



Collegedunia NCERT Notes

The Ultimate NCERT Revision Guide for Class 12 Geography

India: People and Economy (Part 2) · 2026-27 / New NCERT

Chapter 1: Population: Distribution, Density, Growth and Composition

Population Distribution Density Growth and Composition Class 12 Notes

Also see for this chapter: [NCERT Solutions](#)

What this chapter covers: India's people, studied as numbers on a map. You will learn how population is *spread* across India (distribution), how *crowded* the land is (density), how the count has *changed* over a century (growth), and what the people are *like* by where they live, their language, religion and work (composition). This is a core unit for CBSE board exams, CUET, and the UPSC Indian Geography paper.

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1 Introduction: People as a Resource

People are the most important part of any country. India is the second most populous nation in the world after China, with a total population of **1,210 million** (Census 2011). To put that in scale, India's population is larger than the combined population of North America, South America and Australia. Such a large population is often seen as pressure on limited resources, but it is also a vast pool of workers, thinkers and consumers. This chapter studies that population under four heads: distribution, density, growth and composition.

1.1 Why Study Population Geography

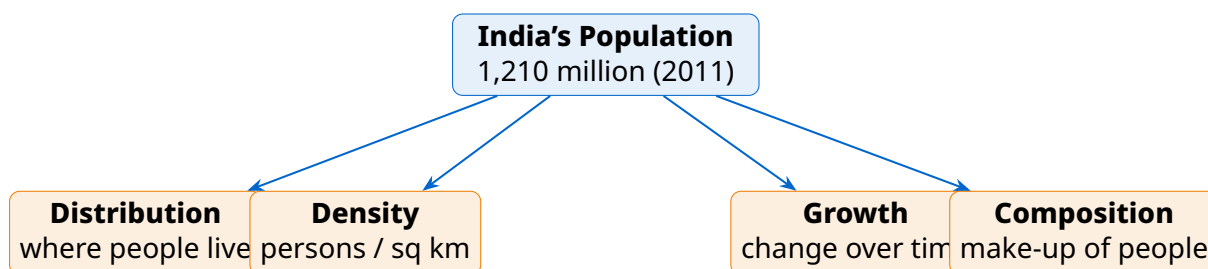
Population geography looks at people not just as a count, but as a pattern on the land. Where people live, how tightly they are packed, how fast their numbers change, and who they are, all tell us about the climate, economy and history of a region. A crowded river plain and an empty desert say very different things about

the land beneath them.

- **Distribution** answers *where* people live across India.
- **Density** answers *how crowded* each square kilometre is.
- **Growth** answers *how the count changes* between two censuses.
- **Composition** answers *what kind of people* make up the total.

The Four Pillars of This Chapter

Keep these four words in order: **Distribution** → **Density** → **Growth** → **Composition**. The first two are about space, the third is about time, and the fourth is about the make-up of people. The chapter title itself is your syllabus map.



1.2 Sources of Population Data: The Census

All population data in India come from the **Census**, a head-count of every person carried out once every ten years. The first census in India was conducted in **1872**, but the first complete and regular census was held in **1881**. Since then, a census has been taken every decade. This ten-year gap is why we speak of *decadal* growth rates.

- **Census year:** every 10 years (e.g. 1991, 2001, 2011).
- **First census:** 1872 (incomplete).
- **First complete census:** 1881.
- Latest figures used in NCERT: **Census 2011**.

Why the Census Matters

The census is the single source of truth for every figure in this chapter, from total population to literacy and work participation. Because it is taken every ten years, all change is measured per decade. When a question gives you a year ending in 1, it is almost certainly a census year.

The Census in Daily Life

Census numbers decide real things: how many seats a state gets in the Lok Sabha, how funds are shared between states, and where new schools, hospi-

tals and roads are planned. A miscount is not just a statistic, it shifts money and power.

2 Distribution of Population

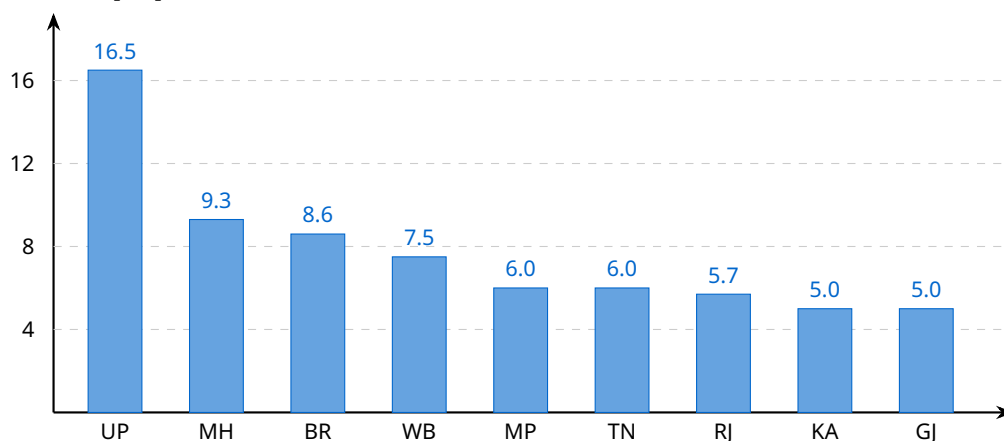
Distribution describes *where* people live across the country. India has a highly **uneven** pattern: some regions are packed with people while large areas stay almost empty. The river plains and coasts are crowded; the deserts, hills and dense forests are thin. Understanding this pattern means linking people to the land, the climate and the history of each region.

2.1 The Big Picture: An Uneven Spread

Looking at the state-wise shares, **Uttar Pradesh** has the highest population, followed by **Maharashtra, Bihar** and **West Bengal**. Just ten states together hold about **76 per cent** of India's total population. At the other end, states like Arunachal Pradesh (0.11%), Jammu & Kashmir (1.04%) and Uttarakhand (0.84%) hold a very small share, even though some of them cover a large area.

- **Top four by population:** Uttar Pradesh, Maharashtra, Bihar, West Bengal.
- **Ten states** hold $\approx 76\%$ of all Indians.
- Large area does not mean large population (Arunachal Pradesh is big but nearly empty).

% share of India's population



Remember the Leaders

For a one-mark question on the most populous state, the answer is always **Uttar Pradesh**. For the second most populous, it is **Maharashtra**. These two top the list in both 2001 and 2011.

2.2 Physical Factors Behind the Pattern

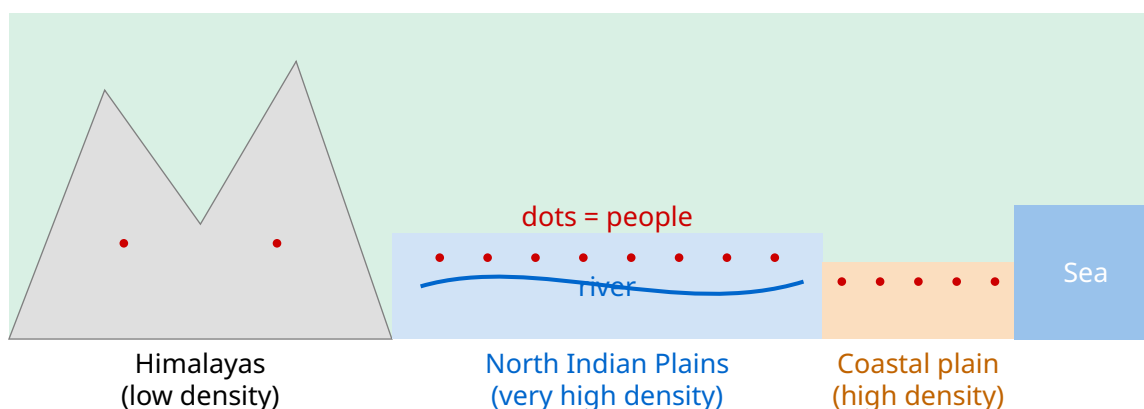
The shape of the land and its climate set the first rule of where people settle. Flat, well-watered plains attract people; harsh terrain and extreme climate repel them. This is why the **North Indian Plains**, the river **deltas** and the **coastal plains** hold a far higher share of people than the interior of the southern and central states, the Himalayas, and many north-eastern and western states.

The Three Physical Controls

Population pull $\propto$ (level terrain) $\times$ (moderate climate) $\times$ (water availability)

Where all three are favourable (river plains, deltas), people gather. Where any one fails badly (desert, high mountain, dense forest), settlement thins out.

- **Terrain:** flat plains are easy to farm, build and travel on.
- **Climate:** very hot-dry (Thar Desert) and very cold-wet (high Himalayas) repel settlement.
- **Water:** rivers and rainfall support farming and daily life.



Physical Rule of Thumb

Plains and coasts are full; mountains, deserts and dense forests are empty. Climate and water decide the first layer of distribution before any economy or history is considered.

2.3 Socio-Economic and Historical Factors

Once the land allows settlement, human factors decide the rest. The growth of **settled agriculture**, the spread of **transport networks**, and the rise of **industries and cities** pull people into certain regions. River plains and coastal areas have been settled for centuries, so they stay crowded even where the land shows signs of overuse. Meanwhile, irrigation in Rajasthan, minerals in Jharkhand, and transport in the Peninsular states have raised population in places that were once thinly peopled.

- **Agriculture:** early farming regions became dense (Ganga plain).
- **Transport & industry:** cities like Delhi, Mumbai, Kolkata, Bengaluru, Chennai and Pune pull migrants.
- **New attractions:** irrigation (Rajasthan), minerals/energy (Jharkhand), transport (Peninsular India).
- **Migration:** rural-to-urban movement swells city populations.

Why Cities Keep Growing

Delhi, Mumbai and Bengaluru did not become crowded by birth alone. Factories, offices and IT parks pull in workers from villages every year. This **rural-urban migration** is the main engine behind the swelling population of metro cities.

Distribution is not the Same as Density

Students often mix these up. **Distribution** is the spread of people *across* regions (a map pattern). **Density** is people *per square kilometre* (a single number for an area). A large state can have a big population (distribution) yet a low density if its area is huge.

3 Density of Population

Density tells us how crowded a place is. It is the number of persons living on each unit of land. While distribution shows the *pattern* on a map, density gives a single *number* that lets us compare one region with another. India's density has been climbing steadily for decades, and within the country it ranges from near-empty hills to some of the most crowded land on Earth.

3.1 Arithmetic Density: The Basic Measure

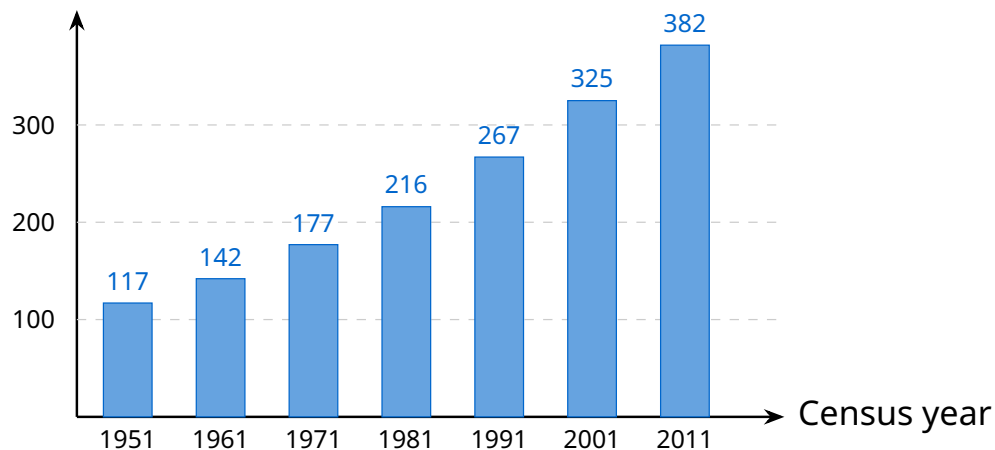
The simplest measure is **arithmetic density**, also called crude density: total population divided by total land area. India's density in 2011 was **382 persons per sq km**. It has risen by more than 200 persons per sq km in just 50 years, from 117 in 1951 to 382 in 2011.

Arithmetic (Crude) Density

$$\text{Density} = \frac{\text{Total population}}{\text{Total land area}} \quad (\text{persons per sq km})$$

$$\text{India 2011: } \frac{1,210 \text{ million}}{3.28 \text{ million sq km}} \approx 382 \text{ persons/sq km.}$$

persons / sq km

**Lock the Key Number**

India's density in 2011 = 382 persons per sq km. This is one of the most-asked one-mark figures from the chapter. Pair it with 117 (1951) to show the jump over 60 years.

3.2 Spatial Variation in Density

Density is far from uniform. It runs from as low as **17 persons per sq km** in Arunachal Pradesh to a staggering **11,297 persons per sq km** in the National Capital Territory of Delhi. Among the northern states, Bihar (1102), West Bengal (1029) and Uttar Pradesh (828) are the most crowded. In the peninsula, Kerala (859) and Tamil Nadu (555) lead. Hill states of the Himalayas and the North-East (except Assam) have very low densities, while the Union Territories (except Andaman and Nicobar) are extremely crowded.

Density band	Range (per sq km)	Examples
Very low	below 100	Arunachal Pradesh (17), hill & NE states
Low to moderate	100–400	Assam, Gujarat, Odisha, Haryana
High	400–900	Tamil Nadu (555), Kerala (859), UP (828)
Very high	above 900	West Bengal (1029), Bihar (1102)
Extreme	above 10,000	NCT of Delhi (11,297)

Most Crowded State to Recall

For the **highest density state**, remember **“Bihar Beats all”** (1102 persons/sq km). For the highest density *Union Territory / overall*, it is **Delhi**

(11,297). State vs UT is a classic trap, so keep both ready.

3.3 Physiological and Agricultural Density

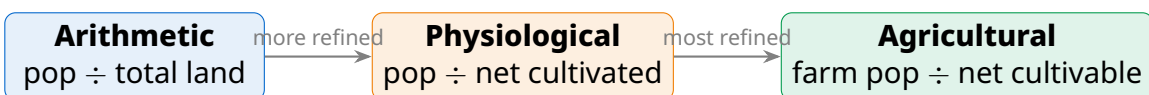
Arithmetic density is crude because it shares people over *all* land, including barren and uncultivable areas. For a farming country like India, two refined measures give a truer picture of pressure on usable land.

Refined Density Measures

$$\text{Physiological density} = \frac{\text{Total population}}{\text{Net cultivated area}}$$

$$\text{Agricultural density} = \frac{\text{Total agricultural population}}{\text{Net cultivable area}}$$

Agricultural population = cultivators + agricultural labourers + their family members.



Crude vs Refined

Arithmetic density spreads people over *all* land, so it understates real pressure. **Physiological** and **agricultural** densities use only cultivated/cultivable land, so they reveal how heavily the productive land is loaded, which matters most for a country that feeds itself by farming.

Net Cultivated vs Net Cultivable

Watch the wording. **Physiological** density uses *net cultivated area* (land actually farmed). **Agricultural** density uses *net cultivable area* (land that can be farmed) with only the *agricultural* population on top. Swapping the two denominators is a common slip.

4 Growth of Population

Growth is the change in the number of people in an area between two points of time, expressed in per cent. India's growth has been high and, for most of the last century, rising. It has two parts: **natural growth** (births minus deaths) and **induced growth** (in-migration minus out-migration). This chapter studies only natural growth, measured from the crude birth and death rates.

4.1 Components and the Decadal Growth Formula

Population growth has two components. **Natural growth** comes from the gap between births and deaths. **Induced growth** comes from people moving in or out. The standard measure is the **decadal growth rate**, the percentage change in population between two census years.

Decadal Growth Rate

$$g = \frac{p_2 - p_1}{p_1} \times 100$$

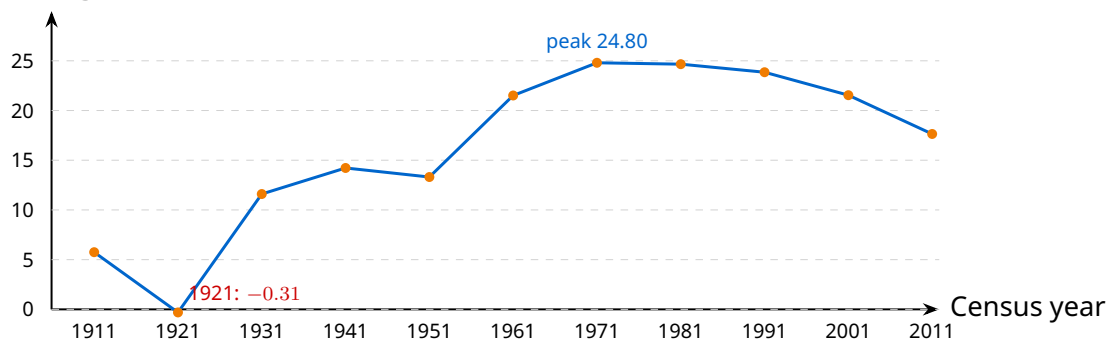
where p_1 = population of the base year and p_2 = population of the present year. India's annual growth rate in 2011 was **1.64 per cent**.

- **Natural growth** = births – deaths (the only part studied here).
- **Induced growth** = in-migration – out-migration.
- **Annual growth rate (2011):** 1.64%.

Population Doubling Time

Doubling time is the number of years a population would take to double at its current annual growth rate. A higher growth rate means a shorter doubling time. At a steady high rate, even a slowing percentage can still add huge absolute numbers because the base is so large.

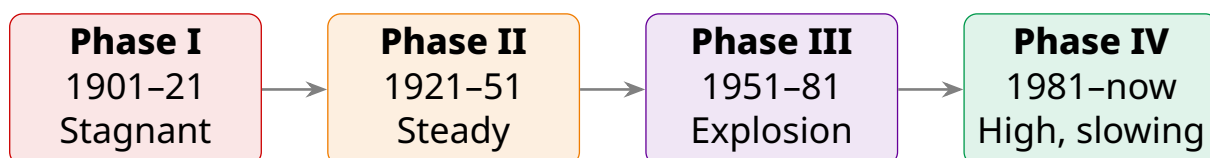
% decadal growth



4.2 The Four Phases of Growth

India's growth over the last century falls into four clear phases, shaped by changing birth rates, death rates and migration.

Phase	Period	Character
Phase I	1901–1921	Stagnant. Both birth and death rates high; growth very low; even a negative rate in 1911–1921. Poor health, illiteracy, weak food distribution.
Phase II	1921–1951	Steady growth. Better health and sanitation lowered deaths; birth rate stayed high; transport improved food supply.
Phase III	1951–1981	Population explosion. Death rate fell fast while fertility stayed high; average annual growth $\approx 2.2\%$; planning, development and migration added to it.
Phase IV	1981–present	High but slowing. Birth rate falling due to later marriage, better education (especially of women), and improved quality of life.



Four Phases in One Line

“Still, Steady, Soar, Slow” maps the four phases in order: **Stagnant** (I) → **Steady** (II) → **Soar/explosion** (III) → **Slow-down** (IV). Four S-words, four phases.

The One Negative Decade

Only **1911–1921** recorded a *negative* growth rate (-0.31%) due to epidemics, famine and influenza. If a question asks which decade lost population, this is the answer.

4.3 Regional Variation and Adolescents

Growth is not even across India. Southern states like **Kerala** (lowest at 9.4%), Karnataka, Tamil Nadu and Andhra Pradesh grow slowly, while a belt from the north-west through the north and north-central states (Gujarat, Rajasthan, UP, MP, Bihar and others) grows faster at 20–25% per decade. During 2001–2011, almost all states recorded lower growth than in the previous decade. A key concern is the **adolescent** group (ages 10–19), about **20.9 per cent** of the population in 2011, a youthful resource that needs care, education and skilling.

- **Slow-growth states:** Kerala, Tamil Nadu, Karnataka, Andhra Pradesh (south).
- **Fast-growth belt:** Bihar, UP, MP, Rajasthan, Gujarat (north and centre).
- **Adolescents (10–19 yrs):** 20.9% of population in 2011.

- Policies: **National Youth Policy 2014** (youth = 15–29 yrs); **Skill Development Policy 2015**.

The Demographic Dividend

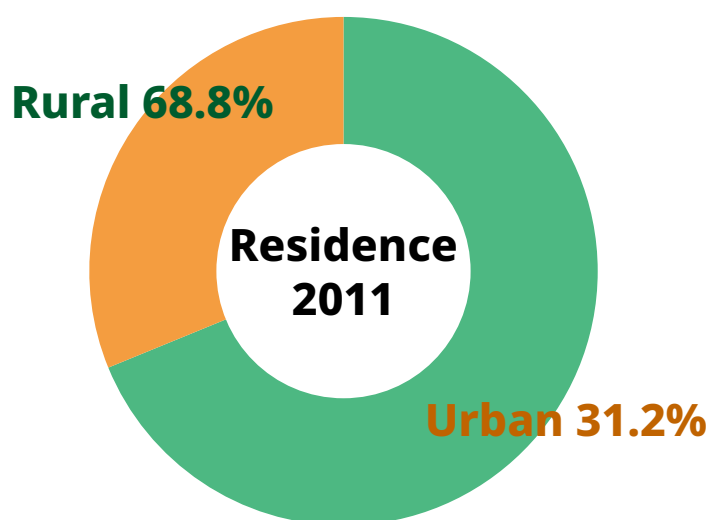
A large young population can be a huge advantage if it is healthy, educated and employed. This “demographic dividend” is why schemes like the National Youth Policy and skill-development missions matter: a youthful India can power its economy, but only if its young people get the right opportunities.

5 Population Composition

Composition asks *what kind* of people make up the total. It studies people by where they live, the language they speak, the religion they follow, and the work they do. This is the most exam-rich part of the chapter, full of one-mark facts and short-answer comparisons. We look at four lenses: rural-urban, linguistic, religious and occupational.

5.1 Rural-Urban Composition

Where people live tells us a lot about a society. In 2011, about **68.8 per cent** of Indians lived in villages and **31.16 per cent** in towns and cities. India has 640,867 villages, of which 597,608 (93.2%) are inhabited. The urban share is low but is rising fast, driven by economic development, better health, and rural-urban migration. Himachal Pradesh and Bihar are strongly rural; Goa and Mizoram have only about half their people in villages.



- **Rural population:** 68.8% (2011).
- **Urban population:** 31.16% (2011), growing faster.
- **Strongly rural states:** Himachal Pradesh, Bihar.

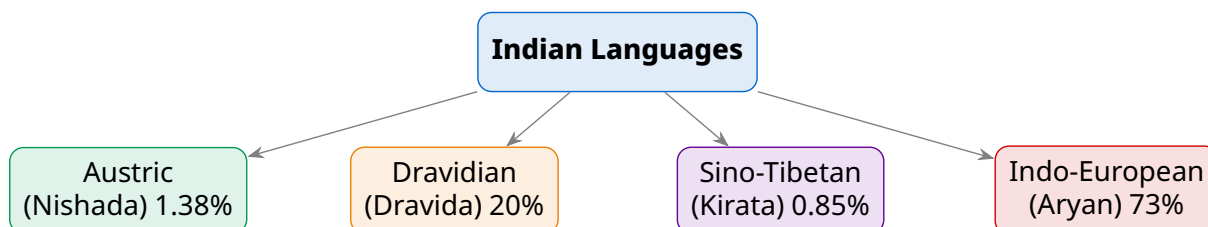
- **Least rural:** Goa, Mizoram ($\approx$ half urban).

Two Numbers That Must Add Up

Rural **68.8%** + Urban **31.2%** $\approx$ 100%. If a question gives you one, the other follows. Goa has the highest *proportion* of urban population among the states.

5.2 Linguistic Composition

India is a land of huge linguistic diversity. The Linguistic Survey of India by Grierson (1903–1928) recorded **179 languages** and **544 dialects**. Today the Constitution recognises **22 scheduled languages** plus many non-scheduled ones. Among scheduled languages, **Hindi** has the largest share of speakers; the smallest groups include Sanskrit, Bodo and Manipuri. The speakers fall into four language families.



Family	Share	Main speech areas
Austic (Nishada)	1.38%	Meghalaya, Nicobar, parts of east-central India
Dravidian (Dravida)	20%	Tamil Nadu, Karnataka, Kerala, Andhra Pradesh
Sino-Tibetan (Kirata)	0.85%	North-East, Himalayan belt
Indo-European (Aryan)	73%	North, west and east India (Hindi belt etc.)

The Four Language Families

The biggest family by far is **Indo-European (Aryan) at 73%**, followed by **Dravidian at 20%**. The two small families are Austic (1.38%) and Sino-Tibetan (0.85%). Linguistic regions do not have sharp borders; they merge and overlap at their edges.

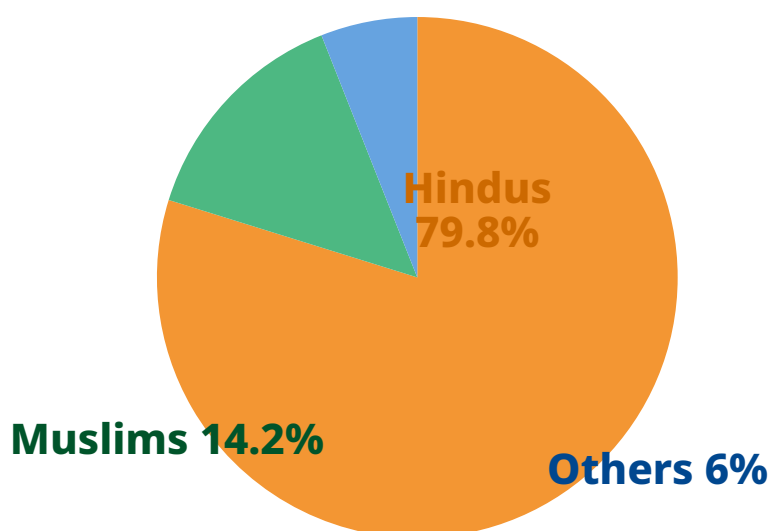
Order of Language Families by Size

Aryan (73) > Dravidian (20) > Austic (1.38) > Sino-Tibetan (0.85). Think **"A-D-A-S"** (Aryan, Dravidian, Austic, Sino-Tibetan) from largest to smallest.

5.3 Religious Composition

Religion deeply shapes the cultural and political life of India. The 2011 Census records the religious make-up of the country, with Hindus the clear majority and Muslims the largest minority.

Religious group	Population (million)	% of total
Hindus	966.3	79.8
Muslims	172.2	14.2
Christians	27.8	2.3
Sikhs	20.8	1.7
Buddhists	8.4	0.7
Jains	4.5	0.4
Other Religions (ORP)	7.9	0.7
Religion Not Stated	2.9	0.2



- **Hindus** are spread across most states (often 70–90%+), the dominant group.
- **Muslims** are concentrated in Jammu & Kashmir, parts of West Bengal, Kerala, UP, around Delhi and Lakshadweep.
- **Christians** cluster on the western coast (Goa, Kerala) and the hill states of the North-East.
- **Sikhs** are mainly in Punjab, Haryana and Delhi.
- **Jains** (urban Rajasthan, Gujarat, Maharashtra) and **Buddhists** (Maharashtra, Sikkim, Ladakh) are the smallest groups.

Largest Minority vs Smallest Group

Muslims are the largest religious *minority* (14.2%), not Christians. Among the listed groups, **Jains** are the smallest (0.4%). Do not confuse “largest minority” with “second-largest religion” when the wording is tricky.

5.4 Composition of the Working Population

By economic status, the census splits people into **main workers**, **marginal workers** and **non-workers**. A *main worker* works at least 183 days (six months) a year; a *marginal worker* works less than that. In 2011, only about **39.8 per cent** of Indians were workers, leaving roughly **60 per cent** as non-workers, a sign of a large dependent population. This is the **work participation rate**.

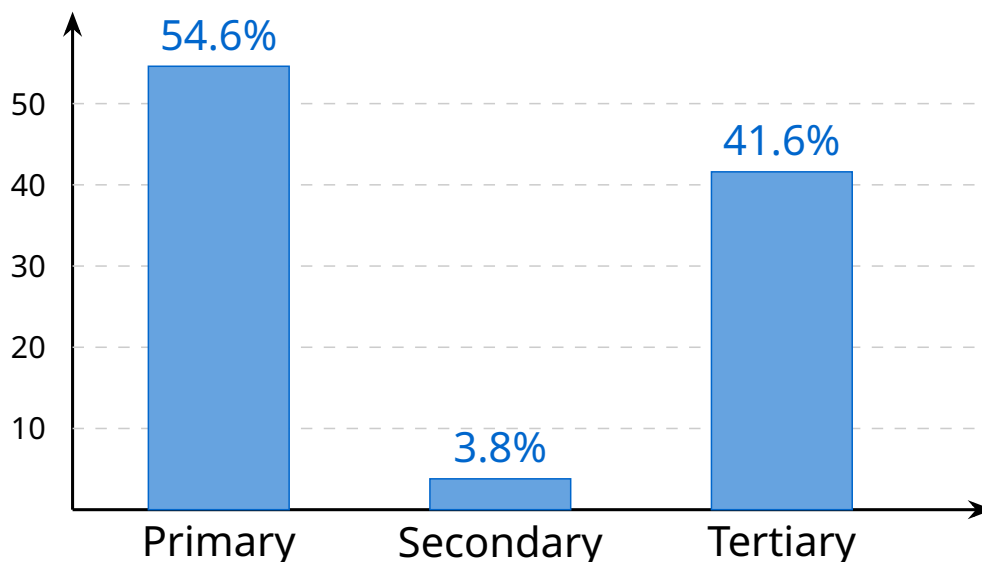
Work Participation Rate

$$\text{Work participation rate} = \frac{\text{Total workers (main + marginal)}}{\text{Total population}} \times 100$$

India 2011: $\approx 39.8\%$ workers, leaving $\approx 60\%$ non-workers.

The 2011 Census divides workers into four categories: **cultivators**, **agricultural labourers**, **household industrial workers**, and **other workers**. By sector, about **54.6 per cent** of workers are in the **primary** sector (farming), only **3.8 per cent** in **secondary** (household industry), and **41.6 per cent** in **tertiary** and other work. Male workers outnumber female workers in all three sectors. The share in agriculture is slowly falling (58.2% in 2001 to 54.6% in 2011), showing a shift towards non-farm work.

% of workers



Sectoral Shift

A falling share of farm workers and a rising share of secondary/tertiary workers signals a **sectoral shift**: the economy is slowly moving from farm-based to non-farm work. Work participation tends to be *higher* in less-developed areas, where many hands are needed for subsistence work.

Beti Bachao–Beti Padhao

Female workers cluster in the primary sector and earn less recognition. The Government's **Beti Bachao–Beti Padhao** campaign tackles the social exclusion of women, because, as the UNDP put it, "If development is not engendered, it is endangered."

Sector Shares in One Glance

Primary 54.6% > Tertiary 41.6% > Secondary 3.8%. The smallest is the secondary (household industry) sector, a frequent one-mark answer.

6 Common Mistakes and Exam Trends

This chapter is loaded with look-alike terms and close numbers, which is exactly where students lose easy marks. This section gathers the traps, shows how CBSE, CUET and UPSC phrase their questions, and gives a clean way to revise the whole chapter as one connected story.

6.1 The Traps That Cost Marks

Most errors in this chapter come from confusing two similar ideas or mixing up two close figures. The table below lines up the pairs that examiners love to test side by side, so you can see the difference in one glance.

This	Not that	The difference
Distribution	Density	Spread on a map vs persons per sq km
Physiological density	Agricultural density	Net cultivated area vs net cultivable area
Highest density state (Bihar)	Highest density overall (Delhi UT)	State leader vs UT/overall leader
Largest minority (Muslims)	Smallest group (Jains)	14.2% vs 0.4%
Main worker (183+ days)	Marginal worker (<183 days)	Six-month cut-off
Natural growth	Induced growth	Births minus deaths vs migration

Reading a Percentage as an Absolute

A falling growth *rate* does not mean the population is falling. India's decadal growth dropped from 21.54% (2001) to 17.64% (2011), yet the country still **added about 18 crore people**. On a base of over a billion, even a smaller percentage is a very large absolute number.

Mixing Up the Census Milestones

The first census in India was **1872**, but the first *complete* census was **1881**. Questions deliberately offer both years as options. Read whether the question asks for the “first” or the “first complete” census.

6.2 How Examiners Frame Questions

Knowing the mark scheme helps you answer in the right length and pick up full marks. The pattern below repeats across CBSE boards, CUET and the UPSC prelims.

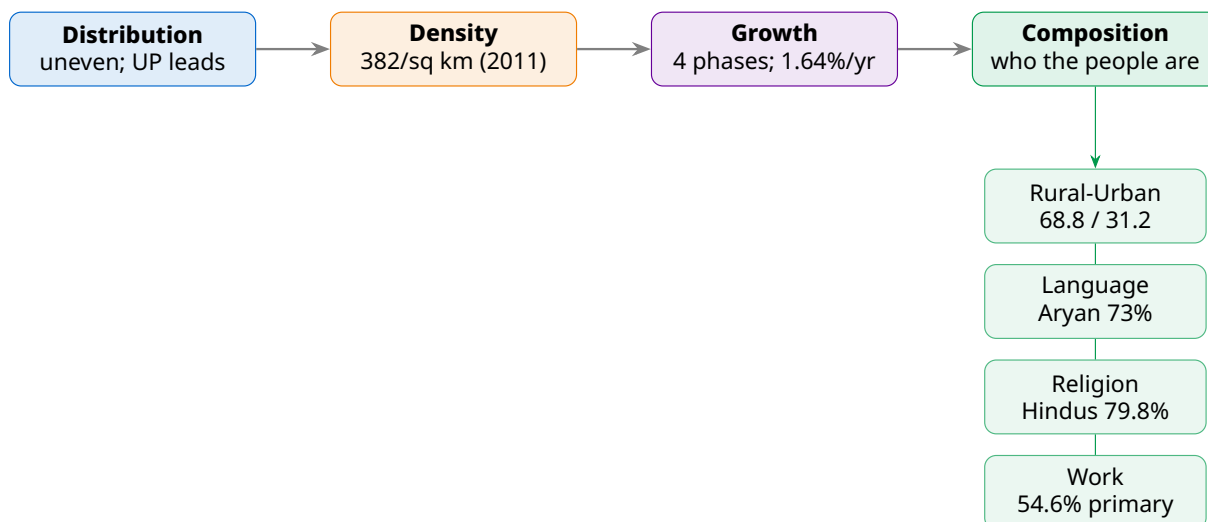
Marks type /	Exam	Typical question
1 (MCQ)	CBSE / CUET	India's population in 2011? Highest density state? Largest language family?
2–3	CBSE	Role of climate in distribution; why some states are highly rural
5	CBSE	Spatial pattern of density; four phases of growth; occupational structure
Factual MCQ	UPSC Prelims	Census milestones, density figures, religion/language shares
Data-based	CUET	Read a table of state shares or sectoral workforce and answer

Why This Chapter Sits in Every Syllabus

Population data drive national planning, election seats, welfare budgets and disaster response. That practical weight is why the chapter appears in CBSE boards, CUET general test, and the UPSC Indian Geography paper, and why the same few figures are asked again and again.

6.3 The Whole Chapter in One Map

Before revising the details, fix the skeleton in your mind. Every topic in this chapter hangs off the four pillars in the title. The diagram below ties them together so you can recall the structure under exam pressure.



One Sentence for the Whole Chapter

"People are unevenly Spread, crowd the plains Dense, Grew in four phases, and differ in how they Live, Speak, pray and Work." Spread = distribution, Dense = density, Grew = growth, and the rest = composition.

7 Quick Reference Summary

This section pulls together every key figure, formula and fact for last-minute revision. If you read only one page before the exam, read this one.

7.1 Key Formulae

All Formulae at a Glance

$$\text{Arithmetic density} = \frac{\text{Total population}}{\text{Total land area}}$$

$$\text{Physiological density} = \frac{\text{Total population}}{\text{Net cultivated area}}$$

$$\text{Agricultural density} = \frac{\text{Agricultural population}}{\text{Net cultivable area}}$$

$$\text{Decadal growth } g = \frac{p_2 - p_1}{p_1} \times 100$$

$$\text{Work participation rate} = \frac{\text{Total workers}}{\text{Total population}} \times 100$$

7.2 Numbers You Must Know

Indicator (Census 2011)	Value
Total population of India	1,210 million
Density of population	382 persons/sq km
Density in 1951 (for comparison)	117 persons/sq km
Annual growth rate (2011)	1.64%
Most populous state	Uttar Pradesh
Highest density state	Bihar (1102)
Highest density (overall)	NCT Delhi (11,297)
Lowest density state	Arunachal Pradesh (17)
Rural population	68.8%
Urban population	31.16%
Adolescents (10–19 yrs)	20.9%
Work participation rate	39.8%
Largest religion / largest minority	Hindus (79.8%) / Muslims (14.2%)
Largest language family	Indo-European (Aryan) 73%
Primary : Secondary : Tertiary workers	54.6 : 3.8 : 41.6

7.3 Self-Check: Practise These

Test yourself with the kind of questions CBSE, CUET and UPSC ask from this chapter. Try to answer before peeking at the notes above.

1. Explain the role of climate in the distribution of India's population. (CBSE 30-word)
2. Discuss the spatial pattern of density of population in India. (CBSE 150-word)
3. Why do some states have higher work participation rates than others?
4. Give an account of the occupational structure of India's population.
5. Distinguish between arithmetic, physiological and agricultural density.
6. Describe the four phases of population growth in India.

Exam Strategy for This Chapter

This chapter is fact-heavy. Lock the *numbers* (density 382, growth 1.64%, rural 68.8%) for one-mark and MCQ questions, and lock the *patterns* (why plains are full, why south grows slowly) for the 3- and 5-mark answers. CUET loves the religion and language percentage tables.

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