Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B1 Cell Biology

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Name of the Student:_____
Max. Marks : 18 Marks **Time :18 Minutes**

Q1.

As they go higher up a mountain, mountaineers take less oxygen into their bodies with each breath, as shown in the table below.

		MILLIGRAMS OF OXYGEN INTO **BLOOD** WITH EACH NORMAL BREATH	
HEIGHT	MILLIGRAMS OF OXYGEN TAKEN INTO **LUNGS** WITH EACH NORMAL BREATH	AT FIRST	AFTER STAYING AT 4500 METRES FOR TWO WEEKS
sea-level	300	60	90
1500 metres	250	50	
3000 metres	200	40	
4500 metres	150	30	45

(a) (i) How does the amount of oxygen taken into the blood with each breath vary with the amount of oxygen breathed into the lungs with each breath?

_____

(2)

(ii) Use the idea of diffusion to explain why the amount of oxygen taken into the blood varies in this way.

_____

_____

(1)

(b) (i) How does staying at an altitude of 4500 metres for two weeks affect the mountaineers?

_____

(2)

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(ii) Suggest an explanation for this.

_____

_____

(1)

(iii) Add the two missing figures to the right-hand column of the table.

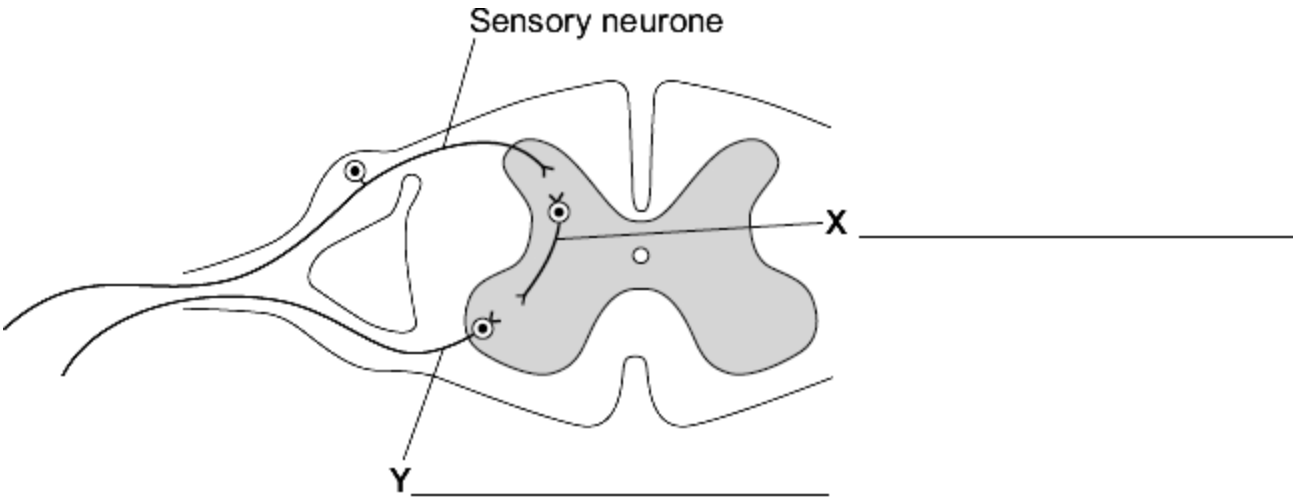
(2)

(Total 8 marks)

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Q2.

The diagram shows some of the structures involved in a reflex action.



(a) On the diagram, name the neurones labelled **X** and **Y**.

(1)

(b) Describe how information is transmitted from neurone **X** to neurone **Y**.

_____

_____

_____

_____

(2)

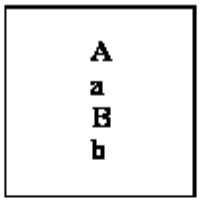
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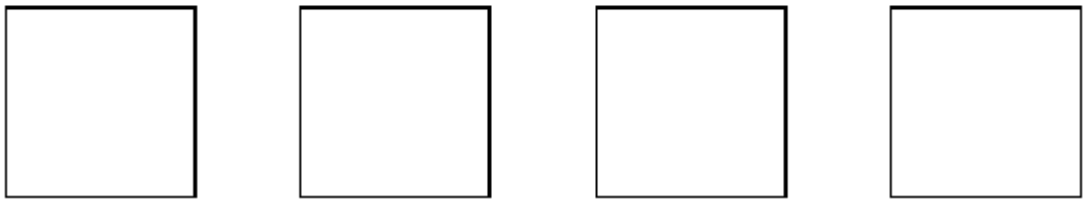
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Q3.

In the cell shown in the diagram as a box, one chromosome pair has alleles **Aa**. The other chromosome pair has alleles **Bb**. The cell undergoes meiosis.

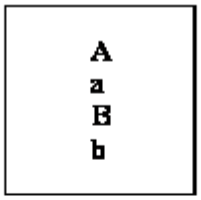
(a) Complete the diagram of the four gametes to show the independent assortment, or reassortment, of genetic material during meiosis.

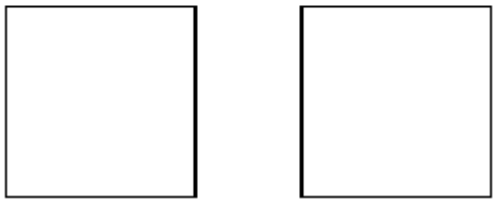




(2)

(b) If the cell undergoes mitosis instead of meiosis, draw the two daughter cells which result to show the chromosomes in each.





(2)

(c) State the number of chromosomes in:

(i) a normal human cell;

_____

(1)

(ii) a human gamete;

_____

(1)

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(iii) the daughter cell from mitosis of a human cell.

_____

(1)

(Total 7 marks)

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