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CLASS X · SOCIAL SCIENCE (087) · GEOGRAPHY · CBSE BOARD EXAMINATION 2027

GEOGRAPHY · CHAPTER 6 MODEL ANSWERS

Manufacturing Industries

Board-Style Answer Booklet · Answers as CBSE expects them

CBSE marking-scheme pattern | Word count on every answer | 87 model answers | Most-probable 2027 answers marked

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HOW TO USE IT

1. Write your own answer first, in the practice notebook.
2. Then open this booklet. Tick each numbered point you also wrote.
3. Give yourself 1 mark per matching point – that is how the examiner marks.
4. Copy any point you missed into My Mistakes (last page of the Chapter Booklet).
5. Rewrite the answer after 3 days, from memory.

USE WITH Chapter Booklet, Geography Ch 6

M

READ THIS FIRST · BASED ON THE CBSE SAMPLE PAPER AND MARKING SCHEME 2026–27

How CBSE Marks Geography

Every answer in this booklet follows the official marking-scheme pattern: numbered value points, keyword first, inside the word limit. Under each answer you will see its word count and how the marks are split.

The Geography section of the 2027 paper

Section B · 20 marks

Item	Type	Marks	Words	What earns the marks
Q10–Q15	MCQs: statements, matching, assertion–reason, identify from clues	1 each	–	Letter + answer
Q16	Very short answer	2	40	2 points × 1 mark
Q17	Long answer, (A) **or** (B)	5	120	5 points × 1 mark
Q18	Source / case-based: 18.1, 18.2, 18.3	1+1+2	100 in all	From the passage + chapter facts
Q19	Map: locate and label any three of four items	3	–	Right place + name written

2025 (32/1/1 Q31) asked a 5-mark question from this chapter: 'manufacturing is the backbone of development' or 'agriculture and industry complement each other'. Write 5 one-line points, each with an example.

How the marking scheme gives marks

SEVEN RULES

- **Marks come from value points.** Each correct, relevant point earns 1 mark: 2 marks = 2 points, 3 marks = 3 points, 5 marks = 5 points. The scheme accepts "any other relevant point", so a correct NCERT point that is not in our answer also scores.
- **Points are numbered and short.** Official answers have no introduction or conclusion. Our 5-mark answers sometimes add one opening and one closing line only so the answer reads well – skip them when short of time.
- **Keyword first.** Start each point with the key word and underline it – the examiner scans for it. Then give one fact: a name, a date, a number or an example.
- **MCQs:** write the letter and the answer text. Combination questions are answered like "(b) Only a, b and d".
- **Case / source-based:** (i) and (ii) need one clear line each; the 2-mark part needs two separate points. Use the passage's own clues, then add chapter facts.
- **Internal choice:** write "(A)" or "(B)" in the margin and attempt only one.
- **Do not repeat** one idea in two points – it earns one mark only.

Answer frames – copy this shape

2-mark answer ≤ 40 words

1. Keyword: one reason or fact.
2. Keyword: a second, different reason or fact.

Two lines, no introduction.

3-mark answer ≤ 60 words

1. Keyword: point + name / date / number.
2. Keyword: point + example.
3. Keyword: point + result.

One sentence per point.

5-mark answer ≤ 120 words

→ Optional opening line that answers the question in short.

1–5 Five numbered points, keyword first, a fact in each.

→ Optional closing line: "So / Hence …".

Order the points in time, or from cause to result.

Case-based 1 + 1 + 2 · ≤ 100 words

(i) One line, from the passage.

(ii) One line: passage clue + chapter fact.

(iii) Two separate points, one line each.

Never copy the whole passage.

Short of time? Learn these ten first

Most probable for 2027

C1	"Manufacturing sector is considered the backbone of …	[5]	C2	"Agriculture and industry complement each other." Explain …	[5]
C3	Classify industries on any three bases with examples.	[3]	C6	Describe the importance and problems of the iron and steel …	[5]
C8	How do industries pollute the environment?	[5]	C9	Suggest measures to control industrial pollution.	[5]
C10	How is NTPC preserving the environment?	[3]	D1	Case: From Field to Factory	[4]
D2	Case: The Golden Riverbank	[4]			

ANSWERS · PART A

A Textbook Check – Answers

Model answers to every Textbook Check question. Underlined words are the keywords the examiner looks for.

Importance and location

A1. What is manufacturing? Give two examples. [2]

1. **Meaning:** producing goods in large quantities by turning raw materials into more valuable products.
2. **Examples:** sugar from sugarcane; steel from iron ore.

22 words · limit 40 | Marking: 2 points × 1 = 2

A2. Why is manufacturing considered the backbone of development? Give three reasons. [3]

1. **Agriculture:** it helps modernise farming.
2. **Jobs:** it reduces dependence on farm income by creating jobs in other sectors.
3. **Exports:** manufactured exports bring foreign exchange.

24 words · limit 60 | Marking: 3 points × 1 = 3 | 2025 32/1/1 Q31(A). | MUST DO

A3. "Agriculture and industry are not exclusive of each other." Explain. [3]

1. **Raw material:** agro-industries get cotton, jute and sugarcane from farms.
2. **Inputs:** industries sell pumps, fertilisers, pesticides and machines to farmers.
3. **Productivity:** agro-industries have raised farm output and efficiency.

28 words · limit 60 | Marking: 3 points × 1 = 3 | 2025 32/1/1 Q31(B). | MUST DO

A4. What is the share of manufacturing in India's GDP? What step was taken to raise its growth? [2]

1. **Share:** about 17% of GDP as per the textbook, out of about 27% for industry.
2. **Step:** the National Manufacturing Competitiveness Council (NMCC) was set up.

25 words · limit 40 | Marking: 2 points × 1 = 2

A5. Name the factors that affect the location of an industry. [2]

1. **Physical:** raw material, power and water.
2. **Human:** labour, capital, market, transport and government policy.

14 words · limit 40 | Marking: 2 points × 1 = 2 | MUST DO

A6. "Industrialisation and urbanisation go hand in hand." Explain. [3]

1. **Town growth:** a town grows around a new industry.
2. **City services:** cities give markets, banking, insurance, transport and labour.
3. **Agglomeration:** industries cluster in cities to share these advantages.

28 words · limit 60 | Marking: 3 points × 1 = 3

Classification

A7. Classify industries on the basis of ownership with one example each. [3]

1. **Public and private:** public – BHEL, SAIL; private – TISCO, Dabur.
2. **Joint:** run by government and private firms – Oil India Ltd.
3. **Cooperative:** owned by producers or workers – sugar in Maharashtra, coir in Kerala.

31 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

A8. Distinguish between basic and consumer industries. [2]

1. **Basic:** supply raw material to other industries – iron and steel, aluminium smelting.
2. **Consumer:** make goods for direct use – sugar, toothpaste, fans.

21 words · limit 40 | Marking: 2 points × 1 = 2 | MUST DO

A9. Distinguish between agro-based and mineral-based industries. [2]

1. **Agro-based:** use farm products – cotton, jute, sugar, tea.
2. **Mineral-based:** use minerals – iron and steel, cement, aluminium.

16 words · limit 40 | Marking: 2 points × 1 = 2

Agro-based industries

A10. Why does the textile industry hold a unique position in India's economy? [3]

1. **Economy:** a large share of industrial production and foreign exchange.
2. **Jobs:** second only to agriculture in employment.
3. **Value chain:** the only industry complete from raw material to finished goods.

29 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

A11. Why were early cotton mills set up in Maharashtra and Gujarat? [3]

1. **Raw material:** the cotton-growing belt was close by.
2. **Market and port:** big markets, transport and port facilities.
3. **Labour and climate:** plenty of labour and a moist climate.

27 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

A12. State three problems of the cotton textile industry. [3]

1. **Power:** erratic power supply.
2. **Machinery:** old machines in weaving and processing need upgrading.
3. **Competition:** low labour output and competition from synthetic fibres.

22 words · limit 60 | Marking: 3 points × 1 = 3

A13. Give reasons for the concentration of jute mills in the Hugli basin. [3]

1. **Raw jute and water:** nearby jute areas and plenty of water for processing.
2. **Transport and labour:** cheap water, rail and road transport; cheap labour from nearby states.
3. **Kolkata:** banking, insurance and port for export.

34 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

A14. State the challenges and the hopes of the jute industry. [3]

1. **Challenges:** synthetic substitutes and rivals like Bangladesh and Brazil.
2. **Policy:** mandatory jute packaging and the National Jute Policy, 2005.
3. **Demand:** rising world demand for biodegradable products.

26 words · limit 60 | Marking: 3 points × 1 = 3

A15. Why is the sugar industry shifting to the southern and western states? [3]

1. **Sucrose:** cane there has a higher sucrose content.
2. **Climate:** the cooler climate gives a longer crushing season.
3. **Cooperatives:** cooperatives are more successful there.

23 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

Mineral-based and other industries

A16. Why is iron and steel called a basic and a heavy industry? [2]

1. **Basic:** all other industries depend on it for machinery.
2. **Heavy:** its raw materials and products are bulky and costly to transport.

21 words · limit 40 | Marking: 2 points × 1 = 2 | MUST DO

A17. Why is the Chota Nagpur plateau the main centre of the iron and steel industry? [3]

1. **Raw materials:** low-cost, high-grade iron ore and coal close by.
2. **Labour:** cheap labour is available.
3. **Market:** vast growth potential in the home market.

23 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

A18. Why has India not performed to its full potential in steel production? [3]

1. **Coking coal:** high cost and limited supply.
2. **Labour and energy:** low labour productivity and irregular power.
3. **Infrastructure:** poor infrastructure; more R&D is needed.

23 words · limit 60 | Marking: 3 points × 1 = 3

A19. State two uses of aluminium and two factors for locating aluminium plants. [2]

1. **Uses:** aircraft, utensils and wires.
2. **Location:** regular cheap electricity and an assured supply of bauxite.

15 words · limit 40 | Marking: 2 points × 1 = 2

A20. Distinguish between inorganic and organic chemical industries. [3]

1. **Inorganic:** sulphuric and nitric acid, soda ash, caustic soda.
2. **Organic:** petrochemicals for fibres, plastics, dyes and drugs.
3. **Location:** inorganic – widely spread; organic – near oil refineries.

25 words · limit 60 | Marking: 3 points × 1 = 3

A21. How has the IT and electronics industry helped India? [3]

1. **Employment:** it has created many jobs, including for women.
2. **Foreign exchange:** the BPO sector earns a lot of it.
3. **Software parks:** single-window service and fast data links; Bengaluru is the electronic capital.

32 words · limit 60 | Marking: 3 points × 1 = 3

Pollution and control

A22. Name the four types of industrial pollution with one cause each. [2]

1. **Air and water:** smoke from kilns and refineries; effluents from tanneries and dyeing units.
2. **Land and noise:** dumping of waste; generators and drills.

23 words · limit 40 | Marking: 2 points × 1 = 2 | MUST DO

A23. Describe the three stages of treating industrial effluents. [3]

1. **Primary:** mechanical – screening, grinding, flocculation, sedimentation.
2. **Secondary:** biological process.
3. **Tertiary:** biological, chemical and physical, including recycling.

16 words · limit 60 | Marking: 3 points × 1 = 3

B

ANSWER KEY · PART B

Objective – Answer Key

All 20 MCQ and assertion–reason answers, each with a one-line reason so you learn the fact, not only the letter.

Write the option letter **and** the answer, as the marking scheme does – e.g. "(b) ..." followed by the answer text.

Q	Answer	Why (one line)
B1	**(a) a-iii, b-iv, c-i, d-ii**	Ownership classification.
B2	**(b) Mumbai, 1854**	Rishra 1855 – jute; Chennai 1904 – cement.
B3	**(c) 4 : 2 : 1**	Some manganese is also added.
B4	**(d) Textile**	From raw material to finished goods.
B5	**(a) Sewing machines**	Direct use.
B6	**(b) Bangladesh**	Three-fourths of jute area went to East Pakistan.
B7	**(c) Potash**	No usable reserves.
B8	**(d) Bengaluru**	Software technology parks.
B9	**(c) Both I and II are correct**	Both true.
B10	**(a) particulate matter in air**	Also fabric filters and scrubbers.
B11	**(b) Salem**	Vijayanagar – Karnataka.
B12	**(c) Pune**	Type of 2026 32/1/1 Q19 (map).
B13	**(d) Bokaro**	Also Jamshedpur. Type of 2025 32/1/1 Q37(b).
B14	**(a) access to markets in the Gulf countries**	Exports by sea.
B15	**(b) Tertiary**	Biological, chemical and physical.
B16	**(d) Surat – Gujarat**	Bhilai – Chhattisgarh; Coimbatore – TN; Kanpur – UP.
B17	**(a) Both A and R are true, and R is the correct explanation of A.**	R explains A. Theme of 2025 Q31(A).
B18	**(a) Both A and R are true, and R is the correct explanation of A.**	R explains A.
B19	**(b) Both A and R are true, but R is not the correct explanation of A.**	Both true; the future depends on demand for biodegradable products.
B20	**(d) A is false, but R is true.**	A false – India is second after China; R true.

C

ANSWERS · PART C

Board Pattern – Answers

Model answers in the marking-scheme pattern. Orange tags show where a similar question came in a board or sample paper.

Importance of manufacturing

★★☆ 2025 32/1/1 · 5 marks (Q31)

C1. "Manufacturing sector is considered the backbone of development." Justify with five points. [5]

1. **Agriculture:** industry modernises farming with machines, fertilisers and irrigation.
2. **Jobs:** it reduces dependence on farm income by giving jobs in secondary and tertiary sectors.
3. **Poverty:** industrial growth helps remove unemployment and poverty.
4. **Regional balance:** industries in tribal and backward areas reduce regional disparities.
5. **Exports:** manufactured exports bring foreign exchange and prosperity.

51 words · limit 120 | Marking: 5 points × 1 = 5 | 2025 32/1/1 Q31(A). | MUST DO

C2. "Agriculture and industry complement each other." Explain with five points. [5]

1. **Raw materials:** cotton, jute, sugarcane and oilseeds feed agro-industries.
2. **Inputs:** industry supplies fertilisers, pesticides and pumps to farmers.
3. **Machines:** tractors, tools and PVC pipes raise farm efficiency.
4. **Income:** agro-industries give farmers a market and better prices.
5. **Productivity:** competitive industry has raised farm production and efficiency.

45 words · limit 120 | Marking: 5 points × 1 = 5 | 2025 32/1/1 Q31(B). | MUST DO

Classification and location

★★☆ NCERT core · 1–3 marks

C3. Classify industries on any three bases with examples. [3]

1. **Raw material:** agro-based – sugar; mineral-based – cement.
2. **Role:** basic – iron and steel; consumer – toothpaste.
3. **Ownership:** public – SAIL; private – TISCO; joint – OIL; cooperative – coir.

22 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

C4. Why did most industries before Independence develop near Mumbai, Kolkata and Chennai? [3]

1. **Overseas trade:** they were set up to export goods through ports.
2. **Facilities:** these cities had markets, banks and transport.
3. **Result:** industrial pockets grew amid large rural hinterlands.

27 words · limit 60 | Marking: 3 points × 1 = 3

Agro- and mineral-based industries

★★☆ NCERT core · 3–5 marks

C5. Explain the factors for the location of the cotton textile and jute industries. [5]

1. **Cotton raw material:** the cotton belt of Maharashtra and Gujarat.
2. **Cotton conditions:** markets, ports, labour and a moist climate.
3. **Jute raw material:** jute-growing areas close to the Hugli basin.
4. **Jute transport:** cheap water transport with rail and road; plenty of water.
5. **Jute services:** cheap labour and Kolkata's banking, insurance and port.

51 words · limit 120 | Marking: 5 points × 1 = 5

C6. Describe the importance and problems of the iron and steel industry in India. [5]

1. **Basic:** all industries depend on it for machinery.
2. **Index:** steel production and use show a country's development.
3. **Coking coal:** high cost and limited supply.
4. **Labour and power:** low labour productivity and irregular energy.
5. **Infrastructure:** poor infrastructure; India imports good-quality steel.

40 words · limit 120 | Marking: 5 points × 1 = 5 | MUST DO

C7. State three challenges faced by the sugar industry. [3]

1. **Seasonal:** mills work only during the crushing season.
2. **Methods:** old, inefficient methods and transport delays.
3. **Bagasse:** its best use is still needed.

22 words · limit 60 | Marking: 3 points × 1 = 3

Pollution and its control

★★☆ NCERT core · 3–5 marks

C8. How do industries pollute the environment? Explain with five points. [5]

1. **Air:** sulphur dioxide, carbon monoxide and smoke from kilns, refineries, smelters.
2. **Water:** effluents with dyes, acids, lead and mercury from tanneries and dyeing units.
3. **Thermal:** hot water from factories and power plants is drained into rivers.
4. **Land:** dumped waste makes soil useless and pollutes groundwater.
5. **Noise:** machines and generators cause stress and hearing loss.

54 words · limit 120 | Marking: 5 points × 1 = 5 | MUST DO

C9. Suggest measures to control industrial pollution. [5]

1. **Water use:** reuse and recycle water; harvest rainwater.
2. **Effluents:** treat in primary, secondary and tertiary stages before release.
3. **Groundwater:** regulate over-drawing by law.
4. **Air:** electrostatic precipitators, filters and scrubbers; oil or gas in place of coal.
5. **Noise:** silencers, quieter machines, noise-absorbing material, ear plugs.

44 words · limit 120 | Marking: 5 points × 1 = 5 | MUST DO

C10. How is NTPC preserving the environment? [3]

1. **Equipment:** optimum use and upgrading of equipment with latest techniques.
2. **Ash:** maximum ash utilisation, ash pond management and ash-water recycling.
3. **Green belts:** afforestation and ecological monitoring of its stations.

29 words · limit 60 | Marking: 3 points × 1 = 3 | MUST DO

D

ANSWERS · PART D

Case-Based – Answers

One line each for the 1-mark parts; separate points for the 2-mark parts. The whole answer stays within the word limit.

D1. Case-Based · From Field to Factory (printed in the booklet) [4]

(i) Name the sector of ownership of this mill. [1]

Cooperative sector.

(ii) Why does it run only part of the year? [1]

The sugar industry is seasonal – it depends on the cane-crushing season.

(iii) How do agriculture and industry help each other here? Two points. [2]

(i) Farms supply cane as raw material to the mill.
(ii) Industry supplies fertilisers, sprinklers and tractors to farmers.

32 words in all · limit 100 | Marking: 1 + 1 + 2 = 4 | Theme of 2025 32/1/1 Q31(B).

D2. Case-Based · The Golden Riverbank (printed in the booklet) [4]

(i) Name the industry and the river. [1]

Jute industry; Hugli.

(ii) Name the country that is the biggest exporter of this product. [1]

Bangladesh.

(iii) Give two reasons for the location of these mills here. [2]

(i) Nearness to jute areas and cheap water transport.
(ii) Plenty of water, cheap labour and Kolkata's port and banks.

24 words in all · limit 100 | Marking: 1 + 1 + 2 = 4

D3. Case-Based · Fire and Iron (printed in the booklet) [4]

(i) Name the furnace and its first product. [1]

Blast furnace; pig iron.

(ii) Why is this called a heavy industry? [1]

Its raw materials and products are heavy and bulky.

(iii) Give two reasons for the concentration of this industry on the plateau. [2]

(i) Low-cost, high-grade iron ore and coal close by.
(ii) Cheap labour and a large home market.

30 words in all · limit 100 | Marking: 1 + 1 + 2 = 4 | Map link: steel plant in Jharkhand, 2025 32/1/1 Q37(b).

D4. Case-Based · Dark River (printed in the booklet) [4]

(i) What type of pollution is shown? [1]

Water pollution by industrial effluents.

(ii) Name two harmful substances such units release. [1]

Chemicals such as acids and salts, and heavy metals like chromium, lead or mercury.

(iii) Describe two stages of the treatment plant. [2]

(i) Primary – mechanical: screening, grinding, sedimentation.
(ii) Secondary – biological; tertiary – recycling the water.

32 words in all · limit 100 | Marking: 1 + 1 + 2 = 4

D5. Case-Based · City of Code (printed in the booklet) [4]

(i) Name the city and the kind of park. [1]

Bengaluru; software technology park.

(ii) Which sector earns foreign exchange through such night work? [1]

Business Process Outsourcing (BPO).

(iii) Give two contributions of this industry to India. [2]

(i) Employment, including for women.
(ii) Foreign exchange earnings.

17 words in all · limit 100 | Marking: 1 + 1 + 2 = 4 | Map link: software park, 2026 32/1/1 Q19.

E

ANSWERS · PART E

Map Work – Key

Where each map item lies, so you can check your own outline map.

Map answers are marked only if the place is shown at the right spot **and** its name is written. Use the school's printed outline map. This key tells you where each item lies.

Item	Where it is – check your map against this
Mumbai – cotton textile	**Maharashtra**
Indore – cotton textile	**Madhya Pradesh**
Surat – cotton textile	**Gujarat**
Kanpur – cotton textile	**Uttar Pradesh**
Coimbatore – cotton textile	**Tamil Nadu**
Durgapur – iron and steel	**West Bengal**
Bokaro – iron and steel	**Jharkhand**
Jamshedpur – iron and steel	**Jharkhand**
Bhilai – iron and steel	**Chhattisgarh**
Vijayanagar – iron and steel	**Karnataka**
Salem – iron and steel	**Tamil Nadu**
Noida – software park	**Uttar Pradesh**
Gandhinagar – software park	**Gujarat**
Mumbai – software park	**Maharashtra**
Pune – software park	**Maharashtra**
Hyderabad – software park	**Telangana**
Bengaluru – software park	**Karnataka**
Chennai – software park	**Tamil Nadu**
Thiruvananthapuram – software park	**Kerala**