

IGCSE Biology P2 V1 Key

Objective Section

Marks: 25

1. A
2. C
3. B
4. D
5. C
6. C
7. C
8. A
9. A
10. C
11. B
12. C
13. C
14. D
15. C
16. B
17. A
18. A
19. B
20. A
21. B
22. B
23. B
24. A
25. A

Theoretical Portion

Marks: 45

1.

(i)

Water

Mineral ions

Energy

(ii)

Because viruses lack the characteristics of living cells, such as responding to stimuli, growing, and reproducing without a host. They are obligate intracellular parasites.

(iii)

- Reduces transpiration
- Conserve water
- Helps survival in arid environments
- Energy efficiency

(iv)

- Wash off into water bodies.
- Contaminate the water, affecting aquatic life.
- Disrupt the food chain.
- Reduced biodiversity.

2.

(i)

Chromosomes.

(ii)

Deoxyribose sugar.

(iii)

Four nitrogenous bases in DNA

- A: Adenine
- C: Cytosine
- G: Guanine
- T: Thymine

3.

(i)

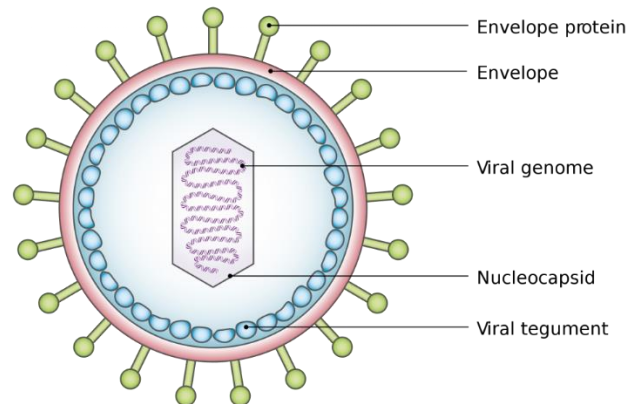
Lipase catalyzes the hydrolysis of lipids which decreases the pH of the solution causing phenolphthalein to change from pink to colorless.

(ii)

Parental phenotypes blood group A × blood group B

Parental genotypes	$I^A I^O \times I^B I^O$
Gametes	I^A and I^O + I^B and I^O
Offspring genotype	$I^A I^B$, $I^A I^O$, $I^B I^O$, $I^O I^O$
Offspring phenotype	blood group O

(iii)



4.

(i)

1. Combustion involves the burning of fossil fuels that release carbon dioxide into the atmosphere.
2. Eating: During digestion, organic compounds are broken down, and carbon becomes part of the body.
3. Photosynthesis: Green plants and algae perform photosynthesis, converting carbon dioxide from the air into glucose using sunlight.
4. Respiration: involves the breakdown of organic molecules to release energy and carbon dioxide.

(ii)

Green plants.

Practical Portion

Marks: 30

1.

(i)

- Prepare starch and amylase solutions and mix them in each test tube.
- Incubate tubes at corresponding temperatures.
- Stop the reaction with iodine solution.
- Measure the time for color change indicating starch digestion.

(ii)

Water bath at 10°C

(iii)

To allow both solutions to reach the same temperature and optimal conditions for the enzymatic reaction.

2.

(i)

If the distance from the tree increases, the percentage of ground covered by plants will also increase. This supports the hypothesis that shade from the tree is affecting plant growth, with less shade leading to increased plant coverage.

(ii)

- Black offspring is produced from grey parents by genetic mutation.
- Black fur provides better camouflage.
- Benefits lead to their higher production, favored by natural selection.

(iii)

- Select participants from both left-handed and right-handed groups.
- Use a consistent experimental setup.
- Collect data on reaction times and control for variables.
- Systematically compare reaction times to explore handedness impact on response speed.