Anglo-Chinese School (Junior)

BITE-SIZED ASSESSMENT 3 (2022)

PRIMARY 5

SCIENCE

Tuesday **23 August 2022**

Name: _____ ( ) Class: 5.( ) Parent's Signature:

INSTRUCTIONS TO PUPILS

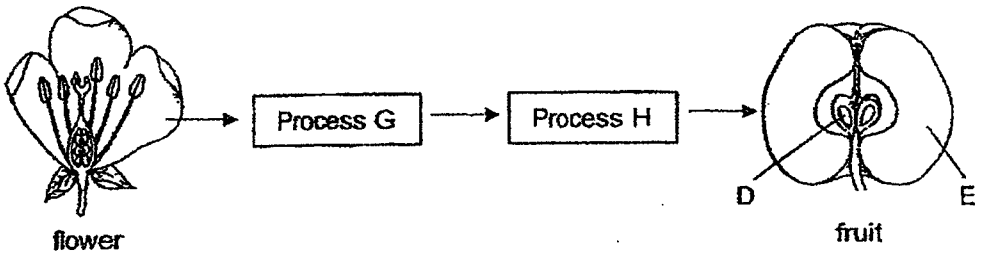
1 Do not turn over the pages until you are told to do so.
2 Follow all instructions carefully.
3 There are 11 questions in this booklet.
4 Answer ALL questions.
5 The marks are given in the brackets [ ] at the end of each question or part question.

Question Paper	Possible Marks	Marks Obtained
Total	**30**	

This question paper consists of 12 printed pages (inclusive of cover page).

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1. The diagram shows how a fruit is formed from the flower of a plant. The fruit has been cut open.



(a) State and describe process G. [1]

_____

_____

(b) State and describe process H. [1]

_____

_____

(c) State the part of the flower that D and E developed from. [1]

D: _____

E: _____

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2. The table shows the characteristics of three different plants A, B and C.

Plant	Does it have flowers?	Can the flower develop into a fruit?	Length of petals (cm)	Does it have nectar?
A	Yes	Yes	6	No
B	Yes	No	2	No
C	Yes	Yes	6	Yes

(a) The flower of plant **B cannot** develop into a **fruit**. Give a possible reason. [1]

_____

_____

(b) **Which** plant can **best attract** pollinators? Give a reason for your answer. [1]

_____

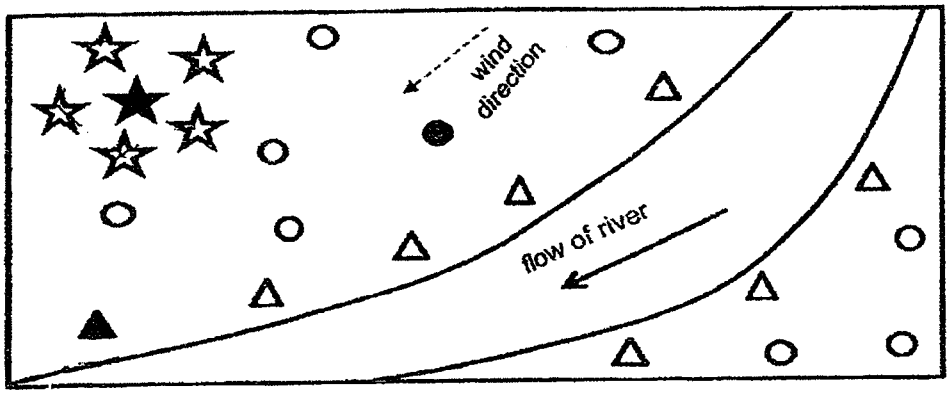
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3. Samuel drew a diagram to show three different types of plants, A, B, and C, in a forest.



Key:

Plant	A	B	C
Parent	★	▲	●
Young	☆	△	○

(a) Samuel drew the position of a parent plant wrongly. Circle the parent plant in the diagram above that is in the **wrong** position and give a reason for your answer. [1]

_____

_____

(b) State the method of seed/fruit dispersal of plants A, B and C in the table. [1]

Plant	Method of dispersal
A	
B	
C	

(c). **Describe how the characteristic of the seed/fruit of Plant A helps in its dispersal.** [1]

_____

_____

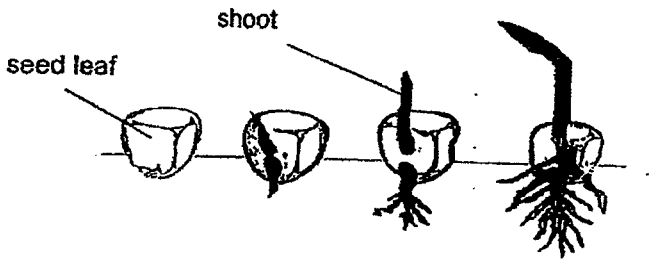
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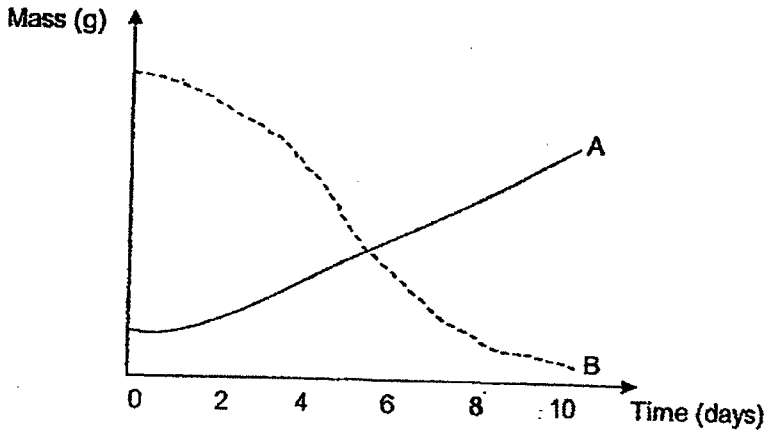
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4. The diagram shows a germinating seed.



The graph shows the changes in the mass of the seed leaf and the shoot over a period of time.



(a) Which line, A or B, shows the change in the mass of the seed leaf? Explain your answer.

[1]

(b) Another seed was placed in a pot of dry soil and left in the dark corner of the living room. What would be observed about the seed after 10 days? Give a reason for your answer.

[1]

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5. The statements, A, B, C and D, describe the reproduction in humans.

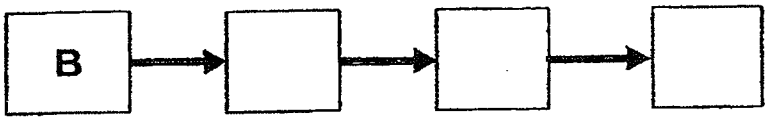
A: Organs of the developing baby begin to form.

B: Many sperms reach the egg.

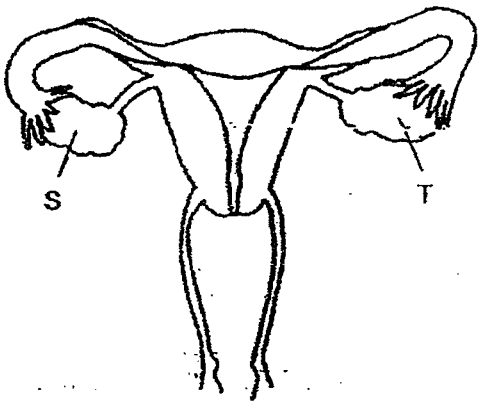
C: One sperm fuses with the egg.

D: The fertilised egg starts to divide to form more cells.

(a) Arrange the above statements in the correct order in the boxes provided. [1]



(b) The diagram shows the female reproductive parts. In the diagram, label and name the part where the fertilised egg develops. [1]



(c) Will the female be able to reproduce if parts S and T are removed? Explain your answer. [1]

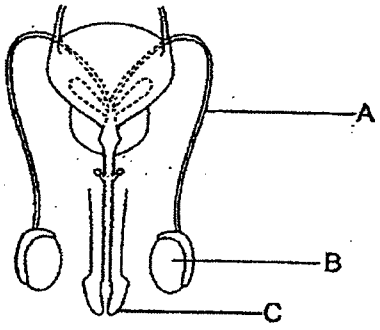
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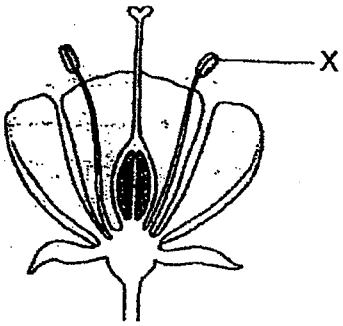
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6. The diagrams show the human and the plant reproductive parts.



Human reproductive part



Plant reproductive part

(a) Which part, A, B or C, of the human reproductive part, has a similar function as part X of the plant reproductive part? State its function. [1]

Part: _____

Function: _____

_____

(b) Give a reason why the human male releases a large number of sperms at a time from his body. [1]

_____

_____

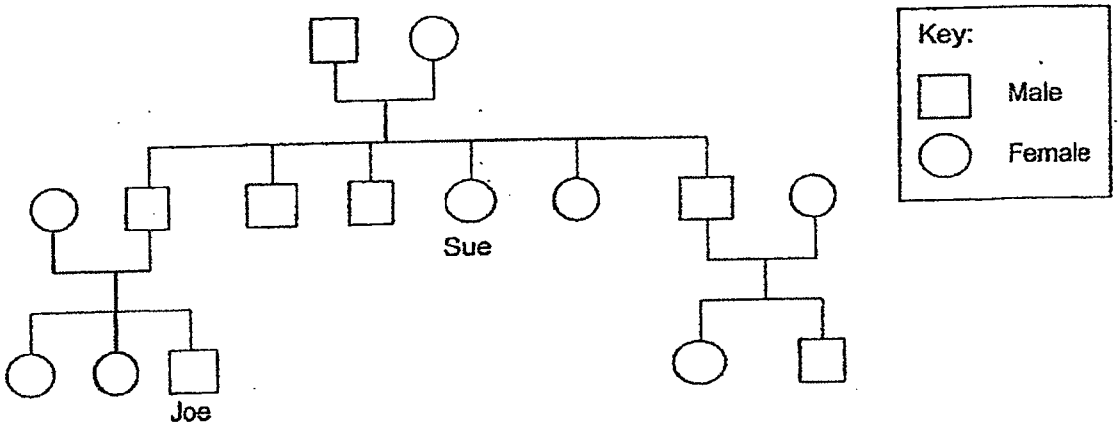
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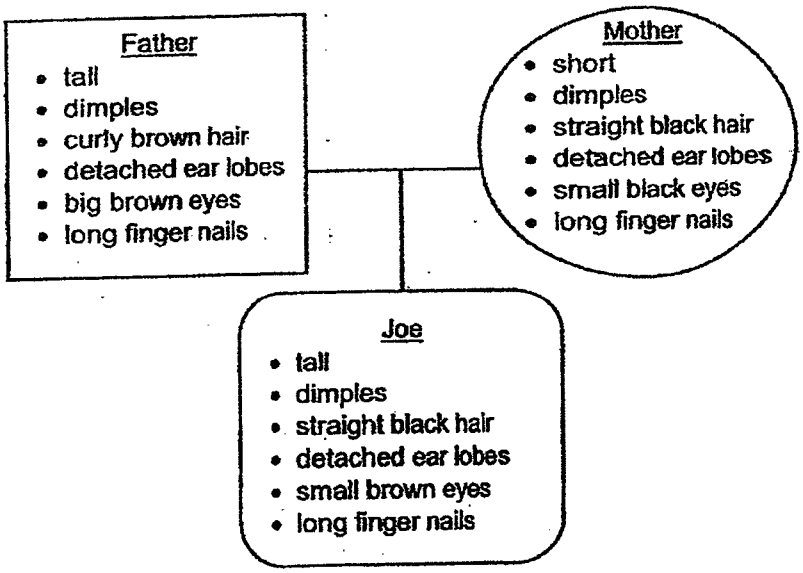
7. Joe drew his family tree.



(a) Read the following statements. Decide whether they are true, false or not possible to tell by placing a tick (✓) in the boxes provided. [1]

Statement	True	False	Not possible to tell
Joe has 3 uncles.			
Both Joe and Sue have attached ear lobes.			

(b) The diagram shows some characteristics of Joe and his parents.



Which characteristic(s) did Joe inherit that is/are common to both parents? [1]

_____

_____

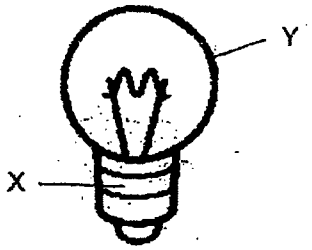
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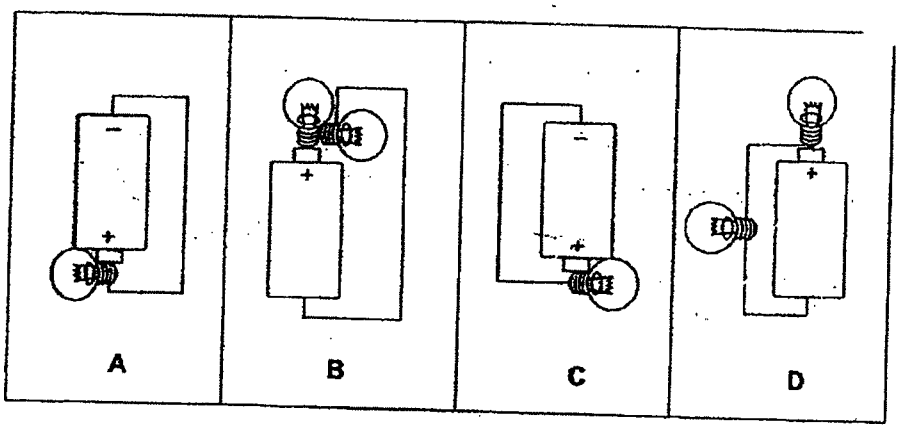
8. The diagram shows a bulb.



(a) What material are parts X and Y made of? State the property of each material that makes it suitable for its function. [2]

	Material	Property
X		
Y		

(b) The diagrams show bulbs connected in four different circuits.



In which circuit(s) will the bulb(s) light up? [1]

_____

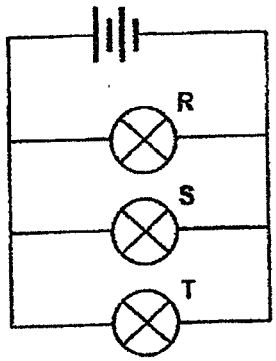
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9. The diagram shows a circuit with three identical bulbs, R, S and T. The bulbs and batteries are in working condition.



(a) Is bulb T brighter than bulb R? Explain your answer. [1]

_____

_____

(b) If bulb S blows, what would happen to bulbs R and T? Give a reason for your answer. [1]

_____

_____

(c) The circuit was rearranged using the same electrical parts. Using two additional switches, draw a closed circuit diagram based on the following conditions:

- Bulbs R and S are of the same brightness
- Bulb T is brighter than bulbs R and S
- Bulbs R and S are controlled by one of the switches
- Bulb T is controlled by the other switch

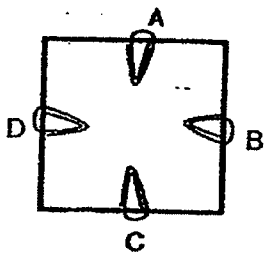
Label the bulbs in your circuit diagram.

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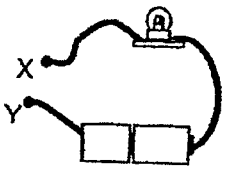
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10. Alex wanted to find out how the wires in a circuit card are connected. He connected the points, X and Y, of a circuit tester to two metal paper clips on the circuit card, of a different combination each time. He recorded the results in the table as shown.



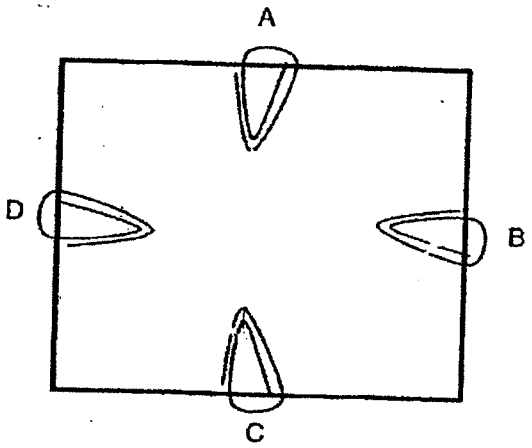
circuit card



circuit tester

Paper Clips	Did the bulb light up?
A and B	No
A and C	Yes
A and D	Yes
B and C	No
C and D	Yes

(a) Based on the results, draw **two** lines in the circuit card below to show how the wires are connected. [1]



(b) Alex used only one battery instead of two in the circuit tester. How will this affect the bulb when the bulb is lit? [1]

_____

_____

(c) Alex replaced all the metal paper clips on the circuit card with plastic paper clips. Give a reason why the bulb did not light up when the circuit tester was connected to any two of the plastic paper clips. [1]

_____

_____

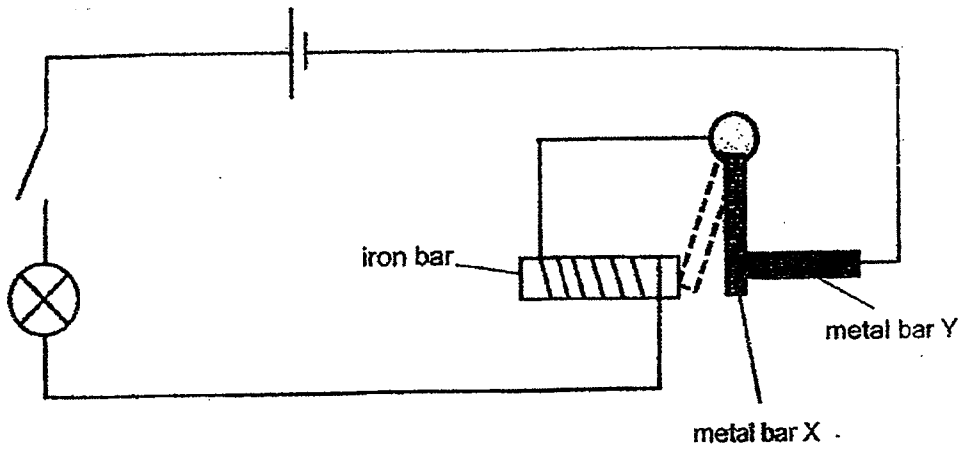
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11. Charles set up the circuit as shown.



When he closed the switch, the bulb lit up. After a short while, metal bar X moved away from the metal bar Y and touched the iron bar.

(a) Give a reason why the bulb lit up when the switch was closed. [1]

_____

_____

(b) What would you observe about the bulb when metal bar X moves towards the iron bar? Give a reason for your answer. [1]

_____

_____

(c) Without making any changes to the metal bars or iron bar, suggest how Charles can make the bulb brighter. [1]

_____

_____

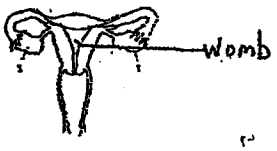
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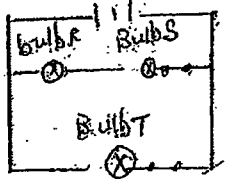
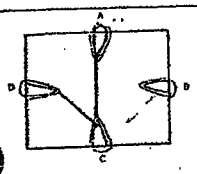
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Bite-Sized Assessment 3

Q1	(a) Pollination. Pollen grains from the anther of the flower is transferred to the stigma of the flower. (b) Fertilisation. The male reproductive cell fuses with the female reproductive cell. (c) D : Ovule E : Ovary
Q2	(a) It is a male flower. (b) Plant C. It has nectar to attract pollinators.
Q3	(a) Blant B was dispersed by water, hence, the seeds of plant B could not go against the flow of the river and the parent Plant B should be positioned at the upstream of the river. (b) A : splitting B : water C : animals (c) The pods split open when dry.
Q4	(a) B. The mass of the seed leaves decrease as the stored food is used for the growth of the seedling. (b) The seed would not germinate. Seed needs water to germinate, since there was no water, the seed would not be able to germinate.
Q5	(a) B -> C -> D -> A  (b) (c) No. No eggs will be released so fertilisation did not occur.

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<table>
<tr><td>Q6</td><td>(a) Part : B
Function : It produces the male reproductive cell.
(b) the human male releases a large number of sperms to increase the chances of a sperm fusing with an egg.</td></tr>
<tr><td>Q7</td><td>(a) True
Not possible to tell
(b) Detached ear lobes and dimples.</td></tr>
<tr><td>Q8</td><td>(a)
<table>
<tr><td>X</td><td>Metal</td><td>Electrical conductor</td></tr>
<tr><td>Y</td><td>Glass</td><td>Transparent</td></tr>
</table>
(b) Circuits B and C.</td></tr>
<tr><td>Q9</td><td>(a) No. The bulbs are connected in parallel and will have the same brightness.
(b) They will still be lighted up. Electricity can still flow through the close circuit.
(c) 
</td></tr>
<tr><td>Q10</td><td>
(a)
(b) The bulb will be dimmer.
(c) Plastic is not a conductor of electricity, hence when the metal paper clips were replaced, an open circuit was formed and electric current was not able to pass through.</td></tr>
<tr><td>Q11</td><td>(a) When the switch was closed, a closed circuit was formed causing electric current to flow through the circuit causing the bulb to light up.
(b) The bulb will not light up. Electricity will not be able to flow through an open circuit.
(c) Add another battery to the circuit.</td></tr>
</table>

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