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

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

Name of the Student:_____
Max. Marks : 29 Marks **Time : 29 Minutes**

Q1.

This question is about tumours.

(a) Describe the similarities and differences between benign tumours and malignant tumours.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

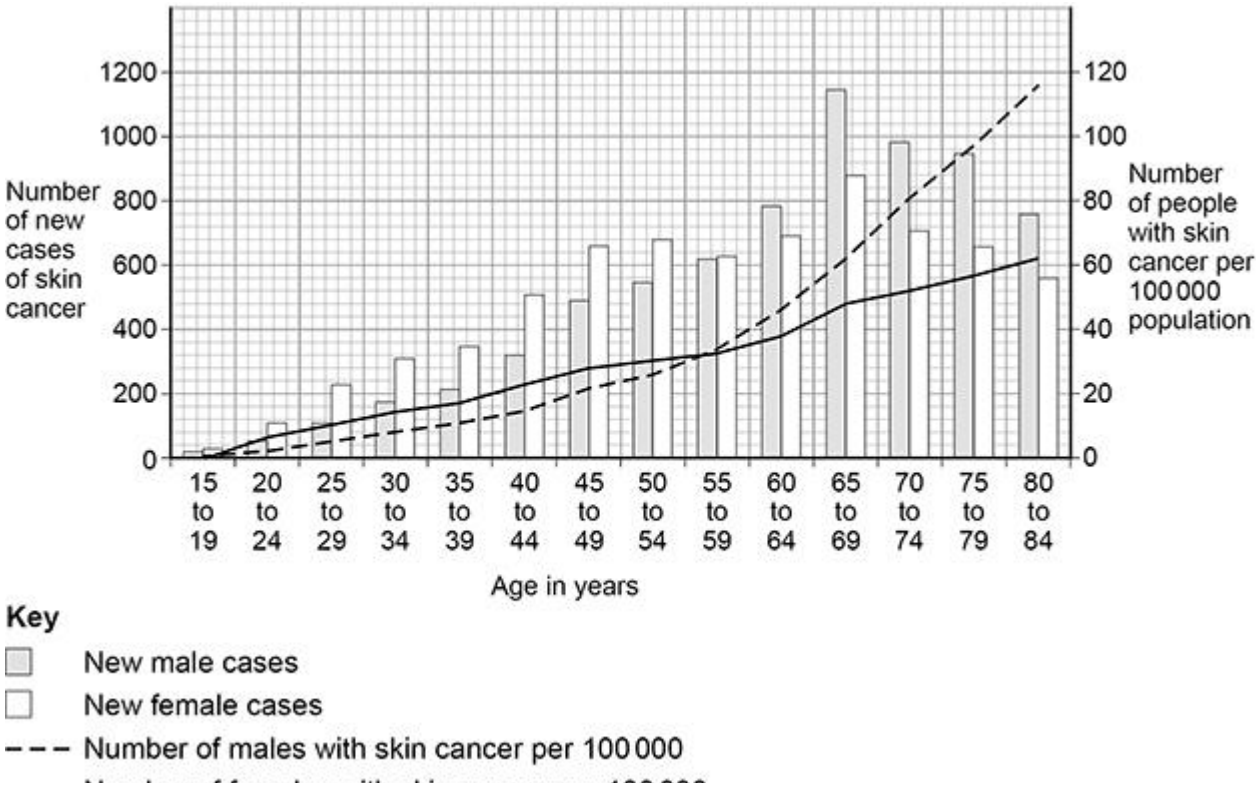
(4)

The figure below shows data about skin cancer in males and females for different age groups in the UK.

It shows:

- the number of new cases of skin cancer in 1 year
- the number of people with skin cancer per 100 000 population in 1 year.

Downloaded from www.merit-minds.com



(b) There are no new cases of skin cancer diagnosed in people younger than 15 years of age.

Explain why.

_____

_____

_____

_____

(2)

(c) Give **two** conclusions about the number of **new cases** of skin cancer.

Use the figure above.

1 _____

_____

2 _____

_____

(2)

(d) The data for the number of people with skin cancer is given per 100 000 population.

Suggest why the data is **not** given as the total number of people.

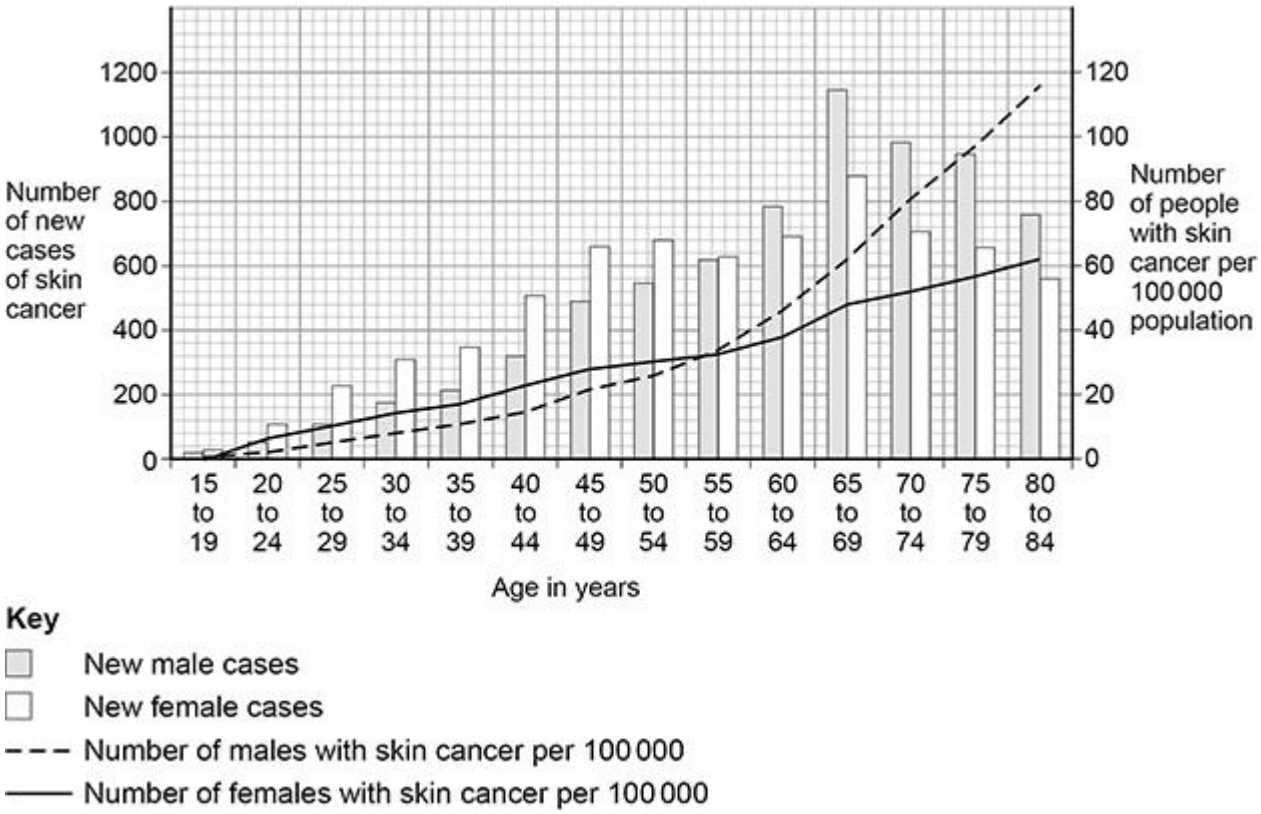
_____

_____

(1)

Downloaded from www.merit-minds.com

The figure above is repeated below.



(e) Describe **two** trends shown in the figure above.

Use **only** the data for the number of people with skin cancer per 100 000 population.

1 _____

_____

_____

2 _____

_____

_____

(2)

(f) The estimated population of males aged 80 to 84 years was 694 000

Calculate the number of males aged 80 to 84 years with skin cancer in that year.

Use the figure above.

Give your answer to 3 significant figures.

_____

_____

_____

_____

Downloaded from www.merit-minds.com

Number of males with skin cancer (3 significant figures) = _____

(3)

(Total 14 marks)

Downloaded from www.merit-minds.com

Q2.

Amylase is an enzyme that digests starch.

(a) Which organs in the human digestive system produce amylase?

Tick (✓) **one** box.

- Liver, small intestine and large intestine ☐
- Salivary glands, stomach and liver ☐
- Salivary glands, pancreas and small intestine ☐
- Stomach, pancreas and large intestine ☐

(1)

A student investigated the effect of pH on the activity of amylase.

This is the method used.

1. Prepare amylase solution at pH 5
2. Mix the amylase solution with starch in a boiling tube.
3. Remove a drop of the amylase-starch mixture every 30 seconds and test it for the presence of starch.
4. Record the time when all the starch has been digested.
5. Repeat steps 1 to 4 using amylase solution prepared at pH 6, then at pH 7 and then at pH 8

(b) What was the independent variable in this investigation?

_____

_____

(1)

(c) Describe how the student would know when all the starch had been digested.

_____

_____

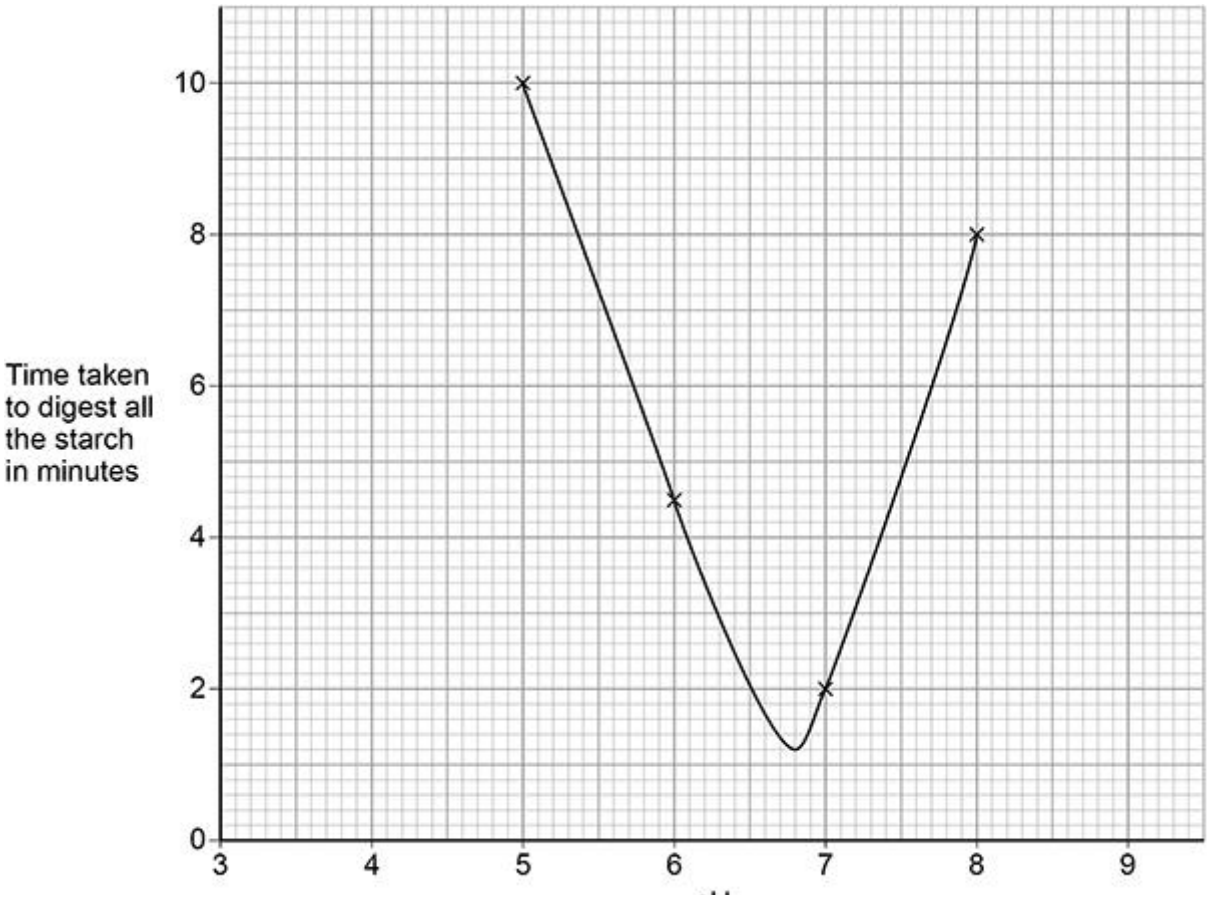
_____

(1)

(d) **Figure 1** shows the student's results.

Figure 1

Downloaded from www.merit-minds.com



What was the optimum pH for the amylase?

Use **Figure 1**.

Optimum pH = _____

(1)

A scientist did a different investigation.

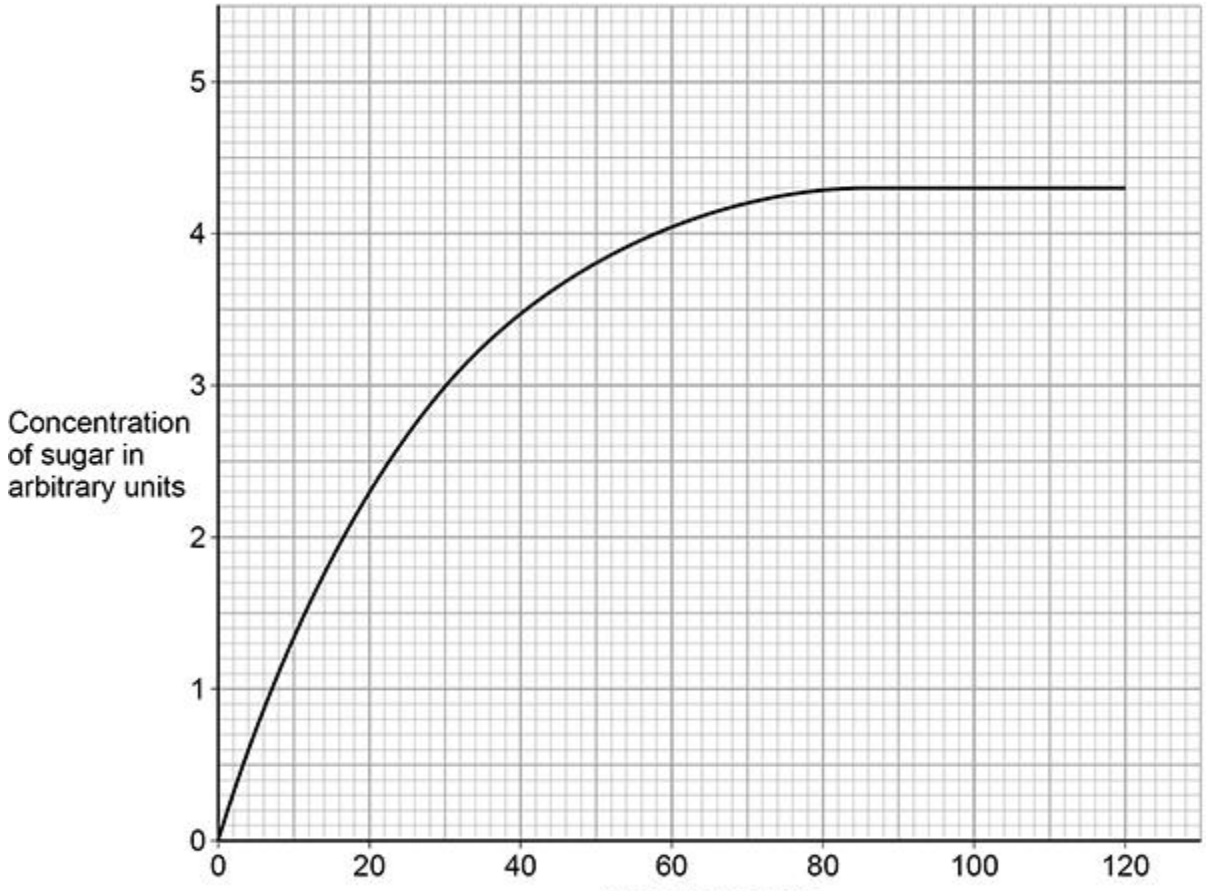
This is the method used.

1. Prepare amylase solution at the optimum pH.
2. Mix the amylase solution with starch in a boiling tube.
3. Measure the concentration of sugar every 10 seconds for 2 minutes.

Figure 2 shows the scientist's results.

Figure 2

Downloaded from www.merit-minds.com



(e) How much time did it take for the amylase to digest all the starch?

Use **Figure 2**.

Time to digest all the starch = _____ seconds

(1)

(f) Determine the rate of sugar production per minute at 40 seconds.

_____

_____

_____

_____

_____

_____

_____

Rate = _____ arbitrary units per minute

(4)

(g) Explain how the structure of enzyme molecules is related to the effect of pH on the activity of amylase.

_____

Downloaded from www.merit-minds.com

(6)

(Total 15 marks)

Downloaded from www.merit-minds.com