

# SCIENCE COORDINATE

0654 | Paper 2

2020 — 2025

## Chapter 1 - BIOLOGY

Page 1

CH 1 - B1. Characteristics Of Living Organisms

CH 2 - B2. Cells

CH 3 - B3. Biological Molecules

CH 4 - B4. Enzymes

CH 5 - B5. Plant Nutrition

CH 6 - B6. Animal Nutrition

CH 7 - B7. Transport

CH 8 - B8. Gas Exchange And Respiration

CH 9 - B9. Coordination And Response

CH 10 - B10. Reproduction

CH 11 - B11. Inheritance

CH 12 - B12. Organisms And Their Environment

CH 13 - B13. Human Influences On Ecosystems

## Chapter 2 - CHEMISTRY

Page 150

CH 14 - C1. The Particulate Nature Of Matter

CH 15 - C2. Experimental Techniques

CH 16 - C3. Atoms, Elements And Compounds

CH 17 - C4. Stoichiometry

CH 18 - C5. Electricity And Chemistry

CH 19 - C6. Energy Changes In Chemical Reactions

CH 20 - C7. Chemical Reactions

CH 21 - C8. Acids, Bases And Salts

CH 22 - C9. The Periodic Table

CH 23 - C10. Metals

CH 24 - C11. Air And Water

CH 25 - C12. Sulfur

CH 26 - C13. Carbonates

CH 27 - C14. Organic Chemistry

## Chapter 3 - PHYSICS

Page 295

CH 28 - P1. Motion

CH 29 - P2. Work, Energy And Power

CH 30 - P3. Thermal Physics

CH 31 - P4. Properties Of Waves, Including Light And Sound

CH 32 - P5. Electricity And Magnetism

CH 33 - P6. Electric Circuits

CH 34 - P7. Electromagnetic Effects

CH 35 - P8. Atomic Physics

## ANSWERS

Page 442

1 - (0654/21\_Summer\_2020\_Q1) - B1. Characteristics Of Living Organisms

Which characteristic of living organisms is defined as the chemical reactions that break down nutrient molecules and release energy for metabolism?

- A excretion
- B nutrition
- C respiration
- D reproduction

2 - (0654/22\_Summer\_2020\_Q1) - B1. Characteristics Of Living Organisms

Which characteristic of living things is described as the removal of toxic materials and substances in excess of requirements?

- A excretion
- B homeostasis
- C nutrition
- D respiration

3 - (0654/23\_Summer\_2020\_Q1) - B1. Characteristics Of Living Organisms

A scientist is studying a living organism. She observes that it has the ability to remove the waste products of metabolism.

What characteristic of living organisms is being observed?

- A excretion
- B nutrition
- C respiration
- D reproduction

4 - (0654/21\_Winter\_2020\_Q1) - B1. Characteristics Of Living Organisms

Which statement is the definition of nutrition?

- A break down of nutrient molecules and the release of energy for metabolism
- B maintenance of a constant internal environment
- C removal of the waste products of metabolism
- D taking in of materials for energy, growth and development

5 - (0654/22\_Winter\_2020\_Q1) - B1. Characteristics Of Living Organisms

A plant is placed on a windowsill. The next day, it is found to have all of its leaves facing the light.

Which of the characteristics is this plant displaying?

- 1 a permanent increase in size and dry mass by an increase in cell number or cell size or both
- 2 an action by an organism or part of an organism causing a change of position or place
- 3 the ability to detect or sense stimuli in the internal or external environment and to make appropriate responses

A 3 only      B 1 and 2 only      C 2 and 3 only      D 1, 2 and 3

6 - (0654/23\_Winter\_2020\_Q1) - B1. Characteristics Of Living Organisms

What is **not** a characteristic of all living organisms?

- A excretion
- B growth
- C photosynthesis
- D sensitivity

7 - (0654/21\_Summer\_2021\_Q1) - B1. Characteristics Of Living Organisms

What is respiration?

- A breakdown of food by enzymes in the alimentary canal
- B breathing to supply oxygen to cells
- C release of carbon dioxide from the lungs
- D release of energy for body activities

8 - (0654/21\_Winter\_2021\_Q1) - B1. Characteristics Of Living Organisms

The list shows some requirements of living things.

- 1 light
- 2 carbon dioxide
- 3 water
- 4 mineral ions

What do plants need to make glucose?

A 1 and 2 only      B 2 and 3 only      C 3 and 4      D 1, 2 and 3

9 - (0654/22\_Winter\_2021\_Q1) - B1. Characteristics Of Living Organisms

Which processes do green plants carry out?

- 1 detect stimuli and make appropriate responses
- 2 break down nutrient molecules to release energy for metabolism
- 3 take in carbon dioxide, water and ions for energy, growth and development

A 1 and 2 only    B 1 and 3 only    C 2 and 3 only    D 1, 2 and 3

10 - (0654/23\_Winter\_2021\_Q1) - B1. Characteristics Of Living Organisms

Ten woodlice were placed in a dish. Half of the dish was dark and the other half of the dish was light.

At the end of one hour, all of the woodlice had moved to the dark side of the dish.

Which characteristic of living organisms does this experiment demonstrate in woodlice?

- A respiration
- B excretion
- C nutrition
- D sensitivity

11 - (0654/21\_Summer\_2022\_Q1) - B1. Characteristics Of Living Organisms

Which statement about one of the characteristics of living organisms is correct?

- A Excretion is the removal of excess substances and toxic materials.
- B Movement is the ability to detect and respond to changes in the environment.
- C Nutrition is the maintenance of a constant internal environment.
- D Respiration is the manufacture of nutrients from raw materials.

12 - (0654/22\_Summer\_2022\_Q1) - B1. Characteristics Of Living Organisms

Which statement about the characteristics of living organisms is correct?

- A Excretion is the chemical reactions in cells that release energy.
- B Nutrition is the taking in of materials for energy, growth and development.
- C Respiration is the process that makes more of the same kind.
- D Sensitivity is the removal of toxic materials and excess substances.

# ANSWERS

[www.exam-prepare.com](http://www.exam-prepare.com)

1 - (0654/21\_Summer\_2020\_Q1) - B1. Characteristics Of Living Organisms

C

2 - (0654/22\_Summer\_2020\_Q1) - B1. Characteristics Of Living Organisms

A

3 - (0654/23\_Summer\_2020\_Q1) - B1. Characteristics Of Living Organisms

A

4 - (0654/21\_Winter\_2020\_Q1) - B1. Characteristics Of Living Organisms

D

5 - (0654/22\_Winter\_2020\_Q1) - B1. Characteristics Of Living Organisms

A

6 - (0654/23\_Winter\_2020\_Q1) - B1. Characteristics Of Living Organisms

C

7 - (0654/21\_Summer\_2021\_Q1) - B1. Characteristics Of Living Organisms

D

8 - (0654/21\_Winter\_2021\_Q1) - B1. Characteristics Of Living Organisms

D

9 - (0654/22\_Winter\_2021\_Q1) - B1. Characteristics Of Living Organisms

D

10 - (0654/23\_Winter\_2021\_Q1) - B1. Characteristics Of Living Organisms

D