Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B2 Organisation

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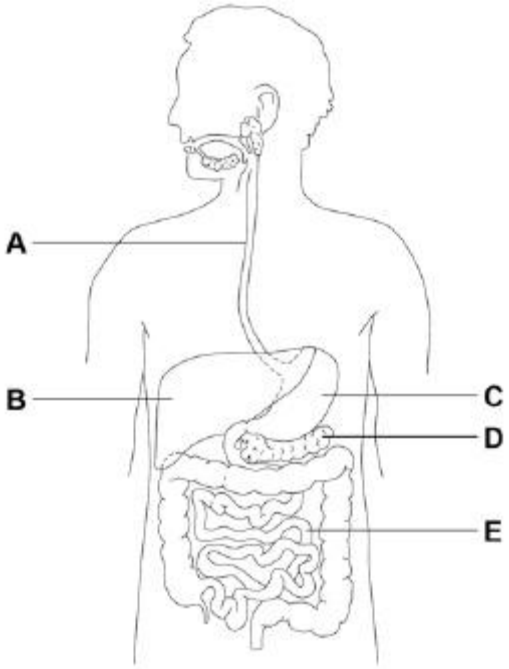
Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Q1.

Figure 1 shows the human digestive system.

Figure 1



(a) Which organ in **Figure 1** produces acid?

Tick **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐

(1)

(b) Which organ in **Figure 1** produces bile?

Tick **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐

(1)

(c) Where in **Figure 1** are digested foods absorbed into the blood?

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Tick **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐

(1)

(d) Food molecules such as proteins **cannot** be absorbed unless they are digested.

Give **one** reason why.

_____

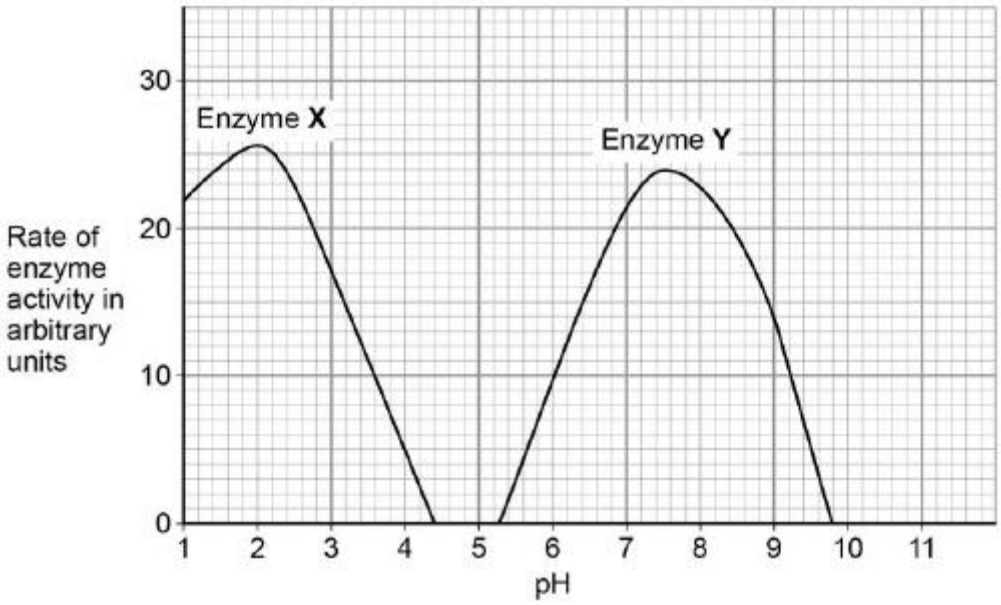
_____

(1)

A scientist investigated the effect of pH on the activity of two protease enzymes.

Figure 2 shows the results.

Figure 2



(e) What is the optimum pH for enzyme **Y**?

pH _____

(1)

(f) Where in the digestive system might the two protease enzymes be produced?

Tick **one** box.

Enzyme X	Enzyme Y	
Mouth	Stomach	☐
Pancreas	Mouth	☐
Small intestine	Pancreas	☐

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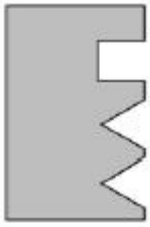
Stomach	Small intestine

(1)

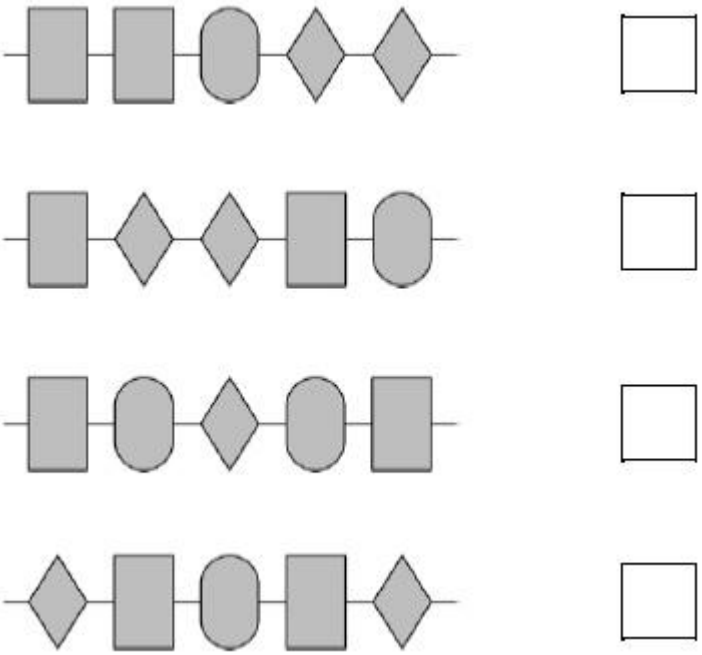
Figure 3 shows a model of an enzyme molecule.

Figure 3



(g) Which substrate fits the enzyme molecule in **Figure 3**?

Tick **one** box.



(1)

(h) The enzyme and substrate diagrams are used as a model for a theory of enzyme action.

What is the name of this theory?

Tick **one** box.

- Evolution ☐
- Lock and key ☐
- Natural selection ☐
- Protein synthesis ☐

(1)

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(i) Explain why pH affects enzyme activity.

_____

_____

_____

_____

(2)

(Total 10 marks)

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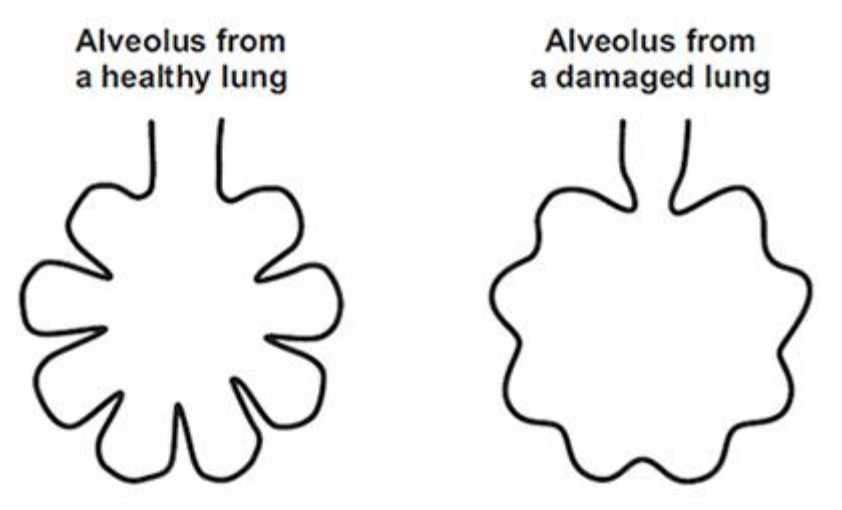
Q2.

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)

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Q3.

The heart is part of the circulatory system.

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

_____

(1)

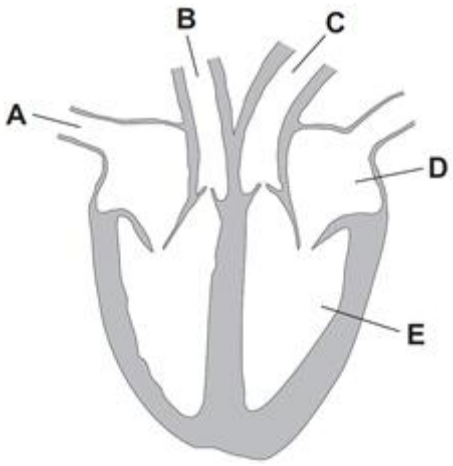
(ii) What is the main type of tissue in the heart wall?

_____

(1)

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

Figure 1



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

(1)

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

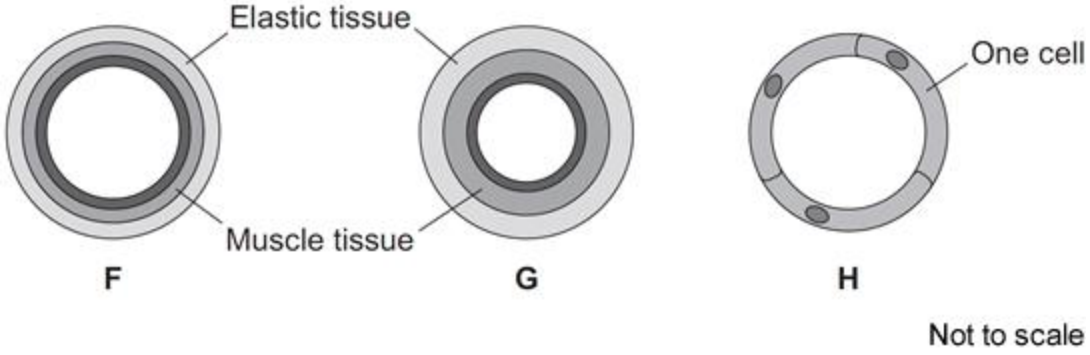
D _____

E _____

(2)

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

Figure 2



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(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)

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