

Post-16 Baseline Assessment

The following 45 minute test is designed to test your recall, analysis and evaluative skills and knowledge.

Remember to use your exam technique: look at the command words and the number of marks each question is worth.

1. a) What are the four base pairs found in DNA?

..... (2)

b) What does DNA code for?

..... (1)

c) Which organelle in a cell carries out this function?

..... (1)

2. a) What theory did Charles Darwin propose?

..... (1)

b) Why did many people not believe Darwin at the time?

..... (1)

c) Describe how fossils are formed.

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.....

..... (3)

d) The fossil record shows us that there have been some species that have formed and some that have become extinct.

i) What is meant by the term 'species'?

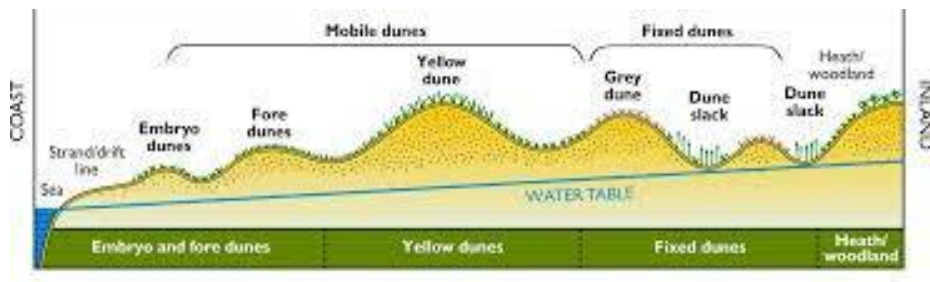
..... (2)

ii) Describe how a new species may arise:

.....
.....
..... (3)

3. Ecologists regularly study habitats to measure the species present and the effect of any changes.

One team of ecologists investigated the habitat shown in the picture below:



a) Define the following keywords:

i) Population

.....

ii) Community

.....

(2)

b) Give an example of one biotic factor and one abiotic factor that would be present in this habitat

Biotic:

.....

Abiotic:

.....

(2)

c) Describe how the ecologists would go about measuring the species present between the coast and the inland.

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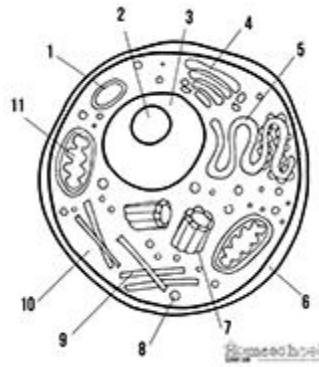
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(6)

4. Every living organism is made of cells.



a) Label the following parts of the animal cell:

- 2
- 5
- 8

(3)

b) Describe how is the structure of the cell membrane related to its function?

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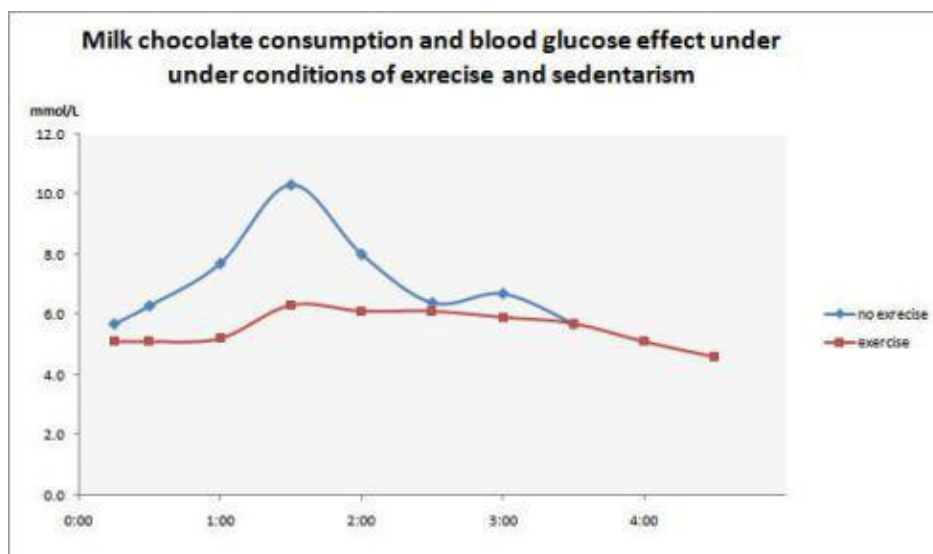
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(3)

5. A medical research team investigated how quickly the body deals with glucose after a meal. They studied the blood glucose concentration of people who exercised versus those who did not.

Here are their results:



a) What organ in the body regulates blood glucose concentration?

.....

(1)

b) Explain how the stages that would bring about a return to normal blood glucose concentrations.

.....

.....

.....

.....

(4)

c) Name one variable the researchers will have controlled.

.....

(1)

d) The researchers made the following conclusion:

“Blood glucose returns to normal values for all people after 4 hours”

To what extent do you agree with this conclusion.

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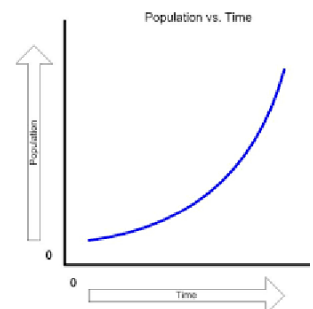
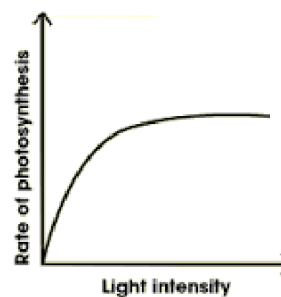
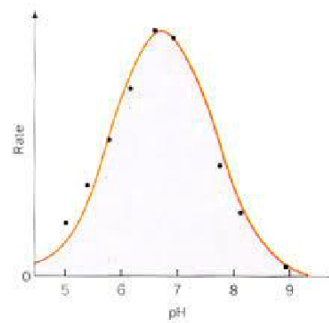
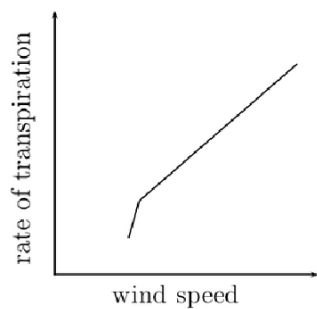
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(3)

6. Scientists need to be able to interpret data in graphs to decide if there are trends in the results.

For each graph bellow, describe the trend.



.....(4)

