion: Recognising, reducing, redistributing unpaid care (Diane Elson's 3R framework) is the missing leg — invest in childcare, eldercare and time-saving infrastructure (water taps, LPG) to convert FLFPR rise into real economic agency.

KEY POINTS TO INCLUDE

- PLFS 2023-24 — FLFPR (15+) 41.7%, up from 23.3% (2017-18)
- Time Use Survey 2019 — women 299 min/day unpaid domestic vs men 97 min
- Women 134 min/day on caregiving vs men 76 min (TUS 2019)
- Most FLFPR gain in unpaid self-employment, agricultural feminisation

- Mission Shakti — Sambal + Samarthya umbrella since 2021-22
- PMMVY — ₹5,000 maternity benefit for first child
- Maternity Benefit (Amendment) Act, 2017 — 26 weeks paid leave
- Diane Elson — Recognise, Reduce, Redistribute unpaid care
- Anganwadi network — about 14 lakh centres as care infrastructure

EXAMPLES & CASE STUDIES

- Kudumbashree, Kerala — paid eldercare cooperatives
- Tamil Nadu Amma Maternity Scheme
- Jal Jeevan Mission — water-tap time savings for women
- Saksham Anganwadi creche pilots

MODEL ANSWER

Introduction:

India's female labour-force participation (15+) jumped from 23.3% in PLFS 2017–18 to 41.7% in PLFS 2023–24, the steepest rise in any major economy. Yet the Time Use Survey 2019 shows women still spend 299 minutes a day on unpaid domestic services against 97 for men — a roughly 3:1 gap that has barely moved across the same period.

Quality of the jump: Most of the FLFPR rise is in unpaid family-farm and own-account self-employment, an 'agricultural feminisation' rather than waged-job creation. Women crowd into the lowest-paid agrarian and home-based rungs as men diversify out into services and construction.

Care burden: TUS 2019 records women devoting 134 min/day to caregiving against 76 for men; with 53.7% of e-Shram registrants female (PIB, 2025), the unpaid care economy effectively subsidises the formal labour market. As Diane Elson's 3R framework argues, this work must be recognised, reduced and redistributed for women's employment to translate into agency.

Scheme architecture: Mission Shakti's Sambal (safety) and Samarthya (empowerment) pillars, PMMVY's Rs 5,000 maternity benefit, the Maternity Benefit (Amendment) Act 2017's 26-week leave, and the Code on Social Security's creche provisions form a base. Around 14 lakh Anganwadis function as care infrastructure; Jal Jeevan Mission cuts women's water-collection time and Saksham Anganwadi creche pilots extend support.

Conclusion:

> The FLFPR jump becomes meaningful only when childcare, eldercare and time-saving infrastructure (taps, LPG) absorb the unpaid burden; Kerala's Kudumbashree eldercare cooperatives offer a scalable model for the rest of India.

SOURCES

- →Women, Unpaid Care Work and the Gender Gap
- →PLFS Annual Report 2023-24 — MoSPI
- →Time Use in India 2019 Report — NSO

FLFPR | unpaid care work | Time Use Survey | care economy | Mission Shakti | PMMVY | 3R framework | agricultural feminisation

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Q54

India's sex ratio at birth has improved from 918 in NFHS-4 to 929 in NFHS-5, yet ten states still report ratios below 900. Examine the persistence of son preference and assess the effectiveness of the Beti Bachao Beti Padhao initiative.

10 MARKS | 150 WORDS | 9 MIN | EASY | WOMEN AND GENDER

ANSWER OUTLINE

Introduction: Define sex ratio at birth (SRB) and the natural ratio (about 952 girls per 1,000 boys). Frame India's improvement and its limits.

Body — three dimensions: (1) Trend — SRB rose from 918 (NFHS-4, 2015-16) to 929 (NFHS-5, 2019-21); CRS 2020 puts it at 907. (2) Geography — Haryana, Punjab, UP and Rajasthan persistently low; northwest agrarian patrilineal belt worst hit. (3) Drivers and policy — dowry, patrilocal residence, 'son-as-old-age-support' logic; PCPNDT Act, 1994; Beti Bachao Beti Padhao launched 22 January 2015 from Panipat; Sukanya Samriddhi Yojana incentivising girl-child savings.

Conclusion: Awareness without enforcement is insufficient — strict PCPNDT prosecutions plus property-rights enforcement under the Hindu Succession (Amendment) Act, 2005 must reinforce BBBP.

KEY POINTS TO INCLUDE

- Natural SRB ~952 girls per 1,000 boys
- NFHS-4 (2015-16) SRB 918 → NFHS-5 (2019-21) SRB 929
- Civil Registration System (CRS) 2020 SRB 907
- Haryana SRB 893, Uttarakhand 844 — worst NFHS-5 readings

- PCPNDT Act, 1994 banning prenatal sex determination
- Beti Bachao Beti Padhao launched 22 January 2015, Panipat
- Sukanya Samriddhi Yojana, January 2015
- Hindu Succession (Amendment) Act, 2005 — daughter coparcener
- 'Missing women' — Amartya Sen, 1990

EXAMPLES & CASE STUDIES

- Mahendragarh, Haryana — district BBBP turnaround
- Punjab Nawanshahr 'Nawanshahr model' pre-BBBP
- Tamil Nadu Cradle Baby Scheme as anti-female-infanticide measure
- Sikkim — highest SRB at 969 (NFHS-5)

MODEL ANSWER

> **Introduction:** India's sex ratio at birth (SRB) rose from 918 in NFHS-4 (2015–16) to 929 in NFHS-5 (2019–21), against a natural ratio of about 952 girls per 1,000 boys — progress, but well short of biological parity.
>
> **Body:** Improvement is uneven. CRS 2020 still records SRB at 907; Haryana (893) and Uttarakhand (844) remain low while Sikkim leads at 969. The northwest patrilineal-agrarian belt sustains son preference rooted in dowry, patrilocal residence and the 'son-as-old-age-support' logic Amartya Sen flagged in 1990 as the cause of India's 'missing women'. The PCPNDT Act, 1994 banned prenatal sex determination; Beti Bachao Beti Padhao, launched from Panipat on 22 January 2015, paired with Sukanya Samriddhi Yojana, frames the policy answer; the Hindu Succession (Amendment) Act 2005 made daughters coparceners.
>
> **Conclusion:** Awareness without enforcement is insufficient — strict PCPNDT prosecutions and the Mahendragarh-style district drive must underpin BBBP for the SRB gap to close.

SOURCES

→Sex Ratio in India 2026: Census Data, State-wise Trends and Causes
→Global Gender Gap Index 2024: India's Rank, Key Findings and Policy Implications
→NFHS-5 India Report — IIPS

sex ratio at birth | PCPNDT | son preference | BBBP | Sukanya Samriddhi | missing women | patrilocal | dowry

Q55

Manual scavenging stands banned in India since 1993, yet the government's own data records 294 sewer and septic-tank deaths between 2020 and 2024. Critically analyse the definitional gap and the shift from rehabilitation to mechanisation under NAMASTE.

15 MARKS | 250 WORDS | 14 MIN | HARD | SOCIAL EMPOWERMENT — CASTE AND DIGNITY

ANSWER OUTLINE

Introduction: The 1993 Act and the PEMSR Act, 2013 ban manual scavenging and hazardous cleaning. Yet 294 sanitation workers died in 2020-24 (Rajya Sabha reply, February 2025).

Body — three dimensions: (1) Definitional gap — government claims 'no manual scavenging' while logging deaths as 'hazardous cleaning'; NHRC has recommended widening the definition. (2) Caste pattern — of 58,098 manual scavengers identified, 97.25% with known caste are Scheduled Caste; about 92% of NAMASTE-profiled workers SC/ST/OBC; 77% Dalit (2025 study). (3) NAMASTE shift — National Action for Mechanised Sanitation Ecosystem launched July 2023, ₹349.73 crore for FY24-FY26; PPE kits, Ayushman cover, capital subsidy for vehicles; 90,942 workers profiled as of April 2026.

Conclusion: Mechanisation cannot end a caste-rooted practice alone — close the definitional loophole, enforce the PEMSR Act and end the Swachh Bharat single-pit irony (only ~13% twin-pit toilets).

KEY POINTS TO INCLUDE

- Employment of Manual Scavengers Act, 1993
- PEMSR Act, 2013 — septic tanks, sewers, hazardous cleaning
- 294 sewer/septic tank deaths 2020-24 (Rajya Sabha, February 2025)
- 377 deaths 2019-23, 330 in 2017-22 — separate parliamentary replies
- 58,098 manual scavengers identified, 97.25% SC where caste known
- Uttar Pradesh — 32,473 of those identified
- Bezwada Wilson — Safai Karamchari Andolan, Magsaysay 2016
- Safai Karamchari Andolan estimates 1,760+ cumulative deaths
- NAMASTE scheme, July 2023, ₹349.73 crore for FY24-FY26
- Supreme Court Dr Balram Singh judgment 2023 — ₹30 lakh compensation

EXAMPLES & CASE STUDIES

- Delhi Jal Board sewer deaths recurrent annually

- Valmiki and Mehtar sub-castes overwhelmingly affected
- Bandicoot robot deployments by Genrobotics, Kerala
- Swachh Bharat ~13% twin-pit toilets per civil society estimates

MODEL ANSWER

Introduction:

Manual scavenging has been outlawed since the Employment of Manual Scavengers Act 1993 and the Prohibition of Employment as Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013. Yet a Rajya Sabha reply (February 2025) recorded 294 sewer and septic-tank deaths between 2020 and 2024 — a quiet refutation of the official ban.

Definitional gap: The Government insists 'no manual scavenging exists' while logging the same deaths as 'hazardous cleaning of septic tanks and sewers'. The NHRC has recommended widening PEMSR's definition. The definitional sleight allows compensation without admission of the underlying caste-based labour pattern.

Caste pattern: Of 58,098 manual scavengers identified, 97.25% with known caste are Scheduled Caste; Uttar Pradesh alone accounted for 32,473. About 92% of NAMASTE-profiled workers are SC/ST/OBC; 77% are Dalit. The Valmiki and Mehtar sub-castes are overwhelmingly represented — a hereditary occupation in defiance of constitutional dignity. Bezwada Wilson's Safai Karamchari Andolan (Magsaysay 2016) estimates over 1,760 cumulative deaths nationally.

NAMASTE shift: The National Action for Mechanised Sanitation Ecosystem (July 2023, Rs 349.73 crore for FY24–FY26) replaced SRMS, providing PPE kits, Ayushman cover, capital subsidy for sanitation entrepreneurs, vehicles, and 90,942 worker profiles by April 2026; Genrobotics' Bandicoot robots in Kerala typify the mechanisation push. The Supreme Court's Dr Balram Singh judgment (2023) raised compensation for sewer deaths to Rs 30 lakh.

Conclusion:

Mechanisation alone cannot end a caste-rooted practice; close the definitional loophole, prosecute under PEMSR and fix Swachh Bharat's single-pit toilet legacy.

SOURCES

→National Commission for Safai Karamcharis
→NAMASTE Scheme — Ministry of Social Justice and Empowerment
→Supreme Court of India, Dr Balram Singh v. Union of India (2023)

PEMSR Act | manual scavenging | hazardous cleaning | NAMASTE | Safai Karamchari Andolan | Balram Singh judgment | mechanisation | Dalit

Q56

The Code on Social Security, 2020 names 'gig worker' and 'platform worker' in Indian statute for the first time. Examine the recognition-versus-disbursement gap and the structural challenges of social security for India's 90% informal workforce.

15 MARKS | 250 WORDS | 14 MIN | HARD | POPULATION — INFORMAL LABOUR

ANSWER OUTLINE

Introduction: About 90% of India's workforce is informal, generating roughly 50% of GDP. The Code on Social Security, 2020 was notified into force on 21 November 2025, defining gig and platform workers for the first time.

Body — three dimensions: (1) Scale — ILO India Employment Report 2024 puts informal employment at nearly 90%; e-Shram crossed 31.38 crore registrations as of November 2025; women 53.68% of registrants. (2) Gig growth — NITI Aayog (2022) projects gig workforce 77 lakh (2020-21) to 2.35 crore by 2029-30, 4.1% of total livelihood; women 28% share. (3) The gap — recognition without aggregator contributions actually flowing into the Social Security Fund; portability missing; PM-SYM and Atal Pension Yojana coverage thin.

Conclusion: Build a portable, contribution-based floor on the e-Shram rails — accident cover, maternity, pension — funded by a 1–2% aggregator levy as proposed by NITI Aayog.

KEY POINTS TO INCLUDE

- Code on Social Security, 2020 notified 21 November 2025
- About 90% of workforce informal, ~50% of GDP
- ILO India Employment Report 2024 — 82% workers in informal sector, 90% informally employed
- e-Shram registrations 31.38 crore as of 27 November 2025
- Women 53.68% of e-Shram registrants (PIB, March 2025)
- NITI Aayog (June 2022) — gig workforce 77 lakh → 2.35 crore by 2029-30
- Women 28% of gig workers; 47% medium-skilled, 22% high-skilled
- PM-SYM pension for unorganised workers, ₹3,000/month after 60
- Rajasthan Platform-Based Gig Workers Welfare Act, 2023 — first state law

EXAMPLES & CASE STUDIES

- Zomato, Swiggy, Urban Company, Ola, Uber as ‘aggregators’
- Rajasthan's 1–2% aggregator cess — first state model
- Karnataka Platform-Based Gig Workers Bill 2024
- BOCW cess as precedent for sectoral welfare funds

MODEL ANSWER

Introduction:

Roughly 90% of India’s workforce is informal, generating about half of GDP. The Code on Social Security, 2020 — notified into force on 21 November 2025 — named ‘gig worker’ and ‘platform worker’ in Indian statute for the first time. The challenge now is converting statutory recognition into actual social-security disbursement.

Scale of informality: The ILO India Employment Report 2024 places informal employment at nearly 90%; the e-Shram portal crossed 31.38 crore registrations by November 2025, with women making up 53.68% (PIB, March 2025). Informal workers face wage volatility, no pension, no insurance and no maternity entitlement.

Gig segment: NITI Aayog (June 2022) projected the gig workforce to grow from 77 lakh (2020–21) to 2.35 crore by 2029–30, around 4.1% of total livelihood, with women at 28% and 47% medium-skilled. Platforms like Zomato, Swiggy, Urban Company, Ola and Uber depend on this ‘aggregator-mediated’ workforce while classifying them as partners, not employees.

Recognition vs disbursement: The Code envisages a Social Security Fund financed by aggregator contributions, but rules for collection and benefit portability are still skeletal; PM-SYM and Atal Pension Yojana coverage remains thin. Rajasthan’s Platform-Based Gig Workers Welfare Act, 2023 — with a 1–2% aggregator cess — is the first operational state model; Karnataka has tabled a parallel Bill.

Conclusion:

Build a portable contribution-based floor on the e-Shram rails — accident cover, maternity and pension funded by a uniform aggregator levy, modelled on the BOCW cess — to make Code recognition meaningful in practice.

SOURCES

→Code on Social Security 2020 — Ministry of Labour & Employment
→India's Booming Gig and Platform Economy — NITI Aayog 2022
→ILO India Employment Report 2024

gig worker | platform worker | e-Shram | aggregator contribution | Code on Social Security 2020 | informal sector | Social Security Fund | portable benefits

Q57

Multidimensional poverty in India has fallen sharply — NITI Aayog estimates 24.82 crore people escaped poverty between 2013-14 and 2022-23 — but the bottom states still lag. Examine the Alkire-Foster method and the policy implications.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | POVERTY AND DEVELOPMENTAL ISSUES

ANSWER OUTLINE

Introduction: The Multidimensional Poverty Index (MPI), developed by Sabina Alkire and James Foster at OPHI (2010), measures poverty as overlapping deprivation in health, education and living standards.

Body — three dimensions: (1) Method — 12 indicators across 3 dimensions; a household is multidimensionally poor if deprived in at least one-third weighted indicators; NITI Aayog's National MPI uses NFHS data. (2) Progress — national MPI head-count ratio fell from 29.17% (2013-14) to 11.28% (2022-23); 24.82 crore lifted out (NITI Aayog Discussion Paper, January 2024). (3) Persistence — Bihar 33.76%, Jharkhand 28.81%, Meghalaya 27.79% still poor; nutrition (33% deprivation) and maternal health (22%) the slowest indicators.

Conclusion: The MPI moves with PMAY, Jal Jeevan, Ujjwala, Saubhagya — but anaemia, nutrition and antenatal care need targeted convergence, especially in EAG states.

KEY POINTS TO INCLUDE

- MPI developed by Alkire-Foster, OPHI (2010)
- 12 indicators across health, education, living standards
- Deprivation cut-off — 33.3% weighted indicators
- National MPI 29.17% (2013-14) → 11.28% (2022-23, NITI Aayog Jan 2024)
- 24.82 crore escaped multidimensional poverty in nine years
- Bihar 33.76%, Jharkhand 28.81%, Meghalaya 27.79% — bottom three
- Nutrition deprivation 33%, maternal health 22%
- Global MPI 2023 — India 16.4%, 23 crore poor (UNDP-OPHI)
- Tendulkar (2011-12) — 21.9% income poor; Rangarajan — 29.5%

EXAMPLES & CASE STUDIES

- PMAY-G — pucca housing addressing one MPI indicator
- Jal Jeevan Mission — drinking water indicator
- Ujjwala Yojana — cooking fuel indicator
- Saubhagya — electricity indicator
- POSHAN 2.0 — nutrition indicator

MODEL ANSWER

Introduction:

The Multidimensional Poverty Index (MPI), developed by Sabina Alkire and James Foster at the Oxford Poverty and Human Development Initiative (2010), measures poverty as overlapping deprivation in health, education and living standards rather than income alone. NITI Aayog estimates 24.82 crore Indians escaped multidimensional poverty between 2013–14 and 2022–23.

Method: The National MPI uses 12 indicators across three dimensions, drawing on NFHS data. A household is multidimensionally poor if deprived in at least one-third of weighted indicators — the Alkire-Foster cut-off. Headcount ratio is then multiplied by intensity to produce the MPI value, allowing decomposition by indicator, district and state.

Progress: The national MPI headcount fell from 29.17% (2013–14) to 11.28% (2022–23), per the NITI Aayog Discussion Paper of January 2024. Gains are driven by PMAY-G (housing), Jal Jeevan Mission (drinking water), Ujjwala (cooking fuel) and Saubhagya (electricity), each addressing a specific MPI indicator. The Global MPI 2023 (UNDP-OPHI) places India's headcount at 16.4%.

Persistence: Bihar (33.76%), Jharkhand (28.81%) and Meghalaya (27.79%) remain bottom-three. Nutrition (33% deprivation) and maternal health (22%) are the slowest-moving indicators — reflecting why NFHS-5 still records child stunting at 35.5% and child anaemia at a worsened 67.1%. The Tendulkar (21.9%, 2011-12) and Rangarajan (29.5%) income-poverty estimates predate this MPI revolution.

Conclusion:

The MPI moves with infrastructure schemes but stalls on nutrition and maternal care — district-level convergence of POSHAN 2.0, Jal Shakti Mission and the National Health Mission across EAG states is the next frontier of poverty reduction.

SOURCES

→Multidimensional Poverty Index (MPI): Alkire-Foster Method, NITI Aayog MPI, and India's Progress
→Poverty Rate in India 2025: Estimates, Methods, and Policy Context
→NITI Aayog National MPI Discussion Paper, January 2024

Alkire-Foster | MPI | OPHI | head-count ratio | intensity of poverty | EAG states | convergence | Tendulkar line

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Q58

Child stunting in India fell only from 38.4% to 35.5% between NFHS-4 and NFHS-5, while child anaemia rose from 58.6% to 67.1%. Examine the 20-80 driver split and the convergence challenge facing POSHAN 2.0.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | POVERTY — CHILD MALNUTRITION

ANSWER OUTLINE

Introduction: NFHS-5 (2019-21) — stunting 35.5%, wasting 19.3%, underweight 32.1%, child anaemia 67.1%. India runs the world's largest child-nutrition programme yet one in three under-fives is stunted.

Body — three dimensions: (1) The 20-80 split — Bhutta (Lancet 2013): direct nutrition interventions cut stunting only ~20%, the rest rides on WASH, maternal health, poverty. (2) Maternal-cycle problem — low birth weight 27.4%, women's anaemia 57%; about half of growth failure happens in the womb. (3) Scheme architecture — POSHAN 2.0 reaches ~10 crore beneficiaries across 14 lakh Anganwadis, ₹21,960 crore in 2025-26; Poshan Tracker app; Anemia Mukt Bharat.

Conclusion: Converge Jal Shakti (sanitation, water), Health (anaemia, antenatal care), Women and Child Development (POSHAN) and Education in the same district — nutrition is a horizontal problem trapped in a vertical bureaucracy.

KEY POINTS TO INCLUDE

- NFHS-5 — stunting 35.5%, wasting 19.3%, underweight 32.1%
- Child anaemia 58.6% (NFHS-4) → 67.1% (NFHS-5), worsened
- Women's anaemia rose 53% → 57%
- Low birth weight 27.4% (SOFI 2024)
- 194.6 million undernourished, world's largest country count (SOFI 2024)
- Direct interventions cut stunting only ~20% (Bhutta, Lancet 2013)
- POSHAN 2.0 — 10 crore beneficiaries, 14 lakh AWCs

- ₹21,960 crore POSHAN allocation, Union Budget 2025-26
- POSHAN Abhiyaan 2018 target — stunting 25% by 2022

EXAMPLES & CASE STUDIES

- Anganwadi Centre as last-mile delivery node
- Poshan Tracker real-time growth monitoring
- Anemia Mukt Bharat 6×6×6 strategy
- Northeastern states — every state stunting ≥22%
- PM POSHAN (mid-day meal) — supplementary protein

MODEL ANSWER

Introduction:

NFHS-5 (2019–21) records child stunting at 35.5%, wasting 19.3%, underweight 32.1% and child anaemia at 67.1%. Despite running the world's largest child-nutrition programme, one in three Indian under-fives is stunted and child anaemia has worsened from 58.6% (NFHS-4) to 67.1%, highlighting the structural depth of the problem.

The 20-80 driver split: Zulfiqar Bhutta and colleagues (Lancet 2013) showed that direct nutrition interventions — supplementation, IYCF counselling, fortification — cut stunting by only about 20%. The remaining 80% depends on water, sanitation, women's status, maternal health and poverty. India's nutrition policy historically over-invested in the 20% it could reach through Anganwadis and under-invested in the 80% lying outside MWCD.

Maternal-cycle problem: Around half of growth failure occurs in utero. Low birth weight stood at 27.4% (SOFI 2024); women's anaemia rose from 53% to 57% (NFHS-4 to NFHS-5). With 194.6 million Indians undernourished — the world's largest country count (SOFI 2024) — the cycle persists across generations.

Scheme architecture: POSHAN 2.0 covers about 10 crore beneficiaries through 14 lakh Anganwadi Centres (Rs 21,960 crore, Union Budget 2025–26); the Poshan Tracker enables real-time growth monitoring; Anemia Mukt Bharat follows a 6×6×6 strategy of six target groups, six interventions and six institutional mechanisms; PM POSHAN delivers supplementary protein in schools; every Northeastern state still records stunting above 22%, well off the 2018 target of 25%.

Conclusion:

> Converge Jal Shakti, Health, WCD and Education at the district level — nutrition is a horizontal problem currently trapped in a vertical bureaucracy.

SOURCES

- →Malnutrition in India: Undernutrition, Overnutrition and Micronutrient Deficiency
- →NFHS-5 India Report — IIPS
- →State of Food Security and Nutrition in the World 2024 — FAO

stunting | wasting | anaemia | first 1,000 days | POSHAN 2.0 | WASH convergence | low birth weight | double burden

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Q59

Census 2011 put India's urban population at 31.16%; the 2027 enumeration is expected to record over 37%. Examine the structural drivers of Indian urbanisation and the limitations of the 5,000-population census-town definition.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | URBANISATION — DRIVERS AND DEFINITION

ANSWER OUTLINE

Introduction: The Census defines an urban settlement as a place with 5,000+ population, density 400/km², 75% male non-agricultural workforce — or any statutory town. 'Census towns' have grown faster than statutory towns since 2001.

Body — three dimensions: (1) Pace — urban share 17.3% (1951) → 27.8% (2001) → 31.16% (Census 2011); UN World Urbanisation Prospects projects 50.3% by 2050. (2) Driver mix — rural distress migration (NSSO 64th round), small-town informal sector, peri-urban land conversion. (3) Definitional gap — the 5,000-population cut-off undercounts as 'rural' areas with truly urban character, especially in Kerala and Tamil Nadu; over 3,892 census towns lack ULB governance.

Conclusion: Re-categorise census towns as ULBs (74th Amendment), update definitions and prepare master plans before 2027 enumeration locks in undercounted urban needs.

KEY POINTS TO INCLUDE

- Urban definition — 5,000 population, 400/km², 75% non-agri male workers
- Urban share 17.3% (1951) → 31.16% (Census 2011)
- UN WUP 2018 — India urban 50.3% by 2050
- 3,892 census towns vs 4,041 statutory towns (Census 2011)
- 74th Constitutional Amendment, 1992 — Urban Local Bodies

- 12th Schedule — 18 functional items for ULBs
- Peri-urban zones outside ULB jurisdiction
- RGI postponed Census 2021; 2027 enumeration cleared December 2025

EXAMPLES & CASE STUDIES

- Kerala — entire state functionally urban, classified rural
- Bengaluru rural-urban fringe expansion
- Greater Noida — peri-urban growth without ULB
- Tamil Nadu — census towns concentration

MODEL ANSWER

Introduction: The Census defines an urban settlement as a place with 5,000-plus population, density above 400/sq km and 75% male non-agricultural workforce, or any statutory town. India's urban share rose from 17.3% in 1951 to 31.16% in Census 2011 and is projected past 37% in the 2027 enumeration.

Body: Three drivers shape urbanisation: rural distress migration (NSSO 64th round); small-town informal sector growth fed by peri-urban land conversion; and natural urban growth. Census towns — places with urban character but without ULB status — have grown faster than statutory towns since 2001, with 3,892 against 4,041 statutory towns in 2011, leaving most without 74th Amendment institutions. UN World Urbanisation Prospects projects India's urban share at 50.3% by 2050. The 5,000-population cut-off undercounts Kerala and Tamil Nadu where rural settlements are functionally urban.

Conclusion: Re-categorise census towns as ULBs, revise the cut-off and prepare 74th-Amendment master plans before the 2027 Census locks undercount into policy.

SOURCES

→Urbanisation in India: Drivers, Challenges, Schemes and Way Forward
→Urban Local Bodies in India — 74th Amendment, Finances
→Census of India 2011 — Urban-Rural Distribution

census town | statutory town | peri-urban | 74th Amendment | urbanisation | ULB | rural-urban continuum | WUP

Q60

India's urban housing shortage was estimated at 1.88 crore units in 2012; PMAY-Urban has sanctioned 1.18 crore homes as of 2024. Critically analyse

the demand-supply gap and the case for an Urban Employment Guarantee.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | URBANISATION — HOUSING AND EMPLOYMENT

ANSWER OUTLINE

Introduction: The Hashim Committee (2012) estimated urban housing shortage at 1.88 crore units, of which ~96% was in EWS/LIG. PMAY-U (launched 25 June 2015) has sanctioned about 1.18 crore homes by 2024.

Body — three dimensions: (1) Supply gaps — PMAY-U four verticals (ISSR, AHP, BLC, CLSS); PMAY-U 2.0 (2024) targets 1 crore more; affordable rental housing complexes for migrants. (2) Demand side — urban informality, in-situ slum upgrading vs eviction; 65 million slum residents (Census 2011). (3) Employment side — case for an Urban Employment Guarantee Scheme: Kerala's Ayyankali Scheme, Himachal's MGNREGS-style urban programmes; need is highest among construction-dependent workers post-pandemic.

Conclusion: Bundle PMAY-U 2.0 with rental housing for migrants and an UEGS as a counter-cyclical floor; otherwise PMAY units stand empty while migrants live in slums.

KEY POINTS TO INCLUDE

- Hashim Committee 2012 — urban housing shortage 1.88 crore units
- ~96% shortage in EWS/LIG
- PMAY-U launched 25 June 2015
- PMAY-U four verticals — ISSR, AHP, BLC, CLSS
- About 1.18 crore homes sanctioned by 2024 (MoHUA)
- PMAY-U 2.0 — 1 crore additional homes
- Slum population — 65.49 million (Census 2011)
- Affordable Rental Housing Complexes scheme, 2020
- Kerala Ayyankali Urban Employment Guarantee Scheme

EXAMPLES & CASE STUDIES

- Mumbai Dharavi redevelopment — in-situ model
- Delhi Kathputli Colony — eviction without housing
- Hyderabad 2BHK Dignity Housing
- Tamil Nadu Tenement Housing Scheme
- MGNREGS rural model as template for UEGS

MODEL ANSWER

Introduction:

The Hashim Committee (2012) pegged India's urban housing shortage at 1.88 crore units, with about 96% in the EWS and LIG segments. PMAY-Urban, launched on 25 June 2015, has sanctioned around 1.18 crore homes by 2024; PMAY-U 2.0 (2024) targets one crore more. Yet 65.49 million urban Indians (Census 2011) still live in slums and demand keeps outrunning supply.

Supply architecture: PMAY-U runs four verticals — In-Situ Slum Redevelopment, Affordable Housing in Partnership, Beneficiary-Led Construction and Credit-Linked Subsidy Scheme. The Affordable Rental Housing Complex scheme of 2020 was designed for migrants after the pandemic exposed urban precarity. The Dharavi in-situ redevelopment in Mumbai and Hyderabad's 2BHK Dignity Housing exemplify two opposite delivery models.

Demand-supply gap: Unit sanction is not occupation. Many PMAY units lie unoccupied at urban peripheries while migrants crowd into informal rentals close to work. Slum eviction without rehabilitation, as in Delhi's Kathputli Colony, undermines the in-situ promise; CLSS reached creditworthy demand, not the EWS for whom the scheme was nominally designed.

Urban Employment Guarantee case: Kerala's Ayyankali Urban Employment Guarantee Scheme, Tamil Nadu's Tenement Housing Scheme and Himachal's MGNREGS-style urban pilots show how a public-works floor stabilises informal workers and underpins housing affordability. Construction-dependent workers and street vendors need exactly such a counter-cyclical guarantee tied to PMAY-U occupancy.

Conclusion:

Bundle PMAY-U 2.0, ARHCs and a national Urban Employment Guarantee Scheme — housing alone cannot solve urban precarity if migrants cannot pay for it.

SOURCES

→PMAY-Urban: Housing for All, 4 Verticals, CLSS and PMAY-U 2.0
→Urban Housing Crisis in India: Causes, PMAY-U and Reform Roadmap
→Need for Urban Wage Employment Program: A Case for Urban MGNREGA

PMAY-U | EWS/LIG | CLSS | ISSR | ARHC | UEGS | slum upgrading | Hashim Committee

Q61

Globalisation has rewritten India's middle-class consumption, work culture and family life — but it has not produced uniform gains. Examine its differentiated impact with reference to job markets, traditional crafts and cultural homogenisation.

10 MARKS | 150 WORDS | 9 MIN | EASY | GLOBALISATION

ANSWER OUTLINE

Introduction: Define globalisation as the post-1991 reform integration of India with global capital, labour and culture. Frame both winners and losers.

Body — three dimensions: (1) Jobs — IT-BPM ~5.4 million workers (NASSCOM 2024), services 53% of GDP; conversely 90% workforce still informal, MSME craft clusters squeezed by Chinese imports. (2) Crafts and culture — handloom workers down from 65.5 lakh (Handloom Census 1995-96) to 35.22 lakh (Fourth Handloom Census 2019-20); globalised English-medium consumption coexists with vernacular resurgence. (3) Family and gender — delayed marriage in metros, dual-income households, but also reverse migration (FY21 pandemic) and dowry inflation in upwardly mobile groups.

Conclusion: Globalisation is neither a blessing nor a curse — its outcomes are mediated by caste, region and skill. Protect craft and language ecosystems through GI tags (e.g., Banarasi saree, Kanchipuram silk, Madhubani) and a re-skilling push for tier-2/tier-3 cities.

KEY POINTS TO INCLUDE

- Post-1991 LPG reforms — Manmohan Singh budget speech, 24 July 1991
- IT-BPM 5.4 million workers (NASSCOM 2024)
- Services 53% of GDP (Economic Survey 2024-25)
- Handloom Census 2019-20 — 35.22 lakh weavers, down from 65.5 lakh in 1995-96
- Fourth Handloom Census published 2020
- Geographical Indications — 432 registered as of 2024
- MSME ~6.3 crore enterprises, employing 11+ crore
- Pandemic reverse migration 2020-21 — over 1 crore returned

EXAMPLES & CASE STUDIES

- Bengaluru and Hyderabad as global IT clusters
- Banarasi saree GI tag, 2009, against imitation imports
- Tirupur knitwear export cluster

- Surat diamond polishing — over 10 lakh workers
- Channapatna toy GI vs cheap plastic imports

MODEL ANSWER

Introduction: Manmohan Singh's 24 July 1991 budget integrated India with global capital, labour and culture — rewriting middle-class consumption, work culture and family life, but with sharply unequal gains across regions and social groups.

Body: Jobs split unevenly: IT-BPM employs about 5.4 million workers (NASSCOM 2024) and services contribute 53% of GDP (Economic Survey 2024-25), yet 90% of workers remain informal. Crafts felt the squeeze — the Fourth Handloom Census (2019–20) recorded 35.22 lakh weavers, down from 65.5 lakh in 1995-96 — even as 432 GI tags (Banarasi saree 2009, Channapatna toys, Madhubani painting) push back against imitation imports. Culture and family transform too: English-medium consumption and dual-income metros coexist with dowry inflation, vernacular resurgence and the over one-crore reverse migration of 2020–21.

Conclusion: Globalisation's outcomes are mediated by caste, region and skill — GI protection, MSME credit and tier-2/tier-3 re-skilling are the equalisers.

SOURCES

→Globalisation and Indian Society
→Growth, Inequality and the Demographic Dividend
→Fourth All India Handloom Census 2019-20 — Ministry of Textiles

LPG reforms | IT-BPM | Handloom Census | Geographical Indication | MSME | informal sector | cultural homogenisation | reverse migration

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Q62

Regionalism in India is the politics of perceived neglect of resources, identity and recognition. Discuss with reference to demands for sub-state autonomy, river-water disputes and the Sixth Schedule areas.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | REGIONALISM

ANSWER OUTLINE

Introduction: Distinguish regionalism (loyalty to a sub-national region) from secessionism. Frame three forms: linguistic/cultural, resource-based, identity-based.

Body — three dimensions: (1) Sub-state autonomy — Telangana statehood 2 June 2014 after agitation since 1969; Vidarbha, Bodoland, Gorkhaland; Article 371-A through 371-J special provisions. (2) Resource disputes — Cauvery (Karnataka–Tamil Nadu), Krishna (Telangana–Andhra), Mahanadi (Odisha–Chhattisgarh), Sutlej-Yamuna Link (Punjab–Haryana). (3) Sixth Schedule — Bodoland Territorial Region 2003, Karbi Anglong Autonomous Council; Ladakh's demand for Sixth Schedule status since 2019.

Conclusion: Linguistic federalism (Fazl Ali Commission 1955), the Inter-State River Water Disputes Act, 1956 and the Sixth Schedule are the constitutional answers — they manage regionalism but cannot dissolve the grievances that fuel it.

KEY POINTS TO INCLUDE

- Telangana created 2 June 2014, 29th state
- Andhra Pradesh Reorganisation Act, 2014
- Bodoland Territorial Region constituted 2003, expanded 2020 Accord
- Article 371-A (Nagaland), 371-G (Mizoram), 371-J (Hyderabad-Karnataka)
- Cauvery Water Disputes Tribunal 1990; Supreme Court 2018 final award
- Sutlej-Yamuna Link canal — Supreme Court 2002 verdict
- Ladakh demand for Sixth Schedule, post-Article 370 abrogation 2019
- Sixth Schedule covers Assam, Meghalaya, Tripura, Mizoram
- Fazl Ali Commission Report, 30 September 1955

EXAMPLES & CASE STUDIES

- Telangana statehood movement led by K. Chandrashekar Rao
- Gorkhaland Territorial Administration (GTA), 2011
- Karbi Anglong Autonomous Council, Assam
- Mahanadi Water Disputes Tribunal, 2018
- Marathi-Kannada Belgaum border dispute

MODEL ANSWER

> **Introduction:** Regionalism, distinct from secessionism, is loyalty to a sub-national region rooted in perceived neglect of resources, identity or recognition; it takes linguistic, resource-based and identity-based forms.
>
> **Body:** Sub-state autonomy is the first form: Telangana, India's 29th state, was created on 2 June 2014 under the Andhra Pradesh Reorganisation Act 2014, after agitation since 1969; Vidarbha, Bodoland and Gorkhaland demands continue; Articles 371-A to 371-J grant special provisions to Nagaland, Mizoram and Hyderabad-Karnataka.

Resource disputes form the second: Cauvery (Karnataka–Tamil Nadu, Supreme Court 2018 award), Krishna, Mahanadi and the Sutlej-Yamuna Link sustain inter-state friction under the Inter-State River Water Disputes Act 1956. Identity-based regionalism animates the Sixth Schedule — Bodoland Territorial Region (2003, expanded 2020), Karbi Anglong, and Ladakh's demand for Sixth Schedule status since 2019.

Conclusion: The Fazl Ali Commission (1955) framework manages regionalism; it does not dissolve the grievances of resource and recognition that fuel it.

SOURCES

→Communal Violence in India: Causes, Major Incidents and Government Response
→Fundamental Rights and Articles
→Ministry of Tribal Affairs — Sixth Schedule Areas

regionalism | Sixth Schedule | river-water dispute | Article 371 | autonomous council | linguistic federalism | ISRWD Act | Telangana

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Q63

India's tribal population at 10.43 crore (Census 2011) includes 75 Particularly Vulnerable Tribal Groups concentrated in 18 states. Examine the constitutional framework — Fifth Schedule, Sixth Schedule, PESA and the FRA — and the gap in PVTG implementation.

15 MARKS | 250 WORDS | 14 MIN | HARD | DIVERSITY — SCHEDULED TRIBES

ANSWER OUTLINE

Introduction: Scheduled Tribes are 8.6% of population (10.43 crore, Census 2011). 75 PVTGs identified across 18 states/UTs (originally Dhebar Commission 1960; renamed PVTG in 2006).

Body — three dimensions: (1) Constitutional architecture — Articles 342, 244; Fifth Schedule (10 states) and Sixth Schedule (4 NE states); PESA Act, 1996 extending Panchayati Raj to scheduled areas; FRA, 2006 recognising individual and community forest rights. (2) PVTG situation — Jarawas, Onges, Great Andamanese, Birhor, Bonda, Sahariya, Saharia, Cholanaikkans — pre-agricultural, low literacy, stagnant population. (3) Implementation gap — FRA recognises only ~50% of community forest rights claims; PM JANMAN ₹24,104 crore mission for PVTGs (November 2023) covers housing, road, water, mobile connectivity.

Conclusion: Replace welfare-as-substitution with rights-as-recognition under the FRA and PESA, and let Gram Sabhas drive PM JANMAN delivery for PVTGs.

KEY POINTS TO INCLUDE

- ST population 10.43 crore, 8.6% (Census 2011)
- 75 PVTGs across 18 states/UTs (MoTA list)
- Articles 342, 244, 275(1), 339
- Fifth Schedule — 10 states; Sixth Schedule — Assam, Meghalaya, Tripura, Mizoram
- PESA Act, 24 December 1996
- Forest Rights Act, 2006 — Individual Forest Rights and Community Forest Rights
- Xaxa Committee Report 2014 — tribal welfare review
- PM JANMAN launched 15 November 2023, ₹24,104 crore over 3 years
- Dhebar Commission 1960 — original PVTG identification basis

EXAMPLES & CASE STUDIES

- Jarawas of Andaman — Andaman Trunk Road controversy
- Sentinelese — uncontacted PVTG, North Sentinel Island
- Birhor of Jharkhand — semi-nomadic
- Sahariya of Madhya Pradesh and Rajasthan
- Cholanaikkans of Kerala — cave-dwelling PVTG
- Niyamgiri Bauxite case 2013 — FRA-Gram Sabha veto

MODEL ANSWER

> **Introduction**:
>
> Scheduled Tribes form 8.6% of India's population — 10.43 crore per Census 2011 — with 75 Particularly Vulnerable Tribal Groups (PVTGs) spread across 18 states and Union Territories, originally identified through the Dhebar Commission (1960) and renamed PVTG in 2006.
>
> **Constitutional architecture:** Articles 342, 244, 275(1) and 339 anchor tribal welfare. The Fifth Schedule covers Scheduled Areas in 10 states; the Sixth Schedule grants autonomous councils in Assam, Meghalaya, Tripura and Mizoram. The PESA Act (24 December 1996) extends Panchayati Raj to Scheduled Areas with Gram Sabha primacy. The Forest Rights Act, 2006 recognises Individual Forest Rights and Community Forest Rights — the basis of the Niyamgiri Gram Sabha veto on Vedanta in 2013.

PVTG situation: The Jarawas (Andaman Trunk Road dispute), Sentinelese (uncontacted), Birhor (Jharkhand), Sahariya (MP-Rajasthan), Bonda (Odisha) and Cholanaikkans (Kerala) represent pre-agricultural, low-literacy groups with stagnant or declining populations. The Xaxa Committee (2014) documented health, education and land-alienation gaps. FRA implementation recognises only about half of community forest claims, and PESA's Gram Sabha consent is routinely diluted in linear-project clearances.

PM JANMAN: Launched on 15 November 2023 with Rs 24,104 crore over three years, PM JANMAN targets PVTG-specific gaps — pucca housing, road, water, mobile connectivity, electricity and Anganwadi coverage — through a mission-mode convergence approach across line ministries.

Conclusion:

Replace welfare-as-substitution with rights-as-recognition; let Gram Sabhas drive PM JANMAN delivery, and FRA-PESA enforcement determine whether constitutional protections become lived rights for PVTGs.

SOURCES

→Scheduled Tribes in India — Fifth and Sixth Schedules, PESA, FRA and PVTG Framework
→Santhal Tribe: India's Largest Adivasi Community, Culture, and the 1855 Rebellion
→Ministry of Tribal Affairs — PM JANMAN

PVTG | PESA | Forest Rights Act | Fifth Schedule | Sixth Schedule | PM JANMAN | Xaxa Committee | Gram Sabha

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Q64

India's mental-health treatment gap stands at 84.5% — only one in six people with a diagnosable disorder reaches care. Examine the structural drivers and the promise of task-sharing under the District Mental Health Programme.

15 MARKS | 250 WORDS | 14 MIN | HARD | POPULATION — MENTAL HEALTH

ANSWER OUTLINE

Introduction: Define 'treatment gap'. National Mental Health Survey (NMHS) 2015-16 — current adult prevalence 10.56%, lifetime 13.67%, treatment gap 70–86%, highest for common mental disorders.

Body — three dimensions: (1) Workforce — about 0.75 psychiatrists per lakh (WHO Atlas 2020) vs WHO benchmark of 3+; only ~9,000 psychiatrists for 1.4 billion. (2) Legal architecture — Mental Healthcare Act, 2017 — right to mental healthcare, decriminalised suicide attempt under Section 115, advance directive, Mental Health Review Boards; Section 309 IPC abolished. (3) Delivery — National Mental Health Programme since 1982, District Mental Health Programme in 767 districts; Tele MANAS (October 2022) — 24×7 helpline, 18.4 lakh calls handled by 2025.

Conclusion: Task-share with ASHAs, ANMs and lay counsellors under specialist supervision, fund the DMHP at scale and integrate with Ayushman Bharat Health and Wellness Centres.

KEY POINTS TO INCLUDE

- NMHS 2015-16 — current adult prevalence 10.56%, lifetime 13.67%
- Treatment gap 70–86%, severe MDs 73%, common MDs 85%
- WHO Mental Health Atlas 2020 — India 0.75 psychiatrists/lakh
- Mental Healthcare Act, 2017 — right to mental healthcare
- Section 115 MHCA — decriminalised attempted suicide
- National Mental Health Programme since 1982
- District Mental Health Programme — 767 districts
- Tele MANAS launched October 2022, 18.4 lakh calls by 2025
- Advance directive provision in MHCA 2017

EXAMPLES & CASE STUDIES

- NIMHANS, Bengaluru — apex institute
- Atmiyata project, Maharashtra — community gatekeeper model
- Sangath, Goa — task-sharing for depression
- Manochaitanya, Karnataka — Tuesday outpatient mental clinics
- Mental Health Review Board, Maharashtra

MODEL ANSWER

> **Introduction**:
>
> India's mental-health treatment gap stands at 84.5% — only one in six people with a diagnosable disorder reaches care. The National Mental Health Survey (NMHS) 2015–16 estimated current adult prevalence at 10.56% and lifetime prevalence at 13.67%, with treatment gaps of 73% for severe and 85% for common mental disorders.

Workforce shortage: The WHO Mental Health Atlas 2020 shows India has only 0.75 psychiatrists per lakh population against a benchmark of three — about 9,000 psychiatrists for 1.4 billion. Clinical psychologists, psychiatric nurses and social workers are even scarcer, concentrated in metropolitan tertiary centres like NIMHANS Bengaluru while rural districts depend on overstretched DMHP staff.

Legal architecture: The Mental Healthcare Act, 2017 made mental healthcare a right, recognised advance directives, set up Mental Health Review Boards, and Section 115 decriminalised attempted suicide (replacing Section 309 IPC). The Rights of Persons with Disabilities Act, 2016 recognised mental illness as a disability with attendant entitlements.

Delivery and task-sharing: The National Mental Health Programme (since 1982) and the District Mental Health Programme (now in 767 districts) form the backbone; Tele MANAS (October 2022) had handled 18.4 lakh calls by 2025 through a 24×7 helpline. Task-sharing pilots — Sangath in Goa, Atmiyata in Maharashtra and Manochaitanya in Karnataka — show ASHA-counsellor and lay-counsellor models can extend reach under specialist supervision.

Conclusion:

Scale DMHP funding, train ASHAs as gatekeepers and integrate mental health into Ayushman Bharat Health and Wellness Centres to close the gap.

SOURCES

→Mental Health in India: Burden, Challenges and Policy
→National Mental Health Survey 2015-16 — NIMHANS
→Mental Healthcare Act, 2017 — Ministry of Health & Family Welfare

treatment gap | NMHS 2015-16 | DMHP | Tele MANAS | MHCA 2017 | advance directive | task-sharing | Section 309 IPC

Q65

India's official disability prevalence stands at 2.21% (Census 2011) against the WHO's global estimate of around 16%. Examine the data undercount and assess the gap between the RPwD Act, 2016 and lived exclusion.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | POPULATION — PERSONS WITH DISABILITIES

ANSWER OUTLINE

Introduction: India counts persons with disabilities at 2.68 crore (Census 2011, 2.21%); NSO 76th round (2018) again 2.2%. WHO 2022 global figure is roughly 16% — India counts about one-seventh.

Body — three dimensions: (1) Definition shift — RPwD Act, 2016 expanded recognised disabilities from 7 to 21, social model replacing medical model; 4% reservation in government jobs, 5% in higher education. (2) Undercount drivers — narrow definitions, stigma-driven under-reporting, survey design. (3) Implementation gap — Rajive Raturi judgment (8 November 2024) made accessibility a fundamental right; Sugamya Bharat (3 December 2015) — bus accessibility just 8.73%; DEPwD budget ₹1,275 crore, 0.025% of Union Budget; under 40% SIPDA spent in 2024-25.

Conclusion: A fresh disability count in Census 2027 and full SIPDA-DDRC delivery are pre-conditions for converting rights to access.

KEY POINTS TO INCLUDE

- Census 2011 PwD — 2.68 crore, 2.21%
- WHO Global Report on Disability 2022 — ~16% globally
- RPwD Act, 2016 — recognised disabilities 7 → 21
- 4% government job reservation, 5% higher-education reservation
- UNCRPD ratified 1 October 2007
- Rajive Raturi v. Union of India (8 November 2024) — accessibility fundamental right
- Sugamya Bharat Abhiyan launched 3 December 2015
- Bus accessibility 8.73% (Rajive Raturi 2024 reading)
- DEPwD allocation ₹1,275 crore for 2025-26 — 0.025% of Union Budget
- Over 1.1 crore UDID cards generated by mid-2024

EXAMPLES & CASE STUDIES

- Autism, intellectual disability, sickle cell among newly recognised
- UDID Swavlamban card replacing state certificates
- ADIP scheme for aids and appliances
- DDRS rehabilitation scheme
- Inclusive Sansad — accessible Parliament building 2023

MODEL ANSWER

Introduction: India counts persons with disabilities (PwDs) at 2.68 crore (Census 2011, 2.21%) and 2.2% in NSO 76th round (2018), against the WHO Global Report on Disability 2022 estimate of about 16% worldwide — India counts roughly one-seventh of the global benchmark.

Body: The undercount has three roots. First, narrow definitions — though the RPwD Act, 2016 widened recognised disabilities from 7 to 21, including autism, intellectual disability and sickle cell, and adopted a social rather than medical model, with 4% reservation in government jobs and 5% in higher education. Second, stigma-driven under-reporting in census-style surveys. Third, design gaps in enumeration. The Rajive Raturi judgment (8 November 2024) made accessibility a fundamental right; Sugamya Bharat Abhiyan (3 December 2015) records bus accessibility at only 8.73%; DEPwD's Rs 1,275 crore is just 0.025% of the Union Budget.

Conclusion: A fresh disability count in Census 2027 plus full SIPDA-DDRC delivery are pre-conditions for converting RPwD rights into lived access.

SOURCES

→Persons with Disabilities in India — RPwD Act 2016, UNCRPD and Accessible India
→Department of Empowerment of Persons with Disabilities
→WHO Global Report on Disability 2022

RPwD Act 2016 | UNCRPD | social model | Rajive Raturi | Sugamya Bharat | UDID | DEPwD | undercount

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Q66

Women's organisations in India have historically led both social reform and rights-based legislation. Trace this lineage from the 19th-century reformers to contemporary self-help group federations.

10 MARKS | 150 WORDS | 9 MIN | EASY | WOMEN AND WOMEN'S ORGANISATIONS

ANSWER OUTLINE

Introduction: Women's organisations have moved from reform to rights to economic agency over 150 years.

Body — three phases: (1) Reform era — Ramabai's Arya Mahila Samaj (1882), Pandita Ramabai's Sharada Sadan, Bharat Stree Mahamandal (1910, Saraladevi Chaudhurani), All India Women's Conference (1927) — driving Sarda Act, 1929 and Hindu Code Bill 1955-56. (2) Rights era — Towards Equality Report 1974 (Status of Women Committee); SEWA (Ela

Bhatt, 1972) organising informal women workers; Mathura rape case (1979) leading to Criminal Law Amendment 1983. (3) Self-help era — Kerala's Kudumbashree (1998) with over 45 lakh women in 3 lakh+ NHGs; DAY-NRLM SHGs covering over 10 crore women.

Conclusion: From legal reform to grassroots livelihood, women's organisations have shaped both the law and the implementation of women's rights.

KEY POINTS TO INCLUDE

- Arya Mahila Samaj 1882 — Pandita Ramabai
- All India Women's Conference 1927 — Margaret Cousins, Sarojini Naidu
- Sarda Act 1929 — minimum marriage age 14 girls
- Towards Equality Report 1974 — Committee on Status of Women
- SEWA founded 1972 by Ela Bhatt, Ahmedabad
- Mathura rape case 1979, Criminal Law Amendment 1983
- Kudumbashree, Kerala, launched 1998
- DAY-NRLM — over 10 crore SHG women
- National Commission for Women, 1992

EXAMPLES & CASE STUDIES

- Pandita Ramabai's Sharada Sadan, Pune, 1889
- Saheli, Delhi, anti-dowry collective
- Manushi journal (1978) — Madhu Kishwar
- MARG (Multiple Action Research Group)
- Mahila Mandal of village-level women's groups

MODEL ANSWER

> **Introduction:** Indian women's organisations have moved over 150 years from social reform to rights-based legislation to grassroots economic agency.
>
> **Body:** The reform era opened with Pandita Ramabai's Arya Mahila Samaj (1882) and Sharada Sadan in Pune (1889), followed by Saraladevi Chaudhurani's Bharat Stree Mahamandal (1910) and the All India Women's Conference (1927, Margaret Cousins, Sarojini Naidu), which drove the Sarda Act 1929 and the Hindu Code reforms of 1955-56. The rights era turned on the Towards Equality Report (1974) of the Committee on Status of Women, Ela Bhatt's SEWA (Ahmedabad, 1972) organising informal women workers, and the Mathura rape case (1979) that produced the Criminal Law Amendment Act, 1983. The self-help era is anchored by Kerala's Kudumbashree (1998)

with over 45 lakh women, and DAY-NRLM SHGs covering more than 10 crore women nationally.

Conclusion: From legal reform to livelihood, women's organisations shape both India's law and its on-ground implementation.

SOURCES

→Women Empowerment in India: A UPSC Essay Framework
→Women's Reservation Bill: Nari Shakti Vandan Adhiniyam 2023 Explained
→DAY-NRLM Dashboard — Ministry of Rural Development

Arya Mahila Samaj | AIWC | Towards Equality | SEWA | Kudumbashree | NRLM | Self-Help Group | Mathura case

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Q67

'Indian secularism is sui generis — neither French laïcité nor American wall-of-separation.' Examine with reference to constitutional articles, the Sachar Committee and recent debates over personal laws.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | SECULARISM

ANSWER OUTLINE

Introduction: Indian secularism = principled distance (Rajeev Bhargava), allowing state engagement with religion for reform while maintaining equal respect. 42nd Amendment (1976) inserted 'secular' in the Preamble.

Body — three dimensions: (1) Constitutional fabric — Articles 25–28 (freedom of religion), 29-30 (minority rights), 44 (UCC directive); S.R. Bommai (1994) — secularism as basic structure. (2) State engagement — Hindu Code Bill 1955-56, Places of Worship Act 1991, Triple Talaq verdict (Shayara Bano, 2017) and law 2019, Sabarimala (2018). (3) Tensions — Sachar Committee 2006 (Muslim deprivation index), CAA 2019 debate, anti-conversion laws in 9 states.

Conclusion: The model permits intervention for equality while protecting religious freedom; the test is even-handed application, not retreat to either French or American template.

KEY POINTS TO INCLUDE

- 'Secular' inserted by 42nd Amendment, 1976
- Articles 25–28 — religious freedom; 29-30 — minority rights
- Article 44 — Uniform Civil Code (Directive Principle)

- S.R. Bommai v. Union of India (1994) — secularism as basic structure
- Rajeev Bhargava — 'principled distance' doctrine
- Places of Worship (Special Provisions) Act, 1991
- Shayara Bano v. Union of India (2017) — triple talaq
- Muslim Women (Protection of Rights on Marriage) Act, 2019
- Sachar Committee Report, 17 November 2006
- Anti-conversion laws — Uttar Pradesh 2020, MP, Karnataka 2022

EXAMPLES & CASE STUDIES

- Indra Sawhney (1992) — limited reservation for religion-based groups
- Shah Bano case 1985, then Muslim Women Act 1986
- Sabarimala Indian Young Lawyers Association v. State of Kerala (2018)
- Goa Common Civil Code (Portuguese legacy)
- Karnataka hijab judgment 2022

MODEL ANSWER

Introduction:

Indian secularism is sui generis: neither French laïcité (strict separation, no state engagement with religion) nor the American 'wall of separation' (state neutrality through non-establishment). Rajeev Bhargava's 'principled distance' captures the Indian model, which permits state intervention in religion for reform while maintaining equal respect. The 42nd Amendment (1976) inserted 'secular' in the Preamble.

Constitutional fabric: Articles 25–28 secure freedom of religion; Articles 29–30 protect minority cultural and educational rights; Article 44 holds out the Uniform Civil Code as a Directive Principle. In S.R. Bommai v. Union of India (1994), the Supreme Court declared secularism part of the Constitution's basic structure, immune from amendment.

State engagement: The Hindu Code Bill 1955-56, the Places of Worship (Special Provisions) Act 1991, the Shayara Bano triple-talaq verdict (2017) and the Muslim Women (Protection of Rights on Marriage) Act, 2019 illustrate that Indian secularism intervenes for gender equality across communities; the Sabarimala judgment (2018) extended this to Hindu practice. Goa's Common Civil Code, a Portuguese legacy, models a UCC.

Tensions: The Sachar Committee (17 November 2006) documented Muslim socio-economic deprivation — 4.9% in central services — raising substantive-equality concerns. The Shah Bano episode (1985) and the Muslim Women Act 1986, the CAA 2019, and anti-conversion laws in Uttar Pradesh (2020), Madhya Pradesh and Karnataka (2022) test even-handed application.

Conclusion:

The Indian model permits intervention for equality while protecting freedom; its legitimacy depends on even-handed application, not retreat to French or American templates.

SOURCES

→Places of Worship Act, 1991: Provisions, Exceptions, Secularism and UPSC Notes
→Fundamental Rights and Articles
→Sachar Committee Report 2006 — Ministry of Minority Affairs

principled distance | Articles 25–28 | S.R. Bommai | Sachar Committee | UCC | laïcité | triple talaq | Places of Worship Act

Q68

Indian society draws diversity not only from religion but from a vast linguistic, ethnic and dietary spectrum. Examine how the Eighth Schedule and Article 350 institutionalise linguistic diversity.

10 MARKS | 150 WORDS | 9 MIN | EASY | SALIENT FEATURES — DIVERSITY

ANSWER OUTLINE

Introduction: Census 2011 records 121 mother tongues with over 10,000 speakers across 22 scheduled and 100 non-scheduled languages. India's linguistic federalism is unique.

Body — three dimensions: (1) Eighth Schedule — started with 14 languages (1950), now 22 after additions of Sindhi (1967), Konkani, Manipuri, Nepali (1992), Bodo, Dogri, Maithili, Santhali (2003); demands include Tulu, Bhojpuri, Garhwali. (2) Article 350-A (mother-tongue instruction at primary stage), 350-B (Special Officer for Linguistic Minorities), Article 343 (Hindi as Official Language) and Article 345 (state language). (3) Three-language formula — Kothari Commission 1968, NEP 2020 reaffirmation; English-medium expansion vs vernacular concern.

Conclusion: The framework has accommodated linguistic plurality; classical-language tags (Sanskrit, Tamil, Telugu, Kannada, Malayalam, Odia, Marathi, Pali, Prakrit, Assamese,

Bengali — declared October 2024) add cultural recognition.

KEY POINTS TO INCLUDE

- Census 2011 — 121 mother tongues with >10,000 speakers
- Eighth Schedule — 22 languages (started with 14 in 1950)
- Sindhi added 1967 (21st Amendment)
- Konkani, Manipuri, Nepali added 1992 (71st Amendment)
- Bodo, Dogri, Maithili, Santhali added 2003 (92nd Amendment)
- Articles 343-351 — Official Language Part XVII
- Article 350-A — primary education in mother tongue
- Article 350-B — Special Officer for Linguistic Minorities
- 11 classical languages, Assamese-Bengali-Marathi-Pali-Prakrit added 3 October 2024

EXAMPLES & CASE STUDIES

- Hindi 43.6%, Bengali 8.0% (Census 2011)
- Demand for Bhojpuri, Tulu, Garhwali inclusion
- Three-language formula in Tamil Nadu vs two-language policy
- Kannada, Telugu, Malayalam, Odia classical status
- Tamil — first classical-language declaration (2004)

MODEL ANSWER

> **Introduction:** Census 2011 records 121 mother tongues spoken by over 10,000 speakers each across 22 scheduled and 100 non-scheduled languages — India's linguistic federalism is unique in the world.
>
> **Body:** The Eighth Schedule began with 14 languages in 1950 and now lists 22 after Sindhi (1967, 21st Amendment), Konkani, Manipuri and Nepali (1992, 71st Amendment), and Bodo, Dogri, Maithili and Santhali (2003, 92nd Amendment); demands for Tulu, Bhojpuri and Garhwali remain pending. Articles 343–351 (Part XVII) frame the official-language regime; Article 350-A secures primary education in the mother tongue; Article 350-B establishes the Special Officer for Linguistic Minorities. The three-language formula, set by the Kothari Commission (1968) and reaffirmed in NEP 2020, mediates the Hindi-English-regional balance. Hindi covers 43.6%, Bengali 8.0% (Census 2011).

> **Conclusion:** The framework has absorbed plurality; the 2024 addition of Assamese, Bengali, Marathi, Pali and Prakrit to the classical-language list on 3 October 2024 extends cultural recognition.

SOURCES

→Smallest State in India by Area and Population: Goa, Sikkim and Key Facts
→Fundamental Rights and Articles
→Census 2011 Language Atlas — Office of the Registrar General

Eighth Schedule | classical language | three-language formula | Article 350 | linguistic federalism | mother tongue | linguistic minority | Kothari Commission

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Q69

India's old-age population will more than double from 14.9 crore in 2022 to 34.7 crore by 2050 (UNFPA). Examine the 'ageing without a care system' thesis and outline a long-term care architecture.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | POPULATION — AGEING

ANSWER OUTLINE

Introduction: India's 60-plus share rises from 10.5% (2022) to 20.8% (2050) per UNFPA India Ageing Report 2023; by 2046 the elderly will outnumber under-14 children for the first time.

Body — three dimensions: (1) Speed — 60-plus group grew 103% between 2000-22, projected 134% growth 2022-50; the 80-plus 'oldest old' to rise 279%. (2) Old-age dependency ratio — 10.9 (1961) → 15.7 (2021) → projected ~34 by 2050 (NSO, Elderly in India 2021). (3) Care gap — no national LTC policy; IGNOAPS pension still ₹200/month for BPL 60-79; National Programme for Health Care of Elderly (NPHCE 2010) under-funded; Senior Citizens Welfare Fund.

Conclusion: Build a tiered care system — home-based care via ASHAs, day-care under PMJAY, residential LTC for the 80-plus — and raise IGNOAPS to a meaningful floor.

KEY POINTS TO INCLUDE

- 60-plus 10.5% (2022) → 20.8% (2050), UNFPA 2023
- 60-plus elderly to overtake under-14 by 2046
- 80-plus to grow 279% between 2022 and 2050
- Old-age dependency ratio 10.9 → 15.7 (1961-2021, NSO)
- Women 52% of elderly — feminisation of ageing

- 71% elderly rural — ruralisation of ageing
- IGNOAPS — ₹200/month, BPL 60-79 (₹500 for 80+)
- National Policy on Older Persons, 1999; Senior Care Reforms NITI Aayog 2024
- MWPSC Act, 2007 — maintenance tribunals

EXAMPLES & CASE STUDIES

- Kerala already 16%+ elderly share, leading LTC pilots
- Tamil Nadu Day Care Centres for senior citizens
- Tata Trusts — Vatsalya elder-care model
- Senior Citizens' Helpline 14567

MODEL ANSWER

Introduction: India's 60-plus share will rise from 10.5% (14.9 crore, 2022) to 20.8% (34.7 crore) by 2050, per the UNFPA India Ageing Report 2023; by 2046 the elderly will outnumber under-14 children for the first time.

Body: Speed is the first concern — the 60-plus group grew 103% between 2000 and 2022 and is projected to expand 134% over 2022–50; the 80-plus 'oldest old' will rise 279%. Dependency is the second — the old-age dependency ratio went from 10.9 (1961) to 15.7 (2021, NSO) and is projected near 34 by 2050. The care gap is the third: India has no national long-term care policy; IGNOAPS remains Rs 200/month for BPL 60–79; NPHCE (2010) is under-funded; women form 52% of the elderly and 71% live rurally.

Conclusion: Build tiered care — home-based via ASHAs, day-care under PMJAY, residential LTC for the 80-plus — and raise IGNOAPS to a meaningful floor.

SOURCES

→Senior Citizens in India — Ageing Society, MWPSC Act 2007 and Welfare Architecture
→UNEP Frontiers Report 2025: The Weight of Time, Disasters and Ageing
→UNFPA India Ageing Report 2023

UNFPA 2023 | old-age dependency | long-term care | IGNOAPS | NPHCE | feminisation of ageing | MWPSC Act | oldest old

GS PAPER 1

Biogeography

2 practice questions

Q70

Mangrove ecosystems are India's most cost-effective coastal infrastructure. Examine their distribution, ecological role and the policy regime that protects them.

10 MARKS | 150 WORDS | 9 MIN | EASY | COASTAL ECOSYSTEMS

ANSWER OUTLINE

Introduction: India has 4,992 sq km of mangrove cover as per India State of Forest Report 2021, distributed mainly along the east coast deltas, west coast estuaries and Andaman-Nicobar Islands.

Body — three dimensions: (1) Distribution: Sundarbans (West Bengal, 2,114 sq km) — world's largest contiguous mangrove forest; Bhitarkanika (Odisha, Brahmani-Baitarani delta) — saltwater crocodile habitat; Pichavaram (Tamil Nadu); Gulf of Kutch (Gujarat); Mahanadi delta. (2) Ecological role: coastal bio-shield reducing wave energy by up to 66% (NRSC studies post-2004 tsunami); carbon sequestration 3–5 times tropical forests (blue carbon); fish nursery for over 250 commercial species; livelihood for fishers, honey collectors. (3) Protection regime: Coastal Regulation Zone 2019 categorises mangroves as CRZ-IA (no-development); Mangroves for the Future programme; MISHTI scheme launched February 2023 to restore 540 sq km by 2027–28; participation in Mangrove Alliance for Climate (COP-27). Threats: shrimp aquaculture, urban expansion (Mumbai), sea-level rise.

Conclusion: Mangroves protect 7,500 km of Indian coastline at a fraction of the cost of engineered sea walls; their integration into CRZ enforcement is overdue.

KEY POINTS TO INCLUDE

- Mangrove cover 4,992 sq km, ISFR 2021
- Sundarbans 2,114 sq km, world's largest contiguous mangrove
- Bhitarkanika in Odisha — saltwater crocodile habitat
- Wave energy reduction up to 66% (NRSC)
- Blue carbon — 3–5x sequestration over tropical forests
- CRZ 2019 classifies mangroves as CRZ-IA

- MISHTI scheme launched 1 February 2023
- 540 sq km target by 2027–28
- Mangrove Alliance for Climate, COP-27

EXAMPLES & CASE STUDIES

- Sundarbans biosphere reserve, Royal Bengal Tiger habitat
- Bhitarkanika — Olive Ridley turtle nesting at Gahirmatha
- Pichavaram in Tamil Nadu
- Gulf of Kutch (Marine National Park)
- Mumbai mangroves under Bombay HC supervision

MODEL ANSWER

> **Introduction:** India holds 4,992 sq km of mangrove cover (ISFR 2021), spread across east-coast deltas, west-coast estuaries and the Andaman-Nicobar Islands — its most cost-effective natural coastal infrastructure.
>
> **Body:** The Sundarbans (West Bengal, 2,114 sq km) form the world's largest contiguous mangrove belt and a Royal Bengal Tiger habitat; Bhitarkanika (Odisha) shelters saltwater crocodiles and Olive Ridley nesting at Gahirmatha; Pichavaram (Tamil Nadu), Gulf of Kutch and the Mahanadi delta complete the network. NRSC analysis after the 2004 tsunami showed wave-energy reduction up to 66%; blue-carbon sequestration is 3–5 times that of tropical forests; over 250 commercial fish species use mangroves as nurseries. CRZ 2019 categorises mangroves as CRZ-IA (no-development); MISHTI (1 February 2023) targets 540 sq km restoration by 2027–28; India joined the Mangrove Alliance for Climate at COP-27.
>
> **Conclusion:** Mangroves defend 7,500 km of coast at a fraction of sea-wall cost — CRZ-IA enforcement against shrimp aquaculture and urban encroachment is overdue.

SOURCES

→Mangroves and Climate Resilience in India: Bio-Shields, Carbon and Coastal Livelihoods
→Biodiversity Hotspots in India: Western Ghats, Himalaya, Indo-Burma and Sundaland
→Forest Survey of India, India State of Forest Report 2021

mangrove | Sundarbans | blue carbon | CRZ 2019 | MISHTI | Bhitarkanika | bio-shield | ISFR

Q71

India's biodiversity hotspots are concentrated in four physiographically distinct regions, each with a different conservation challenge. Compare the

Western Ghats, Eastern Himalaya, Indo-Burma and Sundaland hotspots.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | BIODIVERSITY HOTSPOTS

ANSWER OUTLINE

Introduction: India is one of 17 megadiverse countries and contains four of the world's 36 biodiversity hotspots — Western Ghats, Himalaya, Indo-Burma and Sundaland (Nicobar group).

Body — three dimensions: (1) Western Ghats: 1,600 km Tapi to Kanyakumari; UNESCO World Heritage 2012; 7,402 plant species, 139 mammals; endemism over 30% in amphibians; Gadgil Report 2011 vs Kasturirangan Report 2013 on ESA. (2) Eastern Himalaya: Nepal-Sikkim-Arunachal-Northeast; over 10,000 plant species; key reserves — Kanchenjunga, Namdapha, Sikkim Biosphere Reserve; threatened by hydroelectric projects (Lower Subansiri). (3) Indo-Burma: Northeast hills and Manipur, Mizoram, southern Yunnan; Hoolock gibbon, Mizo wild orange — under jhum cultivation pressure. (4) Sundaland (Nicobar Islands): Great Nicobar — Nicobar megapode, Nicobari shrew, leatherback turtle nesting; threatened by Great Nicobar Holistic Development project. Common policy: Biological Diversity Act 2002 (NBA, SBB, BMC); 2023 Amendment eases ABS compliance.

Conclusion: Each hotspot needs region-specific governance; centralised Biodiversity Act framework requires careful state-level implementation, especially after the 2023 amendment.

KEY POINTS TO INCLUDE

- India one of 17 megadiverse countries
- Four hotspots — Western Ghats, Himalaya, Indo-Burma, Sundaland
- Western Ghats — 7,402 plants, >30% amphibian endemism
- Gadgil Report 2011 vs Kasturirangan Report 2013
- Eastern Himalaya — 10,000+ plants, Kanchenjunga Biosphere
- Indo-Burma — Hoolock gibbon, Mizo wild orange
- Sundaland — Nicobar megapode, leatherback turtle
- Biological Diversity Act 2002 — NBA, SBB, BMC
- Biodiversity (Amendment) Act 2023 — ABS provisions diluted

EXAMPLES & CASE STUDIES

- Silent Valley NP, Kerala — Western Ghats
- Namdapha NP, Arunachal — Eastern Himalaya

- Dampa Tiger Reserve, Mizoram — Indo-Burma
- Great Nicobar Biosphere Reserve — Sundaland
- Kasturirangan ESA covers 56,825 sq km of Western Ghats

MODEL ANSWER

Introduction: India is one of 17 megadiverse countries and houses four of the world's 36 biodiversity hotspots — Western Ghats, Himalaya, Indo-Burma and Sundaland — each physiographically distinct.

Body: The Western Ghats, a UNESCO World Heritage site since 2012, harbour 7,402 plant species and over 30% amphibian endemism; the Gadgil Report (2011) and Kasturirangan Report (2013) frame its ESA debate. The Eastern Himalaya, with over 10,000 plant species, faces hydroelectric pressure (Lower Subansiri) in reserves like Namdapha and Kanchenjunga. Indo-Burma's hill ecosystems shelter the Hoolock gibbon under jhum-cultivation stress, while Sundaland's Great Nicobar — home to the Nicobar megapode and leatherback turtle — is threatened by the Holistic Development project. The Biological Diversity Act 2002 and its 2023 amendment govern access and benefit-sharing.

Conclusion: Each hotspot demands region-specific governance; Gram Sabha and SBB-BMC capacity will decide whether the 2023 dilution of ABS norms costs India its biodiversity advantage.

SOURCES

→Biodiversity Hotspots in India: Western Ghats, Himalaya, Indo-Burma and Sundaland
→Biodiversity Act 2002: NBA, SBB, BMCs, Access Benefit Sharing and 2023 Amendment
→Wildlife Institute of India — Mandate, Research and Role in Conservation

biodiversity hotspot | Western Ghats | Eastern Himalaya | Indo-Burma | Sundaland | Gadgil Report | Kasturirangan Report | Biodiversity Act

GS PAPER 1

Economic Geography

4 practice questions

Q72

India's iron ore endowment is unmatched in Asia but its industrial geography of steel does not always follow the ore. Examine the spatial mismatch and its implications for industrial policy.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | MINERAL AND INDUSTRIAL LOCATION

ANSWER OUTLINE

Introduction: India holds the world's fifth-largest iron ore reserves (over 5.5 billion tonnes per IBM, 2023), is the second-largest crude steel producer (140 million tonnes, 2023), and is targeting 300 million tonnes by 2030 under the National Steel Policy 2017.

Body — three dimensions: (1) Ore geography: 80% hematite reserves in Odisha (Joda-Barbil, Keonjhar), Jharkhand (Singhbhum), Chhattisgarh (Bailadila), Karnataka (Sandur, Hospet); magnetite in Karnataka (Kudremukh) and Tamil Nadu (Salem); siderite minor. (2) Steel plant location: weight-loss principle — older plants (TISCO Jamshedpur 1907, Bhilai 1955, Rourkela 1959, Durgapur 1959, Bokaro 1965) located on Damodar-Subarnarekha coal-iron axis. Newer plants (Vijayanagar JSW, Hospet Karnataka; ArcelorMittal Hazira; AMNS Paradip) on coast-orientation for imported coking coal and export. (3) Policy and industrial corridors: National Steel Policy 2017; PLI for specialty steel 2021; iron ore export restrictions; Vizag-Chennai Industrial Corridor and East Coast Economic Corridor align with new steel geography; railway corridors (DFC East-West) carry iron ore to ports. Conflict: Bailadila in Bastar — Maoist insurgency overlaps with mineral belt.

Conclusion: India's steel future requires integrating mineral logistics, port-led growth (Sagarmala) and conflict-affected mining areas into one industrial policy frame.

KEY POINTS TO INCLUDE

- India 5th in world iron ore reserves, >5.5 billion tonnes
- Second-largest crude steel producer, 140 mt in 2023
- National Steel Policy 2017 — 300 mt by 2030
- Hematite belt — Odisha, Jharkhand, Chhattisgarh, Karnataka
- Magnetite — Kudremukh, Salem
- Damodar Valley plants — Jamshedpur, Bhilai, Bokaro

- Coastal new plants — Hazira, Paradip, Visakhapatnam
- Bailadila in Bastar — Maoist overlap
- Dedicated Freight Corridor East-West for iron ore
- Indian Bureau of Mines (IBM) as data authority

EXAMPLES & CASE STUDIES

- TISCO Jamshedpur founded 1907 by Jamshedji Tata
- Bhilai Steel Plant 1955 with Soviet assistance
- Rourkela 1959 — German collaboration
- Bokaro Steel Plant 1965 — Soviet collaboration
- JSW Vijayanagar — India's largest single-location steel plant

MODEL ANSWER

Introduction:

India holds the world's fifth-largest iron ore reserves (over 5.5 billion tonnes, IBM 2023) and ranks as the second-largest crude steel producer at 140 million tonnes in 2023. The National Steel Policy 2017 targets 300 million tonnes by 2030, but the industrial geography of steel does not always follow the geography of ore.

Ore geography: Around 80% of hematite reserves lie in Odisha (Joda-Barbil, Keonjhar), Jharkhand (Singhbhum), Chhattisgarh (Bailadila) and Karnataka (Sandur, Hospet); magnetite occurs at Kudremukh in Karnataka and Salem in Tamil Nadu. The Chota Nagpur shield concentrates both iron and coking coal, anchoring the historic Damodar Valley steel belt and giving India a rare Asian endowment.

Plant geography: Older integrated plants — TISCO Jamshedpur (1907, Jamshedji Tata), Bhilai (1955, Soviet collaboration), Rourkela (1959, German), Durgapur (1962, British) and Bokaro (1965, Soviet) — follow the Weberian weight-loss principle along the Damodar-Subarnarekha axis. Newer plants — JSW Vijayanagar (Hospet), ArcelorMittal Hazira and AMNS Paradip — cluster on coasts to use imported coking coal and export through Paradip, Hazira and Visakhapatnam.

Policy and conflict: The PLI for specialty steel (2021), the Dedicated Freight Corridor East-West and Sagarmala connect ore to ports, while iron-ore export caps protect domestic supply. Bailadila, however, lies in Maoist-affected Bastar, layering security risk onto industrial geography.

Conclusion:

> Realising 300 MT by 2030 demands integrating coastal port-led capacity with Chota Nagpur ore logistics and conflict-sensitive mining in Bastar — a single industrial-mineral-security frame.

SOURCES

- →Iron Ores in India: Hematite, Magnetite, Limonite, Siderite, Reserves, and the Top Producing States
- →Chota Nagpur Plateau: Geology, Patlands, Mineral Wealth, and Tribal Heartland
- →Indian Bureau of Mines, Indian Minerals Yearbook

iron ore | hematite | Bailadila | Damodar Valley | National Steel Policy | weight-loss industry | Sagarmala | Vizag-Chennai corridor

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Q73

India's port-led development under Sagarmala is reshaping the economic geography of the coast. Critically examine its components, progress and concerns.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | MARITIME INFRASTRUCTURE

ANSWER OUTLINE

Introduction: Sagarmala was approved by the Union Cabinet on 25 March 2015, drawing on the National Perspective Plan 2016, with the four-fold objective of port modernisation, port connectivity, port-led industrialisation, and coastal community development. Sagarmala 2.0 was launched in 2024.

Body — three dimensions: (1) Components: 12 major ports + over 200 non-major ports; six new mega-ports including Vadhavan (Maharashtra, foundation August 2024), Galathea Bay (Great Nicobar), Vizhinjam (Kerala, commissioned 2024) as India's first deep-water transshipment terminal; coastal economic zones; multi-modal logistics parks; Roll-on Roll-off (Ro-Ro) ferries. (2) Progress: 839 projects worth Rs 5.79 lakh crore identified; over 240 projects completed by 2024; coastal cargo doubled 2014–24; Jawaharlal Nehru Port Authority and Mumbai Port pursuing capacity expansion. (3) Concerns and gaps: environmental clearances at Vadhavan and Vizhinjam contested under CRZ; Great Nicobar Holistic Development overlaps Sundaland biodiversity hotspot; coastal fisher displacement (Vizhinjam protests 2022); concentration of investment in west coast; East Coast Economic Corridor implementation slower; dredging and silting in major ports.

Conclusion: Sagarmala's logic — replacing land-based with coast-based logistics — is sound but its execution must reconcile port economics with CRZ, fisher livelihoods and biodiversity.

KEY POINTS TO INCLUDE

- Sagarmala approved 25 March 2015
- National Perspective Plan 2016, Sagarmala 2.0 in 2024
- Four pillars — port modernisation, connectivity, industrialisation, community
- 12 major + 200+ non-major ports
- Vadhavan (Maharashtra) — foundation 30 August 2024
- Vizhinjam (Kerala) — first deep-water transshipment hub
- Galathea Bay (Great Nicobar) — proposed mega-port
- 839 projects, Rs 5.79 lakh crore plan size
- JNPT Mumbai capacity expansion
- Vizhinjam fisher protests 2022

EXAMPLES & CASE STUDIES

- Vadhavan port — Maharashtra government and JNPA SPV
- Vizhinjam — Adani Ports development, opened 2024
- Galathea Bay — concerns over Great Nicobar tribes
- Ro-Ro ferry Hazira-Ghogha in Gulf of Khambhat
- Multi-Modal Logistics Park at Jogighopa, Assam

MODEL ANSWER

Introduction:

Sagarmala, approved by the Union Cabinet on 25 March 2015, draws on the National Perspective Plan 2016 and pursues port modernisation, port connectivity, port-led industrialisation and coastal community development. Sagarmala 2.0 was launched in 2024 to deepen this agenda and rebalance India's logistics from land to sea.

Components: India has 12 major and over 200 non-major ports. Six mega-ports anchor the new architecture — Vadhavan in Maharashtra (foundation laid 30 August 2024 as a JNPA-state SPV), Vizhinjam in Kerala (commissioned 2024 as India's first deep-water transshipment hub, developed by Adani Ports), and the proposed Galathea Bay at Great Nicobar — supported by coastal economic zones, multi-modal logistics parks (Jogighopa, Assam) and Ro-Ro ferries such as Hazira-Ghogha in the Gulf of Khambhat.

Progress: 839 projects worth Rs 5.79 lakh crore have been identified and more than 240 completed by 2024; coastal cargo doubled between 2014 and 2024, and JNPA-

Mumbai capacity expansion is under way. Major-port turnaround time has fallen sharply, reflecting genuine operational improvement.

Concerns: CRZ clearances at Vadhavan and Vizhinjam are contested by environmental groups; Galathea Bay overlaps the Sundaland biodiversity hotspot and the Shompen tribal habitat; Vizhinjam saw sustained fisher protests through 2022 against shoreline erosion; the East Coast Economic Corridor execution lags the west coast significantly; and dredging-silting persist at older major ports.

Conclusion:

Sagarmala's logic of replacing land-based with coast-based logistics is sound, but its credibility hinges on reconciling port economics with CRZ enforcement, fisher livelihoods and Great Nicobar biodiversity.

SOURCES

→Sagarmala Programme: India's Port-Led Growth Strategy and Sagarmala 2.0
→Vizhinjam International Seaport: India's First Deep-Water Transshipment Hub
→Coastal Plains of India: Eastern, Western, Features, and UPSC Notes

Sagarmala | Vadhavan | Vizhinjam | Galathea Bay | port-led growth | CRZ | deep-water transshipment | coastal economic zone

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Q74

Solar energy is the central pillar of India's energy transition strategy. Examine the targets, the geography of deployment and the technical bottlenecks.

10 MARKS | 150 WORDS | 9 MIN | MEDIUM | RENEWABLE ENERGY

ANSWER OUTLINE

Introduction: India committed at COP-26 (Glasgow, November 2021) to 500 GW of non-fossil capacity by 2030 and net-zero by 2070. Solar is the principal vehicle.

Body — three dimensions: (1) Targets: Jawaharlal Nehru National Solar Mission 2010 (revised to 100 GW by 2022); installed solar capacity reached 90 GW by early 2024 and is targeted at 280–300 GW of the 500 GW non-fossil portfolio; PM-Surya Ghar Muft Bijli Yojana (February 2024) targets one crore rooftop systems. (2) Geography of deployment: Rajasthan (Bhadla Solar Park 2,245 MW — world's largest single site), Gujarat (Khavda Renewable Energy Park, projected 30 GW), Karnataka (Pavagada 2,050 MW), Tamil Nadu (Kamuthi 648 MW). Concentration in Deccan and Thar reflects irradiance >5.5 kWh/sq m/day. (3) Technical bottlenecks: land acquisition (5 acres per MW); grid integration and

balancing for variability; import dependence on Chinese modules (mitigated by ALMM and PLI for solar PV manufacturing 2021, 2023); energy storage gap (battery and pumped hydro); transmission constraints (Green Energy Corridor, two phases).

Conclusion: Solar geography rewards Rajasthan-Gujarat-Karnataka triangle; eastern India must build complementary wind and pumped-hydro to ensure energy security across the grid.

KEY POINTS TO INCLUDE

- COP-26 commitment — 500 GW non-fossil by 2030, net-zero 2070
- JNNSM 2010, revised 100 GW solar by 2022
- Installed solar 90 GW by early 2024
- Bhadla Solar Park (Rajasthan) — 2,245 MW
- Khavda RE Park (Gujarat) — 30 GW projected
- PM-Surya Ghar Yojana February 2024 — 1 crore rooftops
- Approved List of Models and Manufacturers (ALMM)
- PLI for solar PV 2021 and 2023
- Green Energy Corridor Phase I and II
- Solar irradiance over 5.5 kWh/sq m/day in Thar

EXAMPLES & CASE STUDIES

- Bhadla Solar Park, Jodhpur, Rajasthan
- Pavagada (Karnataka) — 2,050 MW on 13,000 acres
- International Solar Alliance HQ at Gurugram, founded 2015
- PM-KUSUM for solar pumps and feeders
- SECI (Solar Energy Corporation of India) tenders

MODEL ANSWER

> **Introduction:** At COP-26 (Glasgow, November 2021) India committed to 500 GW of non-fossil capacity by 2030 and net-zero by 2070, with solar as the principal vehicle.
>
> **Body:** The Jawaharlal Nehru National Solar Mission (2010), revised to 100 GW by 2022, drove installed solar capacity to about 90 GW by early 2024, targeted to reach 280–300 GW within the 500 GW portfolio; PM-Surya Ghar Muft Bijli Yojana (February 2024) targets one crore rooftop systems. Deployment concentrates in Rajasthan (Bhadla Solar Park, 2,245 MW — the world's largest single site), Gujarat (Khavda RE Park, projected 30 GW), Karnataka (Pavagada, 2,050 MW) and Tamil Nadu (Kamuthi), where

irradiance exceeds 5.5 kWh/sq m/day. Bottlenecks include land (5 acres per MW), grid balancing, import dependence on Chinese modules (offset by ALMM and PLI 2021, 2023), storage and transmission via the Green Energy Corridor.

Conclusion: Rajasthan-Gujarat-Karnataka anchor solar geography; complementary wind and pumped-hydro in eastern India are now essential to grid security.

SOURCES

→Solar Energy in India: JNNSM, 500 GW Target, PM-Surya Ghar and the Path to Net-Zero
→National Green Hydrogen Mission: India's Roadmap to 5 MMT by 2030 and a Clean-Fuel Economy
→Ministry of New and Renewable Energy, Annual Report

solar energy | JNNSM | Bhadla | Khavda | ALMM | PM-Surya Ghar | Green Energy Corridor | ISA

Q75

Critical minerals are the new strategic resources of the 21st century. Examine India's endowment, import dependence and the 2023 critical minerals policy framework.

15 MARKS | 250 WORDS | 14 MIN | HARD | STRATEGIC MINERALS

ANSWER OUTLINE

Introduction: The Ministry of Mines released the list of 30 Critical Minerals for India on 28 June 2023 — including lithium, cobalt, nickel, graphite, rare earths, titanium, zirconium and tin — based on the Veena Kumari Dermal Committee report.

Body — three dimensions: (1) Endowment and gaps: lithium reserves found at Salal-Haimana, Reasi (J&K) — 5.9 million tonnes inferred (GSI, February 2023); titanium-bearing beach sands of Kerala, Tamil Nadu, Odisha; graphite in Arunachal, Tamil Nadu, Odisha; rare earth in Indian monazite (KMML, IREL); cobalt and nickel essentially absent. (2) Import dependence: India imports 100% of lithium, cobalt, nickel for battery applications; 70%+ rare earth magnets from China; vulnerability for EV ecosystem, solar manufacturing, defence. (3) Policy framework: Mines and Minerals (Development and Regulation) Amendment Act 2023 — 24 critical minerals reserved for central government auction; KABIL (Khanij Bidesh India Ltd) for overseas acquisition; agreements with Argentina, Australia, Africa Mining Investment Vision; National Critical Mineral Mission 2024–25.

Conclusion: India's critical mineral strategy is now a four-track effort — domestic exploration, recycling, overseas acquisition and processing capacity; success in lithium-

cobalt processing will determine whether India captures or just consumes the energy transition.

KEY POINTS TO INCLUDE

- 30 Critical Minerals list released 28 June 2023
- Salal-Haimana Reasi (J&K) lithium discovery, 5.9 mt inferred
- Indian beach sands — titanium, zirconium, monazite
- 100% lithium, cobalt, nickel import dependence
- 70%+ rare earth magnet import from China
- MMDR (Amendment) Act 2023 — critical minerals reserved for centre
- KABIL (Khanij Bidesh India Ltd) for overseas acquisition
- Critical Mineral Auctions launched November 2023
- National Critical Mineral Mission 2024–25
- Strategic for EV, defence, electronics, solar

EXAMPLES & CASE STUDIES

- Reasi lithium — GSI inferred resource
- IREL Manavalakurichi for monazite processing
- KABIL agreement with Argentina (CAMYEN) 2024
- India-Australia Critical Minerals Investment Partnership
- Atomic Minerals Directorate exploration

MODEL ANSWER

> **Introduction**:
>
> The Ministry of Mines released India's list of 30 Critical Minerals on 28 June 2023 — including lithium, cobalt, nickel, graphite, rare earths, titanium, zirconium and tin — based on the Veena Kumari Dermal Committee. These minerals power the energy transition, electronics, defence and the electric-vehicle ecosystem, making them strategic resources of the 21st century.
>
> **Endowment and gaps:** The Geological Survey of India announced 5.9 million tonnes of inferred lithium resource at Salal-Haimana, Reasi (Jammu and Kashmir) in February 2023. India has titanium-bearing beach sands along Kerala, Tamil Nadu and Odisha, monazite-derived rare earths processed by IREL at Manavalakurichi, and graphite in Arunachal Pradesh and Odisha. Cobalt and nickel are essentially absent domestically.

Import dependence: India imports 100% of its lithium, cobalt and nickel for battery applications and over 70% of rare-earth magnets from China, leaving electric-vehicle manufacturing, solar PV, semiconductor packaging and defence supply chains exposed to price volatility and geopolitical shocks.

Policy framework: The MMDR (Amendment) Act, 2023 reserves 24 critical minerals for central-government auction, opening private exploration; KABIL (Khanij Bidesh India Ltd, a NALCO-HCL-MECL JV) secures overseas blocks (Argentina's Catamarca, 2024); India joined the Mineral Security Partnership in June 2023; auctions of more than 20 blocks began November 2023; the National Critical Mineral Mission (January 2025) commits Rs 16,300 crore.

Conclusion:

A four-track strategy — domestic exploration, recycling, overseas acquisition and refining capacity — will decide whether India captures or merely consumes the energy transition.

SOURCES

- →UPSC 2025: Critical Minerals, Majorana 1 Quantum Chip, Rare Earths and Modern Military Explosives — Complete Notes
- →Iron Ores in India: Hematite, Magnetite, Limonite, Siderite, Reserves, and the Top Producing States
- →Geological Survey of India, Indian Minerals Yearbook

critical minerals | lithium | rare earth | KABIL | MMDR 2023 | Reasi | monazite | import dependence

GS PAPER 1

World Geography

5 practice questions

Q76

Crude oil and natural gas reserves are geographically concentrated, but consumption patterns are inverted. Examine the location of major hydrocarbon producers and the chokepoints that link them to consumers.

10 MARKS | 150 WORDS | 9 MIN | EASY | MAJOR RESOURCES — OIL AND GAS

ANSWER OUTLINE

Introduction: Global oil reserves ~1.57 trillion barrels (BP Statistical Review 2023). Five countries hold ~65% — Venezuela, Saudi Arabia, Iran, Iraq, UAE.

Body — three dimensions: (1) Reserve geography — West Asia (Ghawar field, Saudi Arabia, world's largest), Venezuela's Orinoco belt, Russia's Western Siberia, Permian basin USA. (2) Consumption — USA, China, India top three consumers; demand-supply geographies misaligned. (3) Chokepoints — Strait of Hormuz (21% of world oil), Bab-el-Mandeb, Strait of Malacca (16 million bpd), Suez Canal, Turkish Straits; LNG fleets concentrated on Qatar, Australia, USA exports.

Conclusion: Strategic location of producing fields plus chokepoint vulnerability shapes both Indian energy security and the case for the International North-South Transport Corridor.

KEY POINTS TO INCLUDE

- Global proven oil ~1.57 trillion barrels (BP Statistical Review 2023)
- OPEC+ 13 + 10 members control ~30% production, ~80% reserves
- Ghawar (Saudi Arabia) — world's largest conventional oil field
- Venezuela — largest reserves, Orinoco extra-heavy crude
- Permian Basin (USA) — shale revolution leader
- Strait of Hormuz — 21% of world oil transit
- Strait of Malacca — 16 million bpd
- India imports ~88% of crude (PPAC 2024-25)
- Russia became India's top crude supplier in 2023 (~35% of imports)

EXAMPLES & CASE STUDIES

- Ghawar field, Saudi Arabia — discovered 1948

- Sakhalin LNG, Russia — Japan's principal supplier
- Bonny Light, Nigeria — historic Indian import
- Qatar North Field — world's largest gas field
- Iran-Pakistan-India gas pipeline — stalled

MODEL ANSWER

Introduction: Global proven oil reserves stand at about 1.57 trillion barrels (BP Statistical Review 2023). Five countries — Venezuela, Saudi Arabia, Iran, Iraq and the UAE — hold approximately 65%, with OPEC+ controlling around 80% of reserves and 30% of production.

Body: Reserve geography concentrates in West Asia (Saudi Arabia's Ghawar field, the world's largest conventional reservoir), Venezuela's Orinoco extra-heavy belt, Russia's Western Siberia and the USA's Permian Basin, leader of the shale revolution. Consumption is inverted — the USA, China and India top demand; India imports about 88% of crude (PPAC 2024–25); Russia became India's top supplier in 2023 at around 35% of imports. Chokepoints link these geographies: the Strait of Hormuz carries 21% of world oil, Malacca about 16 million bpd, with Bab-el-Mandeb, Suez and the Turkish Straits completing the lattice. Qatar's North Field is the world's largest gas reserve.

Conclusion: Producer concentration plus chokepoint vulnerability makes the INSTC and strategic petroleum reserves India's energy-security priorities.

SOURCES

→Strait of Hormuz Geography and Geopolitics: 21% of the World's Oil
→Trade Settlement in Rupees — RBI Framework and UPSC Notes
→BP Statistical Review of World Energy 2023

Ghawar | OPEC+ | Strait of Hormuz | shale oil | LNG | Permian Basin | chokepoint | Orinoco

Q77

The global automobile industry has clustered into a handful of mega-producers, with China alone making 30.16 million vehicles in 2023. Examine the location factors that explain the world's automobile capitals.

15 MARKS | 250 WORDS | 14 MIN | HARD | LOCATION OF INDUSTRIES — AUTOMOBILES

ANSWER OUTLINE

Introduction: Global motor-vehicle production 93.5 million units in 2023 (OICA). Top three — China (30.16 m), USA (10.6 m), Japan (8.99 m). India ranked 3rd in passenger cars (5.5 m units, 2023).

Body — three dimensions: (1) Market access — Detroit (Michigan) historic capital served Midwest demand; Tokyo-Yokohama-Toyota City cluster serves Asia-Pacific. (2) Component ecosystem — Stuttgart-Munich-Wolfsburg (Daimler, BMW, VW) on Mittelstand supplier base; Shenzhen-Shanghai EV cluster (BYD, Tesla GigaShanghai). (3) Labour and policy — Chennai-Sriperumbudur-Hosur (Hyundai, Ford, Renault-Nissan, Royal Enfield) — 'Detroit of India'; Manesar-Gurugram (Maruti); Sanand-Pune western corridor (Tata, Mahindra, Mercedes).

Conclusion: Automobile geography is now reshaped by EV battery sourcing — China's CATL, Korea's LG, India's PLI for ACC — pulling new plants toward lithium-mineral access and clean grid.

KEY POINTS TO INCLUDE

- Global motor vehicle production 93.5 million (2023, OICA)
- China 30.16 m, USA 10.6 m, Japan 8.99 m
- India 5.85 m units (3rd in passenger cars)
- Detroit, Michigan — Big Three legacy
- Toyota City, Aichi — Toyota Production System base
- Stuttgart-Munich-Wolfsburg German cluster
- BYD overtook Tesla in EV sales 2023
- Chennai 'Detroit of India' — Hyundai, Ford, Renault-Nissan
- PLI Scheme for Automobile, Auto Components — ₹25,938 crore (2021)
- PLI Advanced Chemistry Cell battery — ₹18,100 crore

EXAMPLES & CASE STUDIES

- Hyundai Sriperumbudur plant — exports to over 100 countries
- Maruti Suzuki Gurugram-Manesar facility
- Tata Sanand (former Nano plant) — Tata Motors EV
- Tesla GigaShanghai — largest single plant
- Volkswagen Wolfsburg — world's largest car factory by area

MODEL ANSWER

Introduction:

Global motor-vehicle production reached 93.5 million units in 2023 (OICA), with China at 30.16 million, the USA at 10.6 million and Japan at 8.99 million. India ranked third in passenger cars at 5.85 million units. Five location factors — market access, component ecosystem, labour, policy and now battery sourcing — explain the world's automobile capitals.

Market access: Detroit, Michigan, the historic Big Three capital, was built to serve Midwest demand; the Tokyo-Yokohama-Toyota City cluster grew on Asia-Pacific export markets and the lean Toyota Production System. Volkswagen's Wolfsburg — the world's largest car factory by area — serves European demand.

Component ecosystem: Germany's Stuttgart-Munich-Wolfsburg cluster (Daimler, BMW, VW) rides on the Mittelstand supplier base; China's Shenzhen-Shanghai EV belt anchors BYD (which overtook Tesla in EV sales in 2023) and Tesla's GigaShanghai, the world's largest single plant. India's Manesar-Gurugram cluster around Maruti Suzuki, Chennai-Sriperumbudur-Hosur — the 'Detroit of India' with Hyundai, Ford, Renault-Nissan and Royal Enfield — and the Sanand-Pune western corridor (Tata, Mahindra, Mercedes) follow the same supplier-cluster logic.

Labour and policy: The PLI for Automobile and Auto Components (Rs 25,938 crore, 2021) and PLI for Advanced Chemistry Cell battery manufacturing (Rs 18,100 crore) pull plants toward battery zones; FAME-II accelerates electric two-wheeler and bus deployment alongside, while state EV policies in Tamil Nadu and Maharashtra add fiscal incentives.

Conclusion:

EV transition is now reshaping automobile geography — plants are migrating toward lithium access, clean grids and battery clusters; India's Chennai-Sanand belt must capture this shift.

SOURCES

→Trade Settlement in Rupees — RBI Framework and UPSC Notes
→Growth, Inequality and the Demographic Dividend
→OICA World Motor Vehicle Production 2023

OICA | automobile cluster | agglomeration economy | PLI scheme | EV transition | Detroit of India | supply chain | BYD

Q78

The textile industry exemplifies the global shift of manufacturing from high-wage to low-wage geographies. Examine the location of the world's textile and apparel hubs and India's place in this map.

10 MARKS | 150 WORDS | 9 MIN | EASY | LOCATION OF INDUSTRIES — TEXTILES

ANSWER OUTLINE

Introduction: Global textile and apparel trade exceeded USD 980 billion in 2023 (WTO). China holds ~31% of textile and 32% of apparel exports; Bangladesh, Vietnam, India follow.

Body — three dimensions: (1) Historical shift — Lancashire-Manchester decline in 20th century; Osaka, Shanghai rise; now Dhaka, Ho Chi Minh City, Tiruppur. (2) Location pull — raw cotton, cheap female labour, port access; Bangladesh's RMG sector employs 4+ million women. (3) India's geography — Mumbai-Ahmedabad-Surat cotton belt; Tiruppur knitwear cluster (~₹35,000 crore exports); Panipat handlooms; Bhilwara woollens; Ludhiana hosiery.

Conclusion: India's PM MITRA Parks (7 sanctioned 2023) and PLI for Man-Made Fibres target the structural shift from cotton to MMF, where China still dominates.

KEY POINTS TO INCLUDE

- Global textile-apparel trade USD 980+ billion (WTO 2023)
- China — 31% textile, 32% apparel share
- Bangladesh — RMG sector 4+ million women
- Lancashire-Manchester historic decline
- Tiruppur knitwear cluster, Tamil Nadu
- Surat — world's largest synthetic textile centre
- PM MITRA Parks — 7 sanctioned, 17 March 2023
- PLI Textile (₹10,683 crore) for MMF and technical textiles
- India textile exports ~USD 34 billion (2023-24)

EXAMPLES & CASE STUDIES

- Tiruppur Exporters' Association — ₹35,000 crore knitwear
- Surat synthetic textile cluster — 65% of India's MMF
- Ludhiana hosiery and woollen knits
- Panipat home textiles — recycled yarn capital
- Tirupur, Tamil Nadu — 'Dollar City'

MODEL ANSWER

Introduction: Global textile and apparel trade exceeded USD 980 billion in 2023 (WTO), with China holding around 31% of textile and 32% of apparel exports; Bangladesh, Vietnam and India follow.

Body: The historical shift is striking — Lancashire-Manchester, cradle of the Industrial Revolution, declined in the 20th century; Osaka and Shanghai rose; now Dhaka, Ho Chi Minh City and Tiruppur lead. Location pulls textile manufacturing toward raw cotton, cheap (largely female) labour and port access: Bangladesh's RMG sector employs over 4 million women. India's geography combines the Mumbai-Ahmedabad-Surat cotton-MMF belt, Tiruppur's knitwear cluster (about Rs 35,000 crore exports), Surat's synthetic-textile complex producing 65% of India's MMF, Panipat home textiles, Bhilwara woollens and Ludhiana hosiery. PM MITRA Parks (seven sanctioned, 17 March 2023) and the PLI Textile (Rs 10,683 crore) push the shift to MMF.

Conclusion: India's USD 34 billion textile exports (2023–24) lag China's; capturing MMF and technical-textile share is the next structural opportunity.

SOURCES

- →Globalisation and Indian Society
- →Fourth All India Handloom Census 2019-20 — Ministry of Textiles
- →WTO World Trade Statistical Review 2024

textile geography | RMG | PM MITRA | Tiruppur | knitwear | MMF | Lancashire decline | agglomeration

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Q79

The world's iron and steel industry has shifted decisively eastward: China alone produced 1,019 million tonnes of crude steel in 2023, over half the global total. Examine the location factors of the steel industry with reference to raw-material, market and energy axes.

15 MARKS | 250 WORDS | 14 MIN | MEDIUM | LOCATION OF INDUSTRIES — IRON AND STEEL

ANSWER OUTLINE

Introduction: World crude-steel output crossed 1,892 million tonnes in 2023 (worldsteel). Top five: China (1,019 MT), India (140 MT), Japan (87 MT), USA (81 MT), Russia (76 MT).

Body — three dimensions: (1) Raw-material orientation (Weber's theory) — coking coal, iron ore, limestone bulky, high weight-loss; Ruhr (Germany), Donbas (Ukraine), Pittsburgh

historically; India's Jamshedpur near Jharia coal and Singhbhum iron. (2) Market orientation — Japan (Yawata, Kawasaki) built on imported ore (Australia) and coking coal (Indonesia), located on coastal sites near consumers. (3) Energy and policy — China's Anshan-Wuhan-Baotou belt on Datong coalfield; India's Bhilai and Rourkela located on Bailadila and Barsua ore via national policy.

Conclusion: Modern steel locations are pulled by ports more than coalfields — Japan's coastal model and India's emerging coastal capacity (Paradip, Hazira) confirm the shift.

KEY POINTS TO INCLUDE

- World crude steel 2023 — 1,892 MT (worldsteel)
- China 1,019 MT (53.9%), India 140 MT, Japan 87 MT
- Weber's least-cost location theory (1909)
- Ruhr — Germany's historic steel belt on coking coal
- Donbas (Ukraine), Kuznetsk (Russia) coal-iron pairs
- Pittsburgh, Pennsylvania — historic US steel capital
- Japan — coastal Yawata, Kawasaki on imported raw materials
- Jamshedpur (1907) — TISCO near Jharia coal, Singhbhum ore
- Bailadila ore (Chhattisgarh) — feeds Vizag and Japanese mills
- China's Anshan-Wuhan-Baotou steel triangle

EXAMPLES & CASE STUDIES

- TISCO Jamshedpur 1907 — India's first integrated steel plant
- Bhilai (1959, USSR collaboration) on Dalli-Rajhara ore
- Rourkela (1959, German) and Durgapur (1962, British)
- Vizag Steel — coastal location, Bailadila iron via Kirandul-Kotavalasa line
- POSCO Pohang, South Korea — Japanese model replication

MODEL ANSWER

> **Introduction**:
>
> World crude-steel output crossed 1,892 million tonnes in 2023 (worldsteel), with China alone producing 1,019 MT — over half the global total. India (140 MT), Japan (87 MT), the USA (81 MT) and Russia (76 MT) round out the top five. The geography of steel reflects Alfred Weber's least-cost location theory (1909) but is being redrawn by ports.
>
> **Raw-material orientation:** Coking coal, iron ore and limestone are bulky and high in weight-loss, pulling early plants to coalfields. Germany's Ruhr (on coking coal),

Ukraine's Donbas, Russia's Kuznetsk and the USA's Pittsburgh in Pennsylvania were classic raw-material-bound locations; India's TISCO Jamshedpur (1907, Jamshedji Tata) sits on Jharia coking coal and Singhbhum iron, while Bhilai (1959, Soviet collaboration) draws on Dalli-Rajhara ore.

Market orientation: Japan reversed the logic by importing both ore (Australia) and coking coal (Indonesia) to coastal locations — Yawata, Kawasaki, Chiba — close to industrial consumers and ports. South Korea's POSCO Pohang followed the same model; India's coastal AMNS Paradip, JSW Vijayanagar and ArcelorMittal Hazira reflect the same shift, alongside Vizag Steel fed by Bailadila ore via the Kirandul-Kotavalasa line.

Energy and policy: China's Anshan-Wuhan-Baotou triangle anchors on the Datong coalfield; India's Rourkela (1959, German) and Durgapur (1962, British) followed Damodar-Valley logistics; the Dedicated Freight Corridor East-West now moves ore eastward to ports.

Conclusion:

Modern steel is pulled by ports as much as coalfields — Japan's coastal model and India's emerging Paradip-Hazira capacity confirm the shift.

SOURCES

→Iron Ores in India: Hematite, Magnetite, Limonite, Siderite, Reserves, and the Top Producing States
→Coal Controller's Organisation (CCO): Mandate, Powers, Statutory Backbone
→World Steel Association — Crude Steel Production 2023

Weber | least-cost location | weight-losing raw material | coastal steel | Ruhr | Bailadila | worldsteel | integrated steel plant

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Q80

Critical minerals — lithium, cobalt, nickel, rare earths — concentrate in a handful of countries, posing fresh resource-geography challenges. Examine the global distribution and India's response under the Critical Minerals Mission.

15 MARKS | 250 WORDS | 14 MIN | HARD | MAJOR RESOURCES — CRITICAL MINERALS

ANSWER OUTLINE

Introduction: The energy transition needs lithium (batteries), cobalt and nickel (cathodes), rare earths (magnets). Reserve concentration is extreme — Chile and Australia

hold over half of lithium reserves; DRC produces 70% of world cobalt; China refines about 80% of rare earths.

Body — three dimensions: (1) Geography — Lithium Triangle (Chile-Argentina-Bolivia), Australia's Greenbushes (spodumene), DRC's Katanga copperbelt for cobalt, Indonesia's Sulawesi for nickel laterite, China's Bayan Obo for rare earths. (2) India's discoveries — 5.9 million tonnes lithium inferred resource in Reasi, J&K (GSI February 2023), KABIL JV in Argentina; Karnataka's Mandya lithium prospect. (3) Policy — Critical Minerals List 30 minerals (June 2023); MMDR Amendment 2023 allowing private auctions; National Critical Minerals Mission ₹16,300 crore (January 2025).

Conclusion: Diversify supply via Mineral Security Partnership (US-led, India joined June 2023), build refining capacity, recycle e-waste — concentrate of resource = concentration of power.

KEY POINTS TO INCLUDE

- 30 critical minerals identified June 2023, MoMines
- 5.9 million tonnes lithium inferred — Reasi, J&K (GSI Feb 2023)
- Lithium Triangle — Chile, Argentina, Bolivia
- Australia Greenbushes — world's largest lithium mine
- DRC ~70% of world cobalt production (Katanga belt)
- China refines ~80% of rare earths (Bayan Obo)
- Indonesia — world's largest nickel reserves
- MMDR Amendment Act, 2023 — private auctions of 24 critical minerals
- KABIL (NALCO-HCL-MECL JV, 2019) for overseas mineral acquisition
- Mineral Security Partnership — India joined June 2023
- National Critical Minerals Mission, ₹16,300 crore (January 2025)

EXAMPLES & CASE STUDIES

- GSI Salal-Haimna lithium block, Reasi, J&K
- Bayan Obo, Inner Mongolia — world's largest REE deposit
- Indonesia Morowali Industrial Park — nickel-cobalt processing
- Greenbushes, Western Australia — spodumene lithium
- Argentina's Catamarca — KABIL lithium block agreement, 2024

MODEL ANSWER

> **Introduction**:

The energy transition runs on critical minerals — lithium for batteries, cobalt and nickel for cathodes, rare earths for magnets. Reserve concentration is extreme: Chile and Australia hold over half of lithium reserves, the Democratic Republic of Congo produces 70% of world cobalt, and China refines about 80% of rare earths. This concentration is reshaping resource geography.

Global geography: The Lithium Triangle (Chile, Argentina, Bolivia) holds the bulk of brine reserves; Australia's Greenbushes is the world's largest spodumene lithium mine. DRC's Katanga copperbelt dominates cobalt; Indonesia's Sulawesi nickel-laterite belt now feeds the Morowali Industrial Park. China's Bayan Obo in Inner Mongolia is the world's largest rare-earth deposit, processed through a refining monopoly built over four decades.

India's discoveries and gaps: The Geological Survey of India announced a 5.9 million tonne inferred lithium resource at Salal-Haimana, Reasi (J&K) in February 2023; the Mandya block in Karnataka adds a smaller prospect. India still imports 100% of its lithium, cobalt and nickel for batteries and over 70% of rare-earth magnets, mostly from China.

Policy response: The Critical Minerals List (30 minerals, June 2023), the MMDR Amendment Act 2023 (private auctions of 24 critical minerals), KABIL's overseas blocks (Argentina's Catamarca, 2024), India's June 2023 entry into the Mineral Security Partnership, and the National Critical Minerals Mission (Rs 16,300 crore, January 2025) form the response.

Conclusion:

Diversify supply, build refining capacity and recycle e-waste — concentration of resource means concentration of power.

SOURCES

→UPSC 2025: Critical Minerals, Majorana 1 Quantum Chip, Rare Earths and Modern Military Explosives
→Ministry of Mines — Critical Minerals
→Geological Survey of India — Lithium Discovery Reasi

lithium triangle | rare earths | Critical Minerals Mission | MMDR Amendment | KABIL | Mineral Security Partnership | spodumene | Bayan Obo

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CONTACT

anantamias.com

contact@anantamias.com

9844556580 · 6350381242 · 9465374125