READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the space at the top of this paper.
Write in dark blue or black pen.

Answer all questions.

The number of marks is given in brackets [ ] at the end of each question or part question.
You should show all your working in the booklet.

For Examiner’s Use

1
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15
16
17
18
19
Total
1 Sue heats a salt solution as shown in the diagram.

(a) What substance is given off when the salt solution is heated gently?  
........................................................................................................... [1]

(b) What is the name of the process taking place in the beaker?  
........................................................................................................... [1]

(c) Sue now removes the beaker and continues to heat the salt solution.  

   (i) What will be left in the dish when she has finished heating?  
   ........................................................................................................... [1]

   (ii) How can a salt solution be obtained from what is left in the dish?  
   ........................................................................................................... [1]
Sofia investigates electrical circuits to see how they behave. The first working circuit she builds is shown in the picture.

What happens to the brightness of the lamps if

(a) Sofia adds another lamp?

........................................................................................................................................... [1]

(b) Sofia now replaces one of the wires with a wire that is 5 times longer?

........................................................................................................................................... [1]

(c) Sofia now replaces the wire with one the same length but much thicker?

........................................................................................................................................... [1]

(d) Sofia removes one of the lamps from its holder?

........................................................................................................................................... [1]
3 The diagram shows a human body and part of one of its major organ systems.

(a) Which organ system is shown? Circle the correct answer.

circulatory  digestive  nervous  reproductive  [1]

(b) Name the organ labelled A.

.................................................................................................................... [1]
(c) Look at the diagram.

(i) Which letter shows the position of the heart?

.................................................................................. [1]

(ii) What is the function of the heart?

.......................................................................................................................................................... [1]

(d) What does the excretory system do?

.......................................................................................................................................................... [1]
The scale shows the temperature at which some foods melt.

(a) Which food melts at the lowest temperature?

(b) What is the melting point of chocolate?

(c) The temperature in the kitchen is 20 °C. The temperature inside a fridge is 5 °C. Mark these temperatures on the diagram.

Which food needs to be kept in the fridge to stop it from melting?
5 The diagram shows the cross-section of a flower.

(a) Name the labelled part of the flower which

(i) attracts insects. ................................................................. [1]
(ii) contains pollen. ............................................................... [1]
(iii) is sticky and catches pollen. ............................................. [1]

(b) Insects are often attracted to flowers because they are brightly coloured.

Name one other thing that attracts insects to flowers.

............................................................................................ [1]
6 A shadow play is a puppet show that uses light and shadow to tell a story. The diagram shows how it works.

(a) How does the puppet make a shadow on the screen?

(b) The puppet is moved to make a bigger shadow. Which letter shows the direction of the movement?

(c) What word describes materials that do not let light through?
7 Nisreen is playing the guitar which is a musical instrument.

She plucks a string to make a sound.

(a) What is the word used to describe the movement of the string?

........................................................................................................... [1]

(b) She plays a higher note.

Which word describes how high or low a note is?
Tick (✓) the correct box.

loudness

pitch

insulation

volume

[1]

(c) Write **two** ways she could make a higher note on the guitar.

1 ..................................................................................................................

2 .................................................................................................................. [2]
8 Look at the diagram of the Sun and the Earth.

Complete these sentences.

(a) The Earth rotates on its axis once every \( \text{\underline{\hspace{2cm}}} \) hours. \[1\]

(b) The Earth’s orbit around the Sun takes \( \text{\underline{\hspace{2cm}}} \) days. \[1\]

9 Water can exist in three different forms.

\[
\begin{array}{c}
\text{ice} \quad \text{process 1} \quad \text{water} \quad \text{process 2} \\
\end{array}
\]

(a) Complete the diagram by writing the missing word in the box. \[1\]

(b) What is the name of process 2 shown in the diagram when water turns into ice?

\( \text{\underline{\hspace{2cm}}} \) \[1\]
10 Sort these materials into solids, liquids and gases.

Write the letters in the correct place in the table.

<table>
<thead>
<tr>
<th>solid</th>
<th>liquid</th>
<th>gas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11 A skydiver has jumped out of an aircraft but has not yet opened her parachute.

Which of these statements best describes what is happening? Tick (✓) the correct statement.

- She is pushed towards the Earth by the force of gravity. [ ]
- She is pulled towards the Earth by the force of gravity. [ ]
- She is pulled towards the Earth by air resistance. [ ]
- She is pushed towards the Earth by air resistance. [ ]

12 Which of the following are examples of forces?

Tick (✓).

- a horse pulling a cart [ ]
- the mass of a van [ ]
- a magnet attracting a nail [ ]
- striking a match [ ]
- a jug of boiling water [ ]
13 The pictures show three living organisms in a food chain.

(a) Draw arrows to complete this food chain. [1]

(b) Which organism is the producer? [1]

(c) Which organism is the predator? [1]
14 (a) Eating a varied diet is very important to keep our bodies healthy. Look at the diets of Sadiq and Fatima. Who has the healthier diet? Tick (✓) the correct box.

<table>
<thead>
<tr>
<th></th>
<th>Sadiq</th>
<th>Fatima</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>eats sweets and chocolate</td>
<td>enjoys eating fruit</td>
</tr>
<tr>
<td></td>
<td>drinks fizzy drinks</td>
<td>enjoys eating meat</td>
</tr>
<tr>
<td></td>
<td>enjoys eating meat</td>
<td>drinks plenty of water</td>
</tr>
</tbody>
</table>

(b) What we eat can be damaging to our teeth. Tick (✓) two foods which can lead to tooth decay.

- meat
- sugary foods
- salt
- fizzy drinks
- bread
- pasta

[1]
15 Usha sets up this circuit.

![Circuit diagram]

She describes how her circuit works.

Tick (✓) one box in each row to say whether each statement is true or false.

<table>
<thead>
<tr>
<th>statement</th>
<th>true</th>
<th>false</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric current keeps flowing from the cell around the circuit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If there is a gap in the circuit after the cell, it will still work.</td>
<td></td>
<td>[1]</td>
</tr>
</tbody>
</table>
Class 6 were on a field trip. They observed many animals. Back in school they used a key to identify four of the animals.

Use the key to identify the scientific names of these animals.

<table>
<thead>
<tr>
<th>Has it got legs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes no</td>
</tr>
<tr>
<td>Has it got six legs?</td>
</tr>
<tr>
<td>yes no</td>
</tr>
<tr>
<td>Has it got four wings?</td>
</tr>
<tr>
<td>yes no</td>
</tr>
<tr>
<td>Arion</td>
</tr>
<tr>
<td>Lestes</td>
</tr>
<tr>
<td>Musca</td>
</tr>
</tbody>
</table>

Draw lines to match each letter to the scientific animal name.

A: **Musca**  
B: **Lestes**  
C: **Arion**  
D: **Atrax**
17 Mixtures of two different solids can be separated by different methods. Draw a line from each mixture to how it can be separated.

- mixed nuts: sieve
- iron powder and salt: fingers
- rice and flour: magnet

[2]
The diagram shows a thermometer.

(a) Write the letter A in the box next to the boiling point of water. [1]

(b) Write the letter B in the box next to the melting point of ice. [1]
The table shows some materials found in Mr Patel’s house.

Tick (✓) the materials which come from living things.

<table>
<thead>
<tr>
<th>materials</th>
<th>made from living things</th>
</tr>
</thead>
<tbody>
<tr>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>wood</td>
<td></td>
</tr>
<tr>
<td>diamonds</td>
<td></td>
</tr>
<tr>
<td>silk</td>
<td></td>
</tr>
<tr>
<td>wool</td>
<td></td>
</tr>
<tr>
<td>slate</td>
<td></td>
</tr>
</tbody>
</table>