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CUET · GEOGRAPHY · CLASS XII · CODE 313

The World Population

CUET unit: World Population — Distribution, Density and Growth

By **UniDrill** · NCERT-grounded study material

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📌 Snapshot

- The world's 6+ billion people are unevenly distributed — 90% live on just 10% of land area, and the 10 most populous countries (6 of them in Asia) contain about 60% of world population.
- Population density has a clear formula and meaning, shaped by geographical, economic and socio-cultural factors that explain why some areas are crowded and others empty.
- The vocabulary of population change covers growth, growth rate, natural growth, actual growth, CBR, CDR, immigration, emigration, and push and pull factors of migration.
- The three-stage Demographic Transition Theory links the shift from rural-agrarian to urban-industrial societies; add Malthus's 1798 theory and modern population control measures.
- High-yield for CUET because almost every term, formula, and example here recurs as direct factual or statement-based MCQs.

📖 Detailed Notes

2.1 Core concepts

- **Population is real wealth.** People are "the actual resources" who use a country's other resources and decide its policies — "ultimately a country is known by its people" (NCERT Introduction, p. 7). NCERT opens with Ralph Waldo Emerson's verse "Not gold but only (Wo)men can make a people great and strong" to frame people, not minerals, as the chief national asset.
- **World population scale.** At the beginning of the 21st century the world recorded the presence of **over 6 billion** population (NCERT Introduction, p. 7).
- **Uneven distribution.** Population is unevenly distributed; George B. Cressey's remark on Asia — "Asia has many places where people are few and few place where people are very many" — applies to the world as a whole (NCERT §Patterns of Population Distribution, p. 7).
- **90/10 rule.** Broadly, **90 per cent of the world population lives in about 10 per cent of its land area** (NCERT §Patterns of Population Distribution, p. 7).
- **Top 10 share.** The 10 most populous countries contribute about **60 per cent** of the world's population; **6 of these 10 lie in Asia** (NCERT §Patterns of Population

Distribution, p. 7; Fig. 2.1). The bar chart in Fig. 2.1 ranks the top-10 in this order: China, India, USA, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh, Russia, Mexico — with China and India each above 1,200 million.

- **Density definition & formula.** Density of Population = Population ÷ Area, expressed in persons per sq km; the worked example uses 1,50,000 persons in 100 sq km giving 1,500 persons/sq km (NCERT §Density of Population, p. 8). Each unit of land has a "limited capacity to support people living on it" — hence the ratio is essential.
- **Geographical factors — water.** Fresh water for drinking, bathing, cooking, cattle, crops, industries and navigation makes **river valleys** among the most densely populated areas of the world (NCERT §Factors I(i), p. 8).
- **Geographical factors — landforms.** Flat plains and gentle slopes favour cropping, roads, industry; the **Ganga plains** are densely populated while the **Himalayan mountain zones are scarcely populated**; mountainous areas hinder transport networks and discourage agricultural and industrial development (NCERT §Factors I(ii), p. 8).
- **Geographical factors — climate.** Extreme hot/cold deserts are uncomfortable for human habitation; areas with comfortable climate and little seasonal variation attract more people; very heavy rainfall or harsh climates produce low population; **Mediterranean regions were inhabited from early periods of history due to their pleasant climate** (NCERT §Factors I(iii), p. 8).
- **Geographical factors — soils.** Fertile **loamy soils** support intensive agriculture and therefore higher densities (NCERT §Factors I(iv), p. 8).
- **Economic factors — minerals.** Mineral deposits attract industries; mining and industrial activities generate employment so skilled and semi-skilled workers move to these areas; the **Katanga-Zambia copper belt** in Africa is the standard example (NCERT §Factors II(i), p. 8).
- **Economic factors — urbanisation.** Cities attract migrants through jobs, education, medical care, transport, communication and civic amenities, causing rural-to-urban migration; mega-cities of the world continue to attract large numbers of migrants every year (NCERT §Factors II(ii), p. 8).
- **Economic factors — industrialisation.** Industrial belts pull factory workers plus transport operators, shopkeepers, bank employees, doctors, teachers and other service providers; the **Kobe–Osaka region of Japan** is "thickly populated because of the presence of a number of industries" (NCERT §Factors II(iii), pp. 8–9).
- **Social/cultural factors.** Religious or cultural significance attracts people; social/political unrest repels them; governments may give incentives to populate sparsely populated areas or move people away from overcrowded places (NCERT §Factors III, p. 9).
- **Population growth/change.** Change of inhabitants of a territory over a specific period; positive or negative; expressed in absolute numbers or percentage; an

indicator of economic development, social upliftment and historical/cultural background (NCERT §Population Growth, p. 9). The illustrative computation: India 2001 (102.70 crore) and 2011 (121.02 crore) give an absolute growth of 18.15 crores.

- **Key formulae.** Natural Growth = Births – Deaths; Actual Growth = Births – Deaths + In-migration – Out-migration (NCERT box "Some Basic Concepts of Population Geography", p. 9).
- **Positive vs negative growth.** Positive when birth rate exceeds death rate or there is in-migration; negative when birth rate falls below death rate or people emigrate (NCERT box, p. 9).
- **Three components of population change — births, deaths and migration** (NCERT §Components of Population Change, p. 9).
- **CBR.** Crude Birth Rate = (B/P) × 1000, live births in a year per thousand of mid-year population (NCERT §Components, p. 9).
- **CDR.** Crude Death Rate = (D/P) × 1000; mortality is shaped by demographic structure, social advancement and economic development; population growth occurs not only by increasing birth rates but also by decreasing death rates (NCERT §Components, p. 9).
- **Migration vocabulary.** Place of Origin loses population, Place of Destination gains; migration may be permanent, temporary or seasonal, and rural–rural, rural–urban, urban–urban or urban–rural; the same person is simultaneously an **immigrant** (moves in) and an **emigrant** (moves out); migration may be interpreted as "a spontaneous effort to achieve a better balance between population and resources" (NCERT §Migration, p. 10).
- **Push factors.** Unemployment, poor living conditions, political turmoil, unpleasant climate, natural disasters, epidemics, socio-economic backwardness (NCERT §Migration, p. 10).
- **Pull factors.** Better jobs and living conditions, peace and stability, security of life and property, pleasant climate (NCERT §Migration, p. 10).
- **Scale of growth (Do You Know box, p. 10).** Human population increased more than **ten times in the past 500 years**; in the **20th century alone it grew four times**.
- **Demographic Transition Theory — Stage I (High Fluctuating).** High fertility AND high mortality; slow growth; agrarian society reproduces more to compensate for deaths from epidemics and variable food supply; large families are an asset; low life expectancy, illiteracy, low technology; **200 years ago all countries of the world were in this stage** (NCERT §Demographic Transition, p. 10; Fig. 2.2).
- **Demographic Transition Theory — Stage II (Expanding).** Fertility remains high at the beginning then declines while mortality falls due to improvements in sanitation and health; the gap produces **high net addition to population** (NCERT p. 11).

- **Demographic Transition Theory — Stage III (Low Fluctuating).** Both fertility and mortality are low; population stable or grows slowly; society is urban, literate, technologically advanced and consciously controls family size; "human beings are extremely flexible and are able to adjust their fertility" (NCERT p. 11).
- **Country examples on Fig. 2.2.** Stage I — Bangladesh, Rainforest tribes; Stage II — Peru, Sri Lanka, Kenya; Stage III — Canada, Japan, USA (NCERT Fig. 2.2, p. 10).
- **Rural-Agrarian → Urban-Industrial.** The demographic cycle is the linking process by which a society moves from one extreme to the other (Fig. 2.2 inset diagram, p. 10).
- **Population control.** Family planning — spacing or preventing births — is key; propaganda, free contraceptives and tax disincentives for large families are control measures; access to family planning services is significant in limiting population growth and improving women's health (NCERT §Population Control Measures, p. 11).
- **Malthus (1798).** Population would grow faster than food supply; further increase would cause a population crash via famine, disease and war; **preventive checks are better than physical checks**; for sustainability the world will have to control rapid population increase (NCERT §Population Control Measures, p. 11).

2.2 Definitions to memorise

Term	Definition	Page
Population distribution	The way people are spaced over the earth's surface	7
Density of population	Ratio of number of people to area of land (persons per sq km)	8
Growth of population	Change of population in a particular area between two points of time (absolute)	9
Growth rate of population	Population change expressed in percentage	9
Natural growth	Births – Deaths	9
Actual growth	Births – Deaths + In-migration – Out-migration	9
Positive growth	Birth rate > death rate, or net in-migration	9
Negative growth	Birth rate < death rate, or net out-migration	9
Crude Birth Rate (CBR)	(Live births during year / mid-year population) × 1000	9
Crude Death Rate (CDR)	(Deaths during year / mid-year population) × 1000	9
Place of Origin	Place migrants move from (loses population)	10
Place of Destination	Place migrants move to (gains population)	10
Immigrant	Migrant who moves INTO a new place	10

Term	Definition	Page
Emigrant	Migrant who moves OUT of a place	10
Push factors	Conditions making place of origin unattractive (unemployment, epidemics, etc.)	10
Pull factors	Conditions making destination attractive (jobs, security, climate)	10
Demographic cycle	Stages of transition from high-birth/high-death to low-birth/low-death	10
Stage I — High Fluctuating	High BR and high DR; slow growth	10
Stage II — Expanding	DR falls while BR stays high; high net addition	11
Stage III — Low Fluctuating	Low BR and DR; stable/slow growth	11
Family planning	Spacing or preventing births	11
Malthusian theory (1798)	Population grows faster than food supply, leading to crash; preventive > physical checks	11

2.3 Diagrams / processes to remember

- **Fig. 2.1 Most Populous Countries (p. 7):** horizontal bar chart with population in millions on x-axis. Order from largest: **China, India, USA, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh, Russia, Mexico**. The six Asian countries among the top 10 are China, India, Indonesia, Pakistan, Bangladesh and (depending on counts) Japan; the NCERT prompts the student to identify them.
- **Density formula box (p. 8):** Density = Population/Area, illustrated by **1,50,000 ÷ 100 = 1,500** persons/sq km.
- **Rural-Agrarian → Demographic Transition → Urban-Industrial flow arrow (p. 10):** captures the essence of the theory in one line.
- **Fig. 2.2 Demographic Transition Theory (p. 10):** three-stage curve with BR (birth rate) starting near 35 and DR (death rate) also high in Stage I (**High Fluctuating**), DR falling steeply in Stage II (**Expanding**) while BR lags, both flattening near 15 in Stage III (**Low Fluctuating**); shaded "**Natural Increase in Population**" wedge between the two curves in Stage II; country labels along the time axis: **Bangladesh / Rainforest tribes (I), Peru / Sri Lanka / Kenya (II), Canada / Japan / USA (III)**.
- **Some Basic Concepts box (p. 9):** prints the definitions of Growth, Growth Rate, Natural Growth, Actual Growth, Positive Growth and Negative Growth side by side with formulae.
- **Do You Know box (p. 10):** records that human population grew more than 10 times in the past 500 years, and 4 times in the 20th century alone.

2.5 Key data table (chapter facts at a glance)

#	Fact / figure	NCERT source
1	World population at the start of 21st century	Over 6 billion, p. 7
2	90/10 distribution rule	90% population on 10% land, p. 7
3	Share of top 10 most populous countries	~60% of world population, p. 7
4	Asian countries in the top 10	6 of the 10 are in Asia, p. 7
5	Largest population country (Fig. 2.1)	China (followed by India), p. 7
6	Worked example of density	1,50,000 ÷ 100 = 1,500 persons/sq km, p. 8
7	Mineral-driven density example	Katanga–Zambia copper belt (Africa), p. 8
8	Industrialisation-driven density example	Kobe–Osaka region (Japan), pp. 8-9
9	Densely populated landform example	Ganga plains, p. 8
10	Climate-driven historical density example	Mediterranean regions, p. 8
11	Components of population change	Births, Deaths, Migration, p. 9
12	CBR formula	(B/P) × 1000, p. 9
13	CDR formula	(D/P) × 1000, p. 9
14	Natural growth formula	Births – Deaths, p. 9
15	Actual growth formula	Births – Deaths + In-migration – Out-migration, p. 9
16	India population — 2001 / 2011 (worked example)	102.70 cr / 121.02 cr; growth 18.15 cr, p. 9
17	Stage I country examples (Fig. 2.2)	Bangladesh, Rainforest tribes, p. 10
18	Stage II country examples (Fig. 2.2)	Peru, Sri Lanka, Kenya, p. 10
19	Stage III country examples (Fig. 2.2)	Canada, Japan, USA, p. 10
20	Population growth over past 500 years	More than 10 times, p. 10
21	Population growth in the 20th century	4 times, p. 10
22	Year of Malthus's theory	1798, p. 11

2.4 Common confusions / NTA trap points

- **Immigrant vs Emigrant** — moving IN = immigrant; moving OUT = emigrant. NTA loves swapping the two.
- **Natural growth vs Actual growth** — natural ignores migration (only births – deaths); actual includes net migration.

- **Push vs Pull** — push REPELS from origin (unemployment, epidemics, water shortage); pull ATTRACTS to destination (medical/educational facilities, jobs, security). Exercise 1(iii) is exact: "medical/educational facilities" is NOT a push factor.
- **Stages of demographic transition** — population growth is SLOW in Stage I (both BR and DR high) and Stage III (both low); growth is FASTEST in Stage II. Exercise 1(iv) tests the false claim that growth is high in Stage I.
- **90/10 distribution** — 90% of people on 10% of land, NOT the other way around.
- **Top-10 share** — about 60% of world population, not 90% or 50%.
- **Katanga–Zambia is a COPPER belt** (not coal/iron) and an example of MINERAL-driven density, not industrialisation per se.
- **Kobe–Osaka** is the standard example for INDUSTRIALISATION (not urbanisation alone).
- **Malthus (1798)** said food grows slower than population and proposed PREVENTIVE checks as better than physical (positive) checks.
- **Sparse-population areas (Exercise 1(ii))** — Atacama (cold desert), equatorial region (very heavy rainfall), polar regions are sparse; **South-east Asia is NOT sparse** — it is dense.
- **Highest-growth continent (Exercise 1(i))** — Africa, not Asia.
- **CBR/CDR are** per 1,000, not per 100 — multiplying by 100 gives a percentage, not a rate.
- **Six Asian countries in top 10** is the NCERT count; CUET sometimes tests "how many Asian countries" — the right answer is 6.

🎯 Practice MCQs

📊 PYQ Alignment

This chapter is a perennial favourite in CUET Geography papers — definitions (CBR, CDR, immigrant/emigrant), the 90/10 distribution fact, push–pull factor classification, country–stage matching from Fig. 2.2, and Malthus (1798) regularly appear as direct-recall and statement-based MCQs, typically accounting for 6–8 questions per year across the World Population unit. See /pyq/geography for year-wise CUET stems and tag-wise filters.

CUET 2025 — Actual PYQs from this chapter

Q.3 (CUET 2025) Which one of the following is a pull factor of migration?

- A) Unemployment B) Poor living conditions C) Political turmoil D) Pleasant climate Tests: Push vs pull factors of migration Answer: Not in extracted key

Q.5 (CUET 2025) Arrange the following countries in descending order according to their population: (A) India (B) Indonesia (C) Nigeria (D) Mexico

- A) (A), (B), (C), (D) B) (A), (C), (B), (D) C) (A), (D), (C), (B) D) (C), (B), (D), (A) Tests: Population ranking of world's most populous countries Answer: Not in extracted key

CUET 2024 — Actual PYQs from this chapter

Q.12 (CUET 2024) Arrange stages of demographic transition model. (A) High birth and high death rate (B) High fertility but declining mortality (C) Declining fertility and mortality (D) Low birth and low death rate

- A) A, B, C, D B) A, C, B, D C) D, B, C, A D) D, C, B, A Tests: Demographic transition model — four-stage sequence Answer: Not in extracted key

Q.38 (CUET 2024) Which country's population shows an inverted triangle age-sex pyramid?

- A) Australia B) Nigeria C) Bangladesh D) Japan Tests: Age-sex pyramid shapes and country examples (Fig. 2.5) Answer: Not in extracted key

CUET 2023 — Actual PYQs from this chapter

Q.5 (CUET 2023) Which one of the following is the main cause of immigration in developed countries?

- A) Pleasant climate B) No interference from government C) Helpful people D) Better job opportunities and better quality of life Tests: Causes of immigration / pull factors in developed countries Answer: Not in extracted key

Q.6 (CUET 2023) The Demographic Transition Theory is used to:

- A) Measure birth rate of any area B) Describe and predict the future population of any area C) Measure death rate of any area D) Explain emigration of any area Tests: Purpose/utility of the Demographic Transition Theory Answer: Not in extracted key