

CBSE CLASS X
Science (086)

QUESTION PAPER

AI-generated question paper

Code: I3941T

Questions: 19

Maximum Marks: 38

Generated: 2026-06-25 17:25

SELECTIONS USED

Subject	Science
Lessons	5 Life Processes
Level of understanding	Initial understanding
Question selection	Curated chapter coverage (~3 questions per section)
Model	claude-sonnet-4-6

Composition — Difficulty: 9 straightforward · 9 medium · 1 deep | Types: 9 Short · 8 Very short · 1 Long · 1 MCQ

Q1. medium initial-understanding § Introduction [3]

Even when an organism appears to be completely still, certain processes must keep going on inside its body. Name any two such processes and state why they cannot be stopped as long as the organism is alive.

◆ Life Processes**Q2.** straightforward initial-understanding § 5.1 WHAT ARE LIFE PROCESSES? [2]

Why do living organisms need a continuous supply of energy even when they are not performing any visible activity such as moving or growing?

◆ Life Processes**Q3.** medium initial-understanding § 5.2 NUTRITION [3]

Bile juice does not contain any digestive enzymes, yet it plays a crucial role in the digestion of fats. Explain how.

◆ Life Processes**Q4.** straightforward initial-understanding § 5.2.1 Autotrophic Nutrition [1]

Name the raw materials required for photosynthesis and the main product stored by the plant as an energy reserve.

◆ Life Processes**Q5.** straightforward initial-understanding § 5.2.3 How do Organisms obtain their Nutrition? [1]

Fungi such as bread moulds and mushrooms cannot take in solid food the way animals do. How do they obtain nutrition from the food source around them?

◆ Life Processes**Q6.** medium initial-understanding § 5.2.4 Nutrition in Human Beings [3]

What is the role of bile juice in the digestion of fats in the small intestine?

◆ Life Processes

Q7. straightforward initial-understanding § 5.2.4 Nutrition in Human Beings [1]

Why does the small intestine of a herbivore tend to be longer than that of a carnivore?

◆ Life Processes

Q8. deep initial-understanding § 5.2.4 Nutrition in Human Beings [5]

Describe how a protein in food is digested as it passes through the human alimentary canal. Name the organs and enzymes involved at each stage, and explain how the products of protein digestion are absorbed into the bloodstream.

◆ Life Processes

Q9. straightforward initial-understanding § 5.3 RESPIRATION [1]

Where in the cell does the first step of glucose breakdown occur, and what molecule is produced at the end of this step?

◆ Life Processes

Q10. medium initial-understanding § 5.3 RESPIRATION [3]

Distinguish between aerobic and anaerobic respiration in terms of: (i) where each occurs in the cell, (ii) the end products formed from pyruvate, and (iii) the relative amount of energy released.

◆ Life Processes

Q11. straightforward initial-understanding § 5.3 RESPIRATION [1]

During intense physical exercise, muscle cells may temporarily switch from aerobic to anaerobic respiration. What substance accumulates in the muscles as a result, and what sensation does this cause?

◆ Life Processes

Q12. medium initial-understanding § 5.3 RESPIRATION [1]

Aquatic organisms breathe much faster than terrestrial organisms of comparable size. What is the biological reason for this difference?

◆ Life Processes

Q13. straightforward initial-understanding § 5.4 TRANSPORTATION [1]

What is the role of haemoglobin in the transport of oxygen in human beings?

◆ Life Processes

Q14. medium initial-understanding § 5.4 TRANSPORTATION [2]

Why do arteries have thick, elastic walls while veins do not?

◆ Life Processes

Q15. medium initial-understanding § 5.4 TRANSPORTATION [3]

Name the chambers of the heart that oxygenated blood passes through after returning from the lungs, before it is pumped to the rest of the body.

◆ Life Processes

Q16. straightforward initial-understanding § 5.4 TRANSPORTATION

[1]

Which of the following correctly describes the function of lymph?

- ((A)) It carries oxygen from the lungs to body tissues.
- ((B)) It returns excess tissue fluid and large proteins back to the bloodstream.
- ((C)) It transports digested sugars from the intestine to the liver via the heart.
- ((D)) It pumps blood through the capillaries under high pressure.

A It carries oxygen from the lungs directly to body tissues.

B It carries digested fats from the intestine and drains excess fluid from intercellular spaces back into the blood.

C It pumps blood under high pressure to all organs of the body.

D It produces platelets that help in clotting of blood.

◆ Life Processes

Q17. medium initial-understanding § 5.4 TRANSPORTATION

[3]

How does water move from the soil into the root xylem, and what force drives its upward movement through the plant during the day?

◆ Life Processes

Q18. straightforward initial-understanding § 5.5 EXCRETION

[1]

What is the basic filtration unit of the kidney? Name the tiny cup-shaped structure in which its capillary network is enclosed.

◆ Life Processes

Q19. medium initial-understanding § 5.5 EXCRETION

[2]

Plants do not have kidneys, yet they are able to remove waste products from their bodies. Describe any two strategies plants use to get rid of excretory wastes.

◆ Life Processes

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