

Name of the Student: _____

Max. Marks : 20 Marks

Time : 20 Minutes

Q1.

Over millions of years:

- new groups of organisms have evolved
 - other groups of organisms have become extinct.
- (a) If an asteroid collided with the Earth, large amounts of dust and water vapour would be thrown up into the air. This would mean less light and heat would reach the Earth's surface from the Sun.

- (i) A reduced amount of light and heat could have caused the extinction of plants.

Suggest how.

(1)

- (ii) How could the extinction of plants have caused the extinction of some animals?

(1)

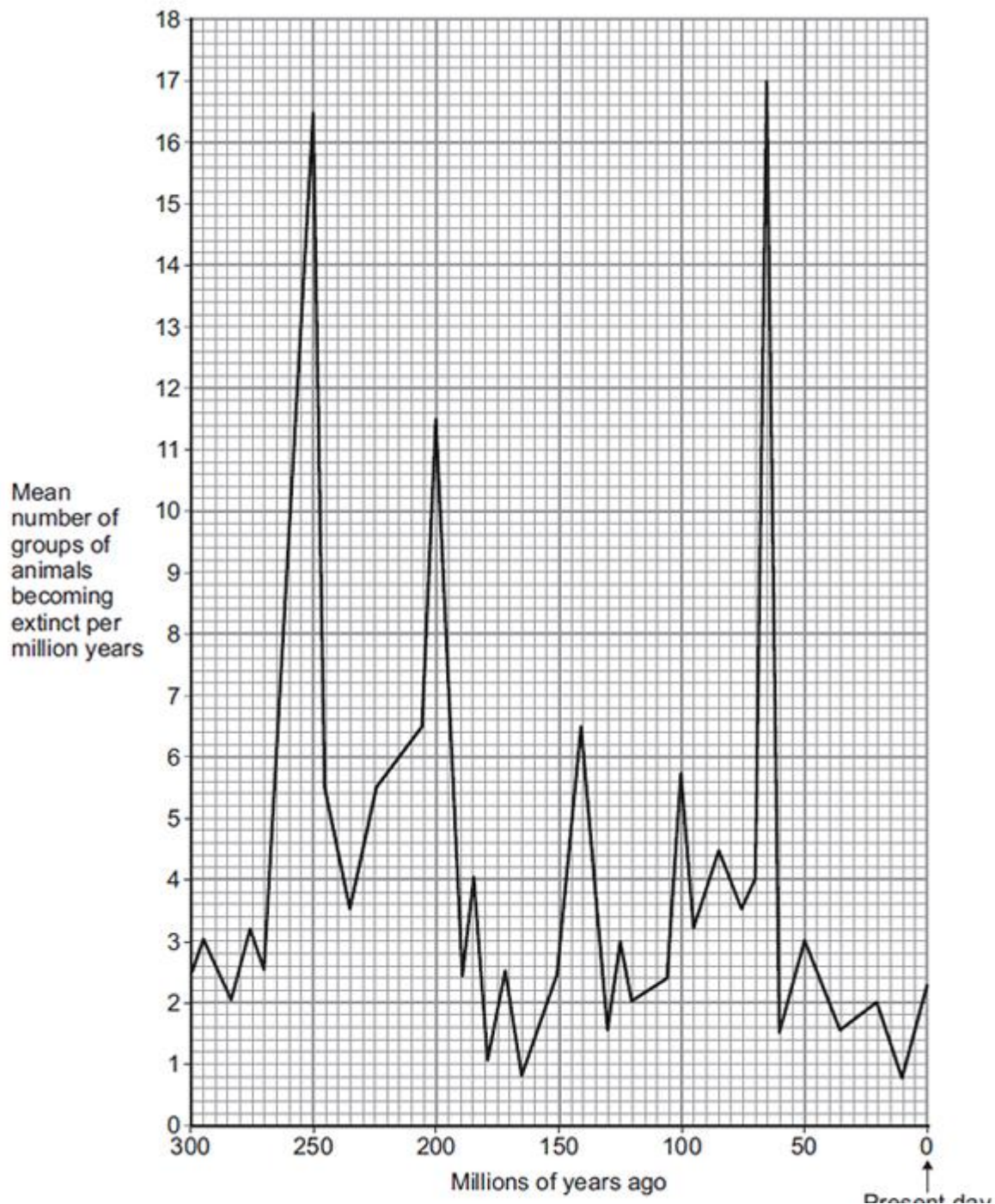
- (iii) Give **two** reasons, other than collision with an asteroid, why groups of animals may become extinct.

1. _____

2. _____

(2)

- (b) The graph shows how the rate of extinction of groups of animals has varied over the past 300 million years.



- (i) If more than 10 groups of animals become extinct in a 1 million year period, scientists call this a 'mass extinction'.

How many mass extinctions occurred over the past 300 million years?

(1)

- (ii) How do we know what types of animals lived hundreds of millions of years ago?

(1)

(c) Use information from the graph to answer part (i) and (ii).

(i) How many years ago did the most recent mass extinction of animals occur?

Tick (✓) **one** box.

50 million years ago

☐

65 million years ago

☐

250 million years ago

☐

(1)

(ii) What was the mean number of groups of animals becoming extinct per million years in the most recent mass extinction?

_____ groups per million years

(1)

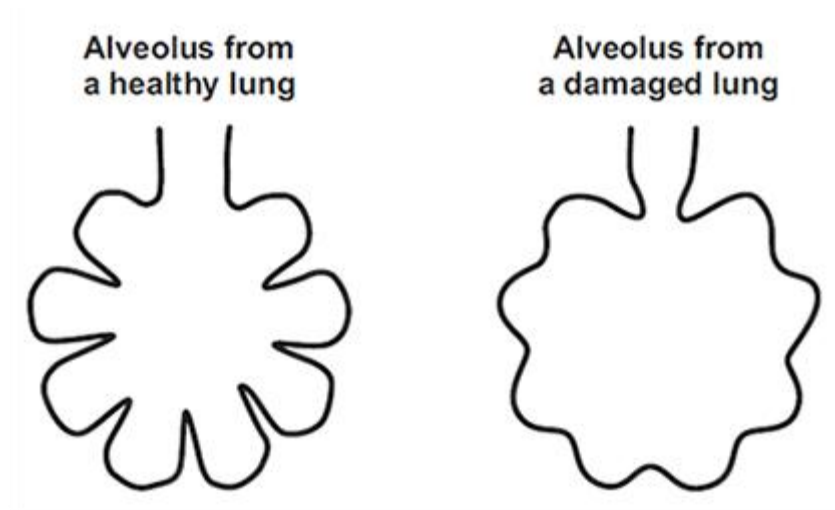
(iii) Why are scientists not sure how many groups of animals became extinct in the most recent mass extinction?

(1)

(Total 9 marks)

Q2.

The diagram below shows an alveolus from a healthy lung and an alveolus from a damaged lung.



- (a) Which **one** of the following is a difference between the alveolus from the damaged lung and the alveolus from the healthy lung?

Tick (✓) **one** box.

The damaged alveolus has a smaller surface area.

☐

The damaged alveolus has a shorter diffusion pathway.

☐

The damaged alveolus has a better blood supply.

☐

(1)

- (b) A person with damaged alveoli finds exercising difficult.

Which **one** of the following is the reason why the damaged alveoli will make exercising difficult?

Tick (✓) **one** box.

Less carbon dioxide is taken in.

☐

Less energy is needed for exercise.

☐

Less oxygen is taken in.

☐

(1)

(Total 2 marks)

Q3.

The heart is part of the circulatory system.

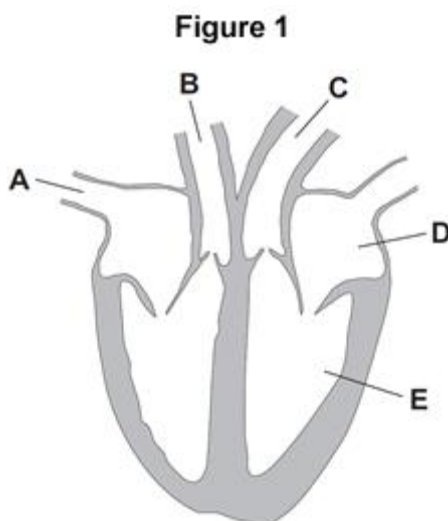
- (a) (i) Name **one** substance transported by the blood in the circulatory system.

(1)

- (ii) What is the main type of tissue in the heart wall?

(1)

- (b) **Figure 1** shows the human heart.



- (i) Which blood vessel, **A**, **B** or **C**, takes blood to the lungs?



(1)

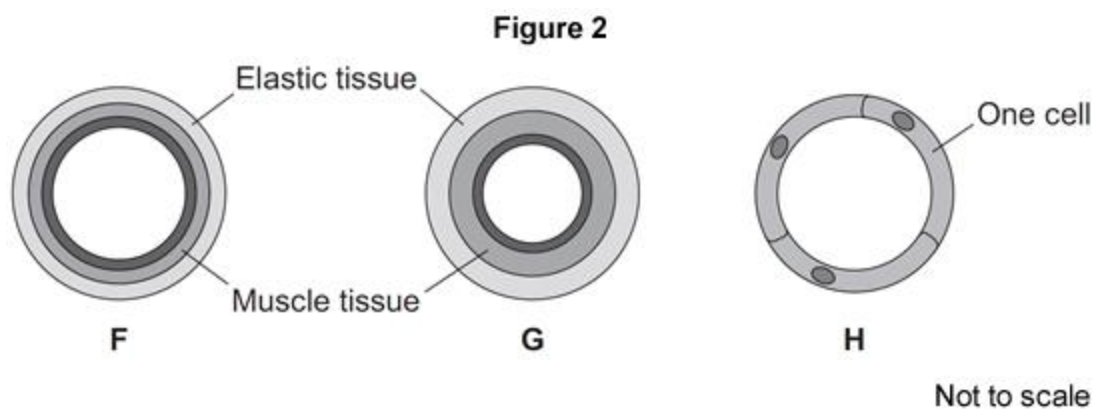
- (ii) Name parts **D** and **E** shown in **Figure 1**.

D _____

E _____

(2)

- (c) **Figure 2** shows three types of blood vessel, **F**, **G** and **H**.



- (i) What type of blood vessel is **F**?

Tick (✓) **one** box.

an artery

☐

a capillary

☐

a vein

☐

(1)

- (ii) A man needs to have a stent fitted to prevent a heart attack.

In which type of blood vessel would the stent be placed?

Tick (✓) **one** box.

an artery

☐

a capillary

☐

a vein

☐

(1)

- (iii) Explain how a stent helps to prevent a heart attack.

(2)

(Total 9 marks)