## MULTIPLE CHOICE QUESTIONS

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 3 | **6** | 4 | **11** | 1 | **16** | 3 | **21** | 2 | **26** | 2 |
| **2** | 4 | **7** | 2 | **12** | 3 | **17** | 4 | **22** | 3 | **27** | 4 |
| **3** | 4 | **8** | 2 | **13** | 1 | **18** | 3 | **23** | 2 | **28** | 1 |
| **4** | 4 | **9** | 2 | **14** | 1 | **19** | 3 | **24** | 1 | | |
| **5** | 2 | **10** | 4 | **15** | 1 | **20** | 3 | **25** | 1 | | |



## OPEN-ENDED QUESTIONS

**Q29**
K: Flowering plants
L: Fungi

**Q30a** Magnetic force of attraction / Pull force

**b** Magnetic



**Q31a** Nymph

**b** Grasshopper

**Accept insects with a 3-stage life cycle*

**Q32a** Solid

**b** Liquid

**Q33a** Faster; better

**b**



| Variables | Kept Constant |
|---|---|
| Size of containers | √ |
| Material of containers | |
| Volume of water in containers | √ |
| Final temperature of water in containers | |

**Q34a** Change 1: She should fill the containers with the same amount of water.
Change 2: She should ensure that the strips of material are of the same thickness.

**Students need to take note that they are not allowed to mention the length and width of the materials.*



**bi** Object D does not break easily and is not flexible.

**ii** Glass



**Q35a**
F: Stomach
H: Large intestine

**b** F and G

<table>
<tr><td>c</td><td>G: Digestion is completed here and the digested food is absorbed through the walls of the small intestine into the bloodstream.<br>H: <u>Excess</u> water and mineral salts are absorbed from the undigested food into the bloodstream.<br><br>*Some students have the misconception that undigested food (waste materials) are absorbed into the bloodstream at the large intestine, which is wrong.</td></tr>
<tr><td>Q36a</td><td><table><tr><th>Items</th><th>Tick (√)</th></tr><tr><td>Iron rod</td><td>√</td></tr><tr><td>Aluminium rod</td><td></td></tr><tr><td>Copper wire</td><td>√</td></tr><tr><td>Eraser</td><td></td></tr></table></td></tr>
<tr><td>b</td><td>0</td></tr>
<tr><td>c</td><td>Plastic is a non-magnetic material and will not be attracted by the electromagnet.</td></tr>
<tr><td>d</td><td>He increased the number of coils of wire <u>around the iron rod</u>.<br>OR<br>He increased the number of batteries <u>in the circuit</u>.<br><br>*It is important for students to include the above words that have been bolded and underlined as some schools do not award marks if they are missing.</td></tr>
<tr><td>Q37a</td><td>Animal B has a 3-stage life cycle while animal D has a 4-stage life cycle.</td></tr>
<tr><td>b</td><td>Animal D</td></tr>
<tr><td>c</td><td>1) Poke holes on the metal cover.<br>2) Place some fresh leaves (food) and water in the jar.</td></tr>
<tr><td>Q38a</td><td>The balance will tilt downwards at Jar X.<br><br>*Air is matter and has mass. By pumping in more air into X, the mass of X increases, causing X to be heavier than Y.</td></tr>
<tr><td>b</td><td>300cm$^3$<br><br>*Air is a gas, which does not have a definite volume and can be compressed. Thus, in order to calculate the volume of the air, take the total capacity of the container minus the volume of any object in the container that has a definite volume.</td></tr>
</table>

<table>
<tr><td>c</td><td>1) Air has mass.<br>2) Air does not have a definite volume and can be compressed.</td></tr>
<tr><td>Q39a</td><td>Shape T<br><br>*The triangular shadow is smaller. Thus, it should be the one that is further away from the torch/nearer to the screen.</td></tr>
<tr><td>b</td><td>Move T closer to the torch.<br>OR<br>Move T further away from the screen.</td></tr>
<tr><td>c</td><td>34</td></tr>
<tr><td>d</td><td>As the distance between the torch and the screen decreases, the height of the shadow increases.</td></tr>
<tr><td>Q40ai</td><td>A shadow is formed when light from the light source, <u>which travels in a straight line</u>, is <u>blocked</u> by the object, which is <u>opaque or translucent</u>.</td></tr>
<tr><td>aii</td><td>
<table>
<tr><th>Shawn should…</th><th>Tick (√)</th></tr>
<tr><td>Move the torch nearer to his hand</td><td>√</td></tr>
<tr><td>Move his hand nearer to the screen</td><td></td></tr>
<tr><td>Move the torch further away from his hand</td><td></td></tr>
<tr><td>Move his hand further away from the screen</td><td>√</td></tr>
</table>
</td></tr>
<tr><td>b</td><td>The ball and the bear</td></tr>
<tr><td>Q41a</td><td>It would be lower than 90°C. The water would <u>lose heat to the cooler ice cube</u> and decrease in temperature.</td></tr>
<tr><td>b</td><td>Choose: Material M.<br>Use Data: The time taken for the ice to melt completely is the longest.<br>Explain Data: This shows that material M is the poorest conductor of heat and the ice cream will gain heat the slowest from the warmer surrounding air to melt the slowest.<br><br>*It is important for students to include superlative terms in their answer to minimize the loss of marks.</td></tr>
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