

GCSE Biology A (Gateway)

J247/01 B1-B3 and B7 Foundation (Foundation Tier)

Question Set 1

Multiple Choice Questions

B1: Cell Level Systems

1

What are proteins made of?

- A Amino acids
- B Fatty acids
- C Nucleotides
- D Sugars

Your answer

[1]

2

Which substance gives a positive test with Benedict's reagent?

- A Lipid
- B Protein
- C Starch
- D Sugar

Your answer

[1]

3

Which hormone is involved in controlling the menstrual cycle?

- A Auxin
- B Insulin
- C Progesterone
- D Testosterone

Your answer

[1]

4 Which molecule is **not** a polymer?

- A** DNA
- B** Lipid
- C** Protein
- D** Starch

Your answer

[1]

5 What is the word equation for aerobic respiration?

- A** Carbon dioxide + water → glucose + oxygen
- B** Glucose + carbon dioxide → oxygen + water
- C** Glucose + oxygen → carbon dioxide + water
- D** Oxygen + water → glucose + carbondioxide

Your answer

[1]

6 Which process takes water out of plant leaves into the air?

- A** Osmosis
- B** Photosynthesis
- C** Translocation
- D** Transpiration

Your answer

[1]

7 Plant shoots grow towards sunlight.

Which term describes this behaviour?

- A Negative gravitropism
- B Negative phototropism
- C Positive gravitropism
- D Positive phototropism

Your answer

[1]

8 How many strands are there in a DNA molecule?

- A 1
- B 2
- C 3
- D 4

Your answer

[1]

9 Which two substances are products of **anaerobic** respiration in **yeast**?

- A Carbon dioxide and ethanol
- B Carbon dioxide and water
- C Oxygen and ethanol
- D Oxygen and water

Your answer

[1]

10 DNA is a polymer.

What is the name of the monomer in DNA?

- A** Base
- B** Deoxyribose sugar
- C** Nucleotide
- D** Phosphate

Your answer

[1]

11 A student uses a microscope to look at plant cells on a slide.

Which of these methods should they use first?

- A** Highest power objective lens and focus moving the lens way from the slide
- B** Highest power objective lens and focus moving the lens towards the slide
- C** Lowest power objective lens and focus moving the lens away from the slide
- D** Lowest power objective lens and focus moving the lens towards the slide

Your answer

[1]

12 The microscope used by the student has an eyepiece lens with a magnification of $10\times$.

Which objective lens would give an image magnification of $200\times$?

- A** $10\times$
- B** $20\times$
- C** $30\times$
- D** $200\times$

Your answer

[1]

13 The diagram shows a variegated leaf.



Which diagram shows the correct starch test results for the variegated leaf?

A B C D

Key

- Iodine solution turns blue/black
- Iodine solution stays brown

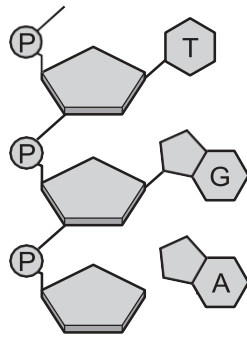
Diagram A: The leaf is entirely white. Diagram B: The green area is black, and the white area is white. Diagram C: The green area is white, and the white area is black. Diagram D: The entire leaf is black.

Your answer

[1]

14 DNA is made of two complementary strands.

The diagram shows part of one strand of DNA.



Which base sequence would be found on the complementary strand of this DNA?

- A A
C
T
- B C
A
G
- C G
A
C
- D T
G
A

Your answer

[1]

15 A student wants to test for **protein**.

What would they use to test for protein?

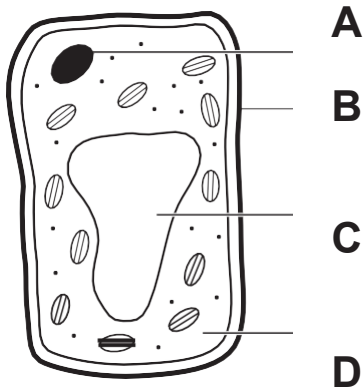
- A Benedict's reagent
- B Biuret reagent
- C Iodine solution
- D Ethanol

Your answer

[1]

16 The diagram shows a plant cell observed using a light microscope.

Which label is pointing to a structure that contains genetic material?



Your answer

[1]

17 How many different bases are in DNA?

- A 2
- B 4
- C 23
- D 46

Your answer

[1]

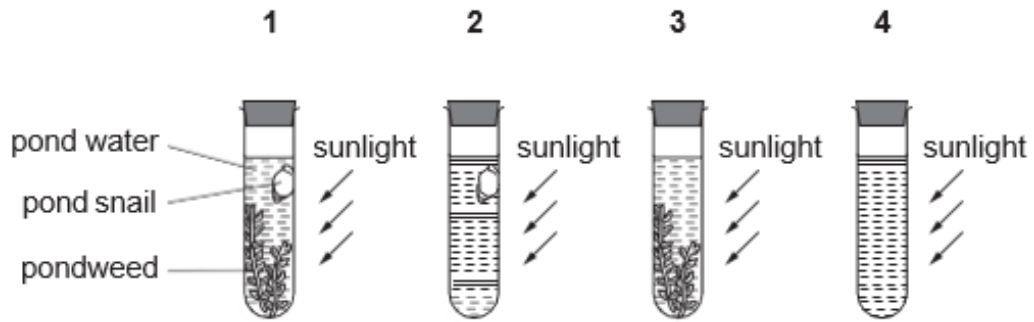
18 When the enzyme lipase is mixed with a lipid which of the following will increase in concentration?

- A Amino acids
- B Fatty acids and glycerol
- C Glucose and fructose
- D Starch

Your answer

[1]

19 Pond snails and pondweed are living in water in sealed test tubes.



Carbon dioxide dissolves in water and forms an acid.

In which test tube would the water become most acidic?

- A 1
- B 2
- C 3
- D 4

Your answer

[1]

Total Marks for Question Set 1: 19

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