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CLASS X · EMPLOYABILITY SKILLS · PART A OF EVERY SKILL SUBJECT (405 · 413 · 417 · 418) · CBSE BOARD EXAMINATION 2027

PART A · UNIT 5

Green Skills – II

Unit Booklet · Short Notes · Board-Pattern Questions · Model Answers

Part A · 2 of 10 theory marks | 24 questions with model answers | For 405 · 413 · 417 · 418 | Taught: Sat 9 Jan

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STUDENT DETAILS

NAME _____

CLASS & SECTION _____

ROLL NO. _____

UNIT FINISHED ON _____

OBJECTIVE SELF-CHECK ____ / 13

1

READ THIS FIRST · SHORT NOTES

Unit Notes

What sustainable development means, why it is important, the problems that stand in its way, practical solutions such as rainwater harvesting and solar energy, the Sustainable Development Goals, and our role as environmental citizens.

THIS UNIT IN THE BOARD PAPER

2 / 10

Each Part A unit carries about **2 marks**: usually one **1-mark** item in Q1 and one **2-mark** question in Q6–Q10. From this unit, the meaning and importance of sustainable development and its problems and solutions are asked most often.

SYLLABUS 2026–27 · WHAT CBSE LISTS FOR THIS UNIT

- Sustainable development: definition
- Importance of sustainable development
- Problems related to sustainable development
- Practical part: community sustainability problems, indigenous knowledge, environmental citizenship, models (rainwater harvesting, drip irrigation, vermicompost, solar cooker)

HOW PART A (EMPLOYABILITY SKILLS) IS SET IN THE BOARD PAPER

1 mark
Q1: six objective items from all five units – answer any **4 of 6**.

2 marks
Q6–Q10: one short question from each unit – answer any **3 of 5** in **20–30 words**.

4 marks
Not asked from Part A. The long and case questions here are for school tests and deeper understanding.

Part A = 10
Objective 4 + short 6. It is the same for every skill subject (405, 413, 417, 418).

Part A marks are easy to score: learn the key words, lists and definitions exactly.

PRACTICAL WORK FOR THIS UNIT

Identify a sustainability problem in your area · group discussion on indigenous knowledge and heritage · discuss the duties of an environmental citizen · make a model of rainwater harvesting, drip irrigation, a vermicompost pit or a solar cooker.

1 Sustainable development

Sustainable development: development that meets the needs of the **present** without harming the ability of **future generations** to meet their own needs.

- It balances three things: **environment** (protect nature), **society** (fair to all people) and **economy** (growth and jobs).
- Example: using solar power instead of coal gives electricity today and keeps the air clean for tomorrow.

2 Importance of sustainable development

- **Saves natural resources** – water, soil, forests, minerals – for the future.
- **Reduces pollution** and slows climate change.
- **Protects biodiversity** – plants and animals.
- Ensures **food, water and energy** for everyone.
- Reduces **poverty** and inequality.
- Gives **long-term** economic growth and a healthier life.

3 Problems related to sustainable development

Problem	What goes wrong
Food	Growing population, less farmland, overuse of chemical fertilisers
Water	Groundwater overused; rivers and lakes polluted; water scarcity
Energy	Dependence on coal and oil, which are limited and polluting
Land degradation	Deforestation, overgrazing and soil erosion
Climate change	Greenhouse gases cause global warming, floods and droughts
Waste and pollution	Plastic, e-waste, smoke and sewage
Loss of biodiversity	Forests cleared; species disappear

4 Solutions: what can be done

Solution	How it helps
Rainwater harvesting	Collects rain from roofs into tanks or recharge pits; refills groundwater
Drip and sprinkler irrigation	Drip gives water drop by drop at the roots; sprinklers spray like rain – both save water
Vermicompost	Earthworms turn kitchen and farm waste into rich manure; less chemical fertiliser
Solar energy and solar cooker	Clean, renewable power; a solar cooker cooks with sunlight, no fuel
Reduce, Reuse, Recycle	Less waste: cloth bags, steel bottles, recycling paper and plastic
Tree planting	Stops soil erosion, cleans the air
Public transport, cycling, walking	Less fuel and smoke

5 Sustainable Development Goals (SDGs)

- In **2015** the member countries of the United Nations adopted **17 goals** to be achieved by **2030**.
- Examples: No Poverty, Zero Hunger, Good Health and Well-being, Quality Education, Gender Equality, Clean Water and Sanitation, Affordable and Clean Energy, Climate Action, Life Below Water, Life on Land.

6 Environmental citizenship and indigenous knowledge

- **Environmental citizen:** a person who protects the environment through daily habits, follows green rules and spreads awareness.
- **Responsibilities:** save water and electricity, segregate wet and dry waste, avoid single-use plastic, plant and protect trees.
- **Benefits:** cleaner surroundings, better health, resources for the future.
- **Indigenous knowledge:** traditional practices of local communities passed down over generations – stepwells and ponds for storing water, mixed cropping, neem leaves to protect stored grain, earthen pots. We should respect and conserve it.

Key terms

11 terms

Sustainable development: meeting present needs without harming the future

Renewable energy: energy that does not run out: sun, wind

Rainwater harvesting: collecting and storing rainwater

Drip irrigation: water dripped at the roots

Vermicompost: manure made by earthworms

Climate change: long-term change in climate from greenhouse gases

Biodiversity: variety of plants and animals

SDGs: 17 UN goals for 2030

3 Rs: reduce, reuse, recycle

Indigenous knowledge: traditional local practices

Environmental citizen: person who protects the environment

Common mistakes and exam tips

AVOID THESE

- Learn the definition word for word: **present needs** … **without harming future generations**.
- SDGs: **17** goals, adopted **2015**, target **2030**.
- Pair each problem with a solution: water → rainwater harvesting and drip irrigation; energy → solar.

A

PART A · 1 MARK EACH

Objective Questions

13 questions: MCQs, assertion–reason, fill in the blanks and true/false, like Q1 of the board paper. Answers in Part E.

ASSERTION–REASON: HOW TO ANSWER

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

A1. Development that meets present needs without harming future generations is: [1]

(a) industrial development
(b) sustainable development
(c) urbanisation
(d) globalisation

A2. How many Sustainable Development Goals did the UN adopt in 2015? [1]

(a) 8 **(b)** 12 **(c)** 17 **(d)** 20

A3. Which is a renewable source of energy? [1]

(a) Coal **(b)** Petrol **(c)** Solar **(d)** Natural gas

A4. Earthworms turning kitchen waste into manure is called: [1]

(a) vermicompost
(b) incineration
(c) landfill
(d) deforestation

A5. Which method of irrigation gives water drop by drop at the roots? [1]

(a) Flood **(b)** Drip **(c)** Canal **(d)** Sprinkler

A6. Cutting down forests on a large scale leads to: [1]

(a) soil erosion
(b) cleaner air
(c) more wildlife
(d) less flooding

A7. Which habit supports sustainable development? [1]

(a) Using plastic bags
(b) Leaving lights on
(c) Carrying a cloth bag
(d) Burning garbage

A8. ASSERTION–REASON [1]

Assertion (A): Rainwater harvesting helps sustainable development.
Reason (R): It stores rainwater and recharges groundwater for later use.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

A9. ASSERTION–REASON [1]

Assertion (A): Coal is a sustainable source of energy.
Reason (R): Burning coal releases greenhouse gases.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

A10. FILL IN THE BLANK [1]
Reduce, Reuse and _____ are the three Rs of waste management.

A11. FILL IN THE BLANK [1]
The Sustainable Development Goals are to be achieved by the year _____.

A12. TRUE OR FALSE [1]
A solar cooker cooks food without using any fuel.

A13. TRUE OR FALSE [1]
Sustainable development means stopping all development.

B — Short Answer Questions

PART B · 2 MARKS EACH

Answer in 20–30 words: two clear points, like Q6–Q10 of the board paper. Model answers in Part E.

B1. Define sustainable development. MUST DO [2]

B2. Give any two reasons why sustainable development is important. [2]

B3. Name any two problems related to sustainable development. MUST DO [2]

B4. How does drip irrigation help sustainable development? [2]

B5. Write any two things a student can do for sustainable development. [2]

B6. What is indigenous knowledge? Give one example. [2]

C — Long Answer Questions

PART C · 4 MARKS EACH

Part A has no 4-mark questions in the board paper. These are for school tests and to learn the unit fully. Model answers in Part E.

C1. Explain any four problems related to sustainable development. MUST DO [4]

C2. Explain any four solutions that support sustainable development. [4]

C3. Who is an environmental citizen? Give three of their responsibilities. [4]

D — Case-Based Questions

PART D · CASE AND COMPETENCY BASED

Read the situation, then answer from it and from the unit. For school tests and to practise applying the unit.

D1. Case-Based · A thirsty town [4]

In a small town the wells dry up every summer. Families pump groundwater for every need. Rain falling on concrete roofs runs into the drains, and farmers flood their fields with water.

(i) Identify the main sustainability problem. [1]

(ii) Suggest two solutions. [2]

(iii) Which Sustainable Development Goal does this relate to? [1]

D2. Competency-Based · The school green audit [4]

A school uses 40 old tube lights, produces about 20 kg of mixed waste every day, and most students come in private vehicles.

(i) Suggest one step to save energy. [1]

(ii) How should the waste be handled? [1]

(iii) Suggest two green habits for students. [2]

E

PART E · ANSWERS IN CBSE MARKING-SCHEME STYLE

Answers

Objective key with a reason, then model answers: numbered value points, key word first, the mark for each point in orange, and the word count under each answer. Any other correct, relevant point also earns the mark.

Objective questions – answer key

Part A

Write the option letter **and** the answer, as the marking scheme does.

Q	Answer	Why (one line)
A1	**(b) sustainable development**	Definition.
A2	**(c) 17**	To be met by 2030.
A3	**(c) Solar**	Sunlight does not run out.
A4	**(a) vermicompost**	Vermi = worm.
A5	**(b) Drip**	It saves the most water.
A6	**(a) soil erosion**	Roots no longer hold the soil.
A7	**(c) Carrying a cloth bag**	Reduces plastic waste.
A8	**(a) Both true; R explains A**	R explains A.
A9	**(d) A false, R true**	A is false – coal is limited and polluting; R is true.
A10	**Recycle**	Less waste.
A11	**2030**	Adopted in 2015.
A12	**True**	It uses sunlight.
A13	**False**	Correct: it means developing in a way that protects resources for the future; growth continues, wisely.

Short answers

Part B · 2 marks

B1. Define sustainable development. [2]

1. **Present:** development that meets the needs of the present 1
2. **Future:** without harming the ability of future generations to meet their needs. 1

21 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1 | MUST DO

B2. Give any two reasons why sustainable development is important. [2]

1. **Resources:** saves water, soil, forests and fuels for the future. 1
2. **Health:** reduces pollution and slows climate change. 1

17 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

B3. Name any two problems related to sustainable development. [2]

1. **Water scarcity:** groundwater is overused and polluted. 1
2. **Climate change:** greenhouse gases cause global warming, floods and droughts. 1

17 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1 | MUST DO

B4. How does drip irrigation help sustainable development? [2]

1. **Working:** water drips slowly at the plant roots through pipes. 1
2. **Benefit:** saves water and fertiliser; fewer weeds grow. 1

18 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

B5. Write any two things a student can do for sustainable development. [2]

1. **Save energy:** switch off lights and fans when leaving a room. 1
2. **Reduce waste:** carry a cloth bag; separate wet and dry waste. 1

22 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

B6. What is indigenous knowledge? Give one example. [2]

1. **Meaning:** traditional practices of local communities passed down over generations. 1
2. **Example:** using neem leaves to protect stored grain. 1

18 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

Long answers

Part C · 4 marks

C1. Explain any four problems related to sustainable development. [4]

1. **Food:** more people, less farmland, too many chemicals. 1
2. **Water:** groundwater overused and rivers polluted. 1
3. **Energy:** dependence on limited, polluting coal and oil. 1
4. **Climate change:** global warming brings floods and droughts. 1

30 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each | MUST DO

C2. Explain any four solutions that support sustainable development. [4]

1. **Rainwater harvesting:** stores rain and recharges groundwater. 1
2. **Solar energy:** clean power; solar cookers need no fuel. 1
3. **Vermicompost:** turns waste into manure; fewer chemicals. 1
4. **Three Rs:** reduce, reuse and recycle to cut waste. 1

32 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each

C3. Who is an environmental citizen? Give three of their responsibilities. [4]

1. **Meaning:** a person who protects the environment through daily habits and awareness. 1
2. **Water and power:** saves water and electricity. 1
3. **Waste:** separates wet and dry waste; avoids single-use plastic. 1
4. **Trees:** plants and protects trees. 1

33 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each

Case-based answers

Part D

D1. Case-Based · A thirsty town (passage printed in Part D) [4]

(i) Identify the main sustainability problem. [1]

Water scarcity – falling groundwater.

(ii) Suggest two solutions. [2]

(1) **Rooftop rainwater harvesting** into tanks or recharge pits. (2) **Drip or sprinkler irrigation** on farms instead of flooding.

(iii) Which Sustainable Development Goal does this relate to? [1]

Clean Water and Sanitation (Goal 6).

Marking: 1 + 2 + 1 = 4 | 1 + 2 + 1

D2. Competency-Based · The school green audit (passage printed in Part D) [4]

(i) Suggest one step to save energy. [1]

Replace tube lights with **LED lights**, or install **solar panels**.

(ii) How should the waste be handled? [1]

Separate wet and dry waste; turn wet waste into **vermicompost**.

(iii) Suggest two green habits for students. [2]

(1) Use the **school bus, cycle or walk**. (2) Carry **steel bottles and cloth bags**, avoiding single-use plastic.

Marking: 1 + 1 + 2 = 4 | 1 + 1 + 2