1. Anna bought fruit, vegetables and other things to prepare supper.

a. What does Anna do before she starts eating the fruit?

__________________________________________________________________________

1 mark

b. The picture below shows Anna’s supper. Use this picture to answer the following questions.

![Image of a girl eating a meal]

i. Which ONE foods are rich in carbohydrates?

__________________________________________________________________________

1 mark

ii. Name ONE food rich in proteins.

__________________________________________________________________________

1 mark

iii. Which of the above food items is most likely to cause tooth decay?

__________________________________________________________________________

1 mark
c. Anna eats two slices of wholemeal bread during supper. This contains a lot of fibre. Why is fibre important in the diet?
___________________________________________________________________ 2 marks

d. Give THREE reasons why we need food.
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________ 3 marks

2. Ronald is a football player. Answer the following questions.

a. Underline: While running his breathing rate and pulse rate (increase/decrease).
   Give a reason for your answer: _______________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________ 3 marks

b. Ronald trains a lot. He follows all the instructions given by his coach, but he smokes a number of cigarettes per day. Describe how smoking may effect his health.
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________ 2 marks

c. During a football game Ronald falls and cuts his knee. The nurse puts a bandage on his cut.
   i. Why was putting a bandage important?
      ________________________________________________________________
      ________________________________________________________________
      ________________________________________________________________ 1 mark
ii. Give the name of ONE type of micro-organism which can infect the cut.

__________________________________________________________ 1 mark

iii. The nurse wears rubber gloves to clean Ronald’s knee. Why are the rubber gloves important for the nurse?

__________________________________________________________ 1 mark

3. This question is about elements, compounds and mixtures.
   a. Use this list of chemicals to answer the questions below.
      oxygen        water        iron        carbon dioxide        air        copper

   i) Find one chemical that is an element. ______________________

      Write its symbol ______________________

   ii) Find one chemical that is a metal. __________

   iii) Name two compounds from this list.

      ______________________  ______________________

   iv) Choose one element that is a gas. ______________________

      6 marks

b. Peter put some sugar in a beaker. He added some water and stirred until all the sugar disappeared.

   Tick (✓) the correct answers.

   The sugar changed to a new chemical. [ ]
   The sugar dissolved in the water. [ ]
   Peter made a solution. [ ]
   The liquid tasted salty. [ ]

      2 marks
c. Some students put a few new, shiny, grey nails in the school yard. After some days they brought them back into the lab. The nails looked dull and had brown patches on them.

Answer these questions:

i. What happened to the nails?

__________________________________________________________________

1 mark

ii. Is this change reversible? ______________________

1 mark

iii. Which elements join together in this case? ____________________________

2 marks

4. The diagrams below show different separation techniques.

a. Name the separation technique shown in diagrams

B: ______________________

D: ______________________

2 marks

b. Which of the above separation techniques would you use to separate:

i. The colours in black ink:

ii. Sand from water:

iii. Salt from water:

iv. Pure water from sea water:

4 marks
5. a. The picture below shows Mary in her room.

i. Draw rays of light to show how Mary can see the armchair.  

ii. Name ONE luminous and ONE non-luminous object that you can see in the picture.

<table>
<thead>
<tr>
<th>Luminous</th>
<th>Non-Luminous</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. The diagram below shows the human eye.
Use THREE of the words listed below to label the different parts of the human eye.

*retina, lens, cornea, iris, pupil, optic nerve*
6. A science student investigated how light and sound travel. He set up a bell jar, set the alarm of his mobile phone and placed it in the bell jar.

a. The alarm sets off. Did he hear the sound of the alarm? ______________________

1 mark

He then removed all the air by using a vacuum pump. His mother called him on his mobile.

b. How can the student know that his mum is calling?
________________________________________________________________________

1 mark

c. Explain why he did not hear the mobile ringing.
________________________________________________________________________

________________________________________________________________________

2 marks

7. The police are investigating a hit and run accident. A car ran over a 7 year old boy, hit a tree and drove away at a high speed. The forensic scientists came to collect any evidence.

a. Tick (✓) the clues which might be useful.
   i. The tyre marks on the ground
   ii. The direction of the wind on that day.
   iii. Some black paint found on the tree trunk.
   iv. The name of the place.

2 marks
b. After the accident the police found a black car abandoned in a valley. They found clues which may be related to this accident. The forensic scientists found one fingerprint, some hair strands and a broken tooth. It seems that the driver lost this tooth during the accident!

i. Name the four types of teeth we find in the human mouth.

______________________________________________________________________

4 marks

ii. Identify the type of tooth found on the crime scene. ______________________

What is the function of this tooth? _______________________________________

2 marks

The diagram shows the details of four suspects.

iii. Which piece of evidence suggests that Danny Zee may not be involved in the crime?

______________________________________________________________________

1 mark
iv. From the evidence collected, identify which of the four suspects is responsible for the crime.__________________________________________________________ 1 mark

8. Read these sentences and then answer the following questions:

_Tuna is a fast swimming fish. It is able to survive in cooler waters and thus is found in a wider range of sea environments than other types of fish._

_Tuna eats other small fish or animals such as sardines, herrings, shrimps and shellfish. These in turn feed on plankton._

_Tuna is an important commercial fish._

_Sharks eat tuna but the main enemy for tuna is overfishing. Some countries are enforcing laws and restricting tuna fishing as research shows that tuna may become extinct._

_a. Use the above information to write down a food chain._

__________________________________________________________ 2 marks

_b. From your food chain, give ONE example of

i. a producer: _______________________

ii. an animal which is both a predator and a prey: _______________________

2 marks

c. Explain the meaning of the words

(i) Overfishing: _______________________

(ii) Extinct: _______________________

2 marks

d. What happens to tuna if all the sharks die out?

__________________________________________________________ 1 mark
9. The following diagram shows a power station and the area around it.

   ![Diagram of power station and surrounding area]

a. From the diagram above identify TWO sources of air pollution.

   ___________________________________________  _______________________________________  
   2 marks

b. Identify ONE way to reduce air pollution.

   ________________________________________________________________  
   ________________________________________________________________  
   1 mark

c. Name ONE gas in the air that causes global warming?

   ________________________________________________________________  1 mark

d. Which of the following may happen because of climate change? 
   Tick (✓) the correct answer.

   [ ] There will be a temperature rise and ice will melt.
   [ ] The sea level will go down.
   [ ] There will be longer days.  1 mark
10. One way to reduce land pollution is to reduce the amount of waste that is generated throughout the year by making use of the 3R’s.

a. Fill in the missing keywords in the logo. 3 marks

b. Describe TWO ways in which you can make use of the 3R’s in your daily life. 2 marks

11. These are some facts about the Solar system. Write the correct word for each fact.

Each word can be used once, more than once or not at all.

solar eclipse Venus 28 days Mercury a season
lunar eclipse gravity 24 hours phases 365 days

the changes in the appearance of the Moon as it orbits the Earth
this stops the Moon from moving away from Earth
the time taken by Earth to spin once on its axis
an eclipse in which the Moon passes through the Earth’s shadow and it becomes very dark
the nearest planet to the Sun
the time taken by the Moon to orbit the Earth
the hottest planet in the Solar system

7 marks
12. This diagram shows the Earth at two different positions in its orbit.

[Diagram of Earth at two different positions in its orbit]

a. What is the line A – B called? ___________________ 1 mark

b. What is the path taken by Earth round the Sun called? ___________________ 1 mark

c. Imagine that you are living in a country marked Z. At one position, it is summer, at the other it is winter. Write ‘summer’ and ‘winter’ under the correct parts of the diagram. 1 mark

d. Give the reason why there are seasons on Earth.

_____________________________________________________________ 1 mark

- End of paper. Please check your work again -
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Maximum Marks</th>
<th>Level Allocation</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><strong>9</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>1</td>
<td>L5</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>She needs to wash her hands and fruit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Accept any one answer)</td>
</tr>
<tr>
<td>b.(i)</td>
<td>1</td>
<td>L6</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wholemeal bread; cake; peas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Accept any one)</td>
</tr>
<tr>
<td>b.(ii)</td>
<td>1</td>
<td>L6</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chicken or peas</td>
</tr>
<tr>
<td>b.(iii)</td>
<td>1</td>
<td>L6</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cake</td>
</tr>
<tr>
<td>c.</td>
<td>2</td>
<td>L7</td>
<td>2 marks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fibre keeps the digestive system healthy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Accept any other correct answer)</td>
</tr>
<tr>
<td>d.</td>
<td>3</td>
<td>L7</td>
<td>1 mark each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>For energy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>For growth and repair</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>To stay healthy</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td><strong>8</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>1</td>
<td>L5</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>L8</td>
<td>2 marks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>He needs more oxygen /energy quickly.</td>
</tr>
<tr>
<td>b.</td>
<td>2</td>
<td>L7</td>
<td>2 marks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Accept any 2 effects of smoking such as short breath, circulation, heart problems, lung cancer, etc.</td>
</tr>
<tr>
<td>c.(i)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>To prevent germs entering the cut and stop bleeding. (Accept any)</td>
</tr>
<tr>
<td>c. (ii)</td>
<td>1</td>
<td>L6</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bacteria</td>
</tr>
<tr>
<td>c.(iii)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>To prevent the spread of disease.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td><strong>12</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.(i)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>L8</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oxygen/iron/copper (Accept any)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Corresponding correct symbol.</td>
</tr>
<tr>
<td>a.(ii)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Iron/copper (Accept any)</td>
</tr>
<tr>
<td>a.(iii)</td>
<td>2</td>
<td>L5</td>
<td>1 mark each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Water/carbon dioxide (Accept any)</td>
</tr>
<tr>
<td>a.(iv)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oxygen</td>
</tr>
<tr>
<td>b.</td>
<td>2</td>
<td>L7</td>
<td>1 mark each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The sugar dissolved in water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Peter made a solution.</td>
</tr>
<tr>
<td>c.(i)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>They rusted.</td>
</tr>
<tr>
<td>c.(ii)</td>
<td>1</td>
<td>L7</td>
<td>1 mark</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>c.(iii)</td>
<td>2</td>
<td>L6</td>
<td>1 mark each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Iron and oxygen</td>
</tr>
</tbody>
</table>
4. | 6 |
---|---|
a. | 1 | L6 | 1 mark | B: evaporation |
    | 1 | L6 | 1 mark | D: distillation |
b. (i) | 1 | L6 | 1 mark | A |
b. (ii) | 1 | L7 | 1 mark | C |
b. (iii) | 1 | L7 | 1 mark | B |
b. (iv) | 1 | L7 | 1 mark | D |

5. | 8 |
---|---|
a. (i) | 2 | L7 | 2 marks | Straight arrows from lampshade to the armchair which is then reflected to the eye |
a. (ii) | 1 | L5 | 1 mark | Luminous: accept any from lampshade, TV |
    | 1 | L5 | 1 mark | Non-luminous: accept any other object |
b. | 4 | L7 | 1 mark each | Pupil Retina |
    |     |     |     | Lens Optic Nerve |

6. | 4 |
---|---|
a. | 1 | L5 | 1 mark | Yes |
b. | 1 | L5 | 1 mark | The screen lights up |
c. | 2 | L7 | 2 marks | Sound does not travel through a vacuum (Accept any correct answer) |

7. | 10 |
---|---|
a. | 1 | L6 | 1 mark | The tyre marks on the ground |
    | 1 | L6 | 1 mark | Some black paint found on the tree trunk. |
b. (i) | 4 | L7 | 1 mark each | Incisor, canine, premolar, molar |
b. (ii) | 1 | L7 | 1 mark | Canine |
    | 1 | L7 | 1 mark | Tearing of food. |
b. (iii) | 1 | L6 | 1 mark | The hair strands. |
b. (iv) | 1 | L7 | 1 mark | Itsy Cee |

8. | 7 |
---|---|
a. | 2 | L6 | 2 marks | plankton ➔ shrimps ➔ small ➔ fish tuna (Accept any other correct answer) |
b. (i) | 1 | L7 | 1 mark | Plankton |
b. (ii) | 1 | L7 | 1 mark | Small fish |
c. (i) | 1 | L7 | 1 mark | Catching a lot of the same fish. |
c. (ii) | 1 | L7 | 1 mark | Does not exist anymore. |
d. | 1 | L8 | 1 mark | The number of tuna increases. |
<table>
<thead>
<tr>
<th>Level</th>
<th>Range of Percentage marks</th>
<th>Total marks (out of 85)</th>
<th>Total % mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5-10%</td>
<td>8</td>
<td>9.4</td>
</tr>
<tr>
<td>6</td>
<td>15-30%</td>
<td>18</td>
<td>21.2</td>
</tr>
<tr>
<td>7</td>
<td>60-75%</td>
<td>52</td>
<td>61.2</td>
</tr>
<tr>
<td>8</td>
<td>5-15%</td>
<td>7</td>
<td>8.2</td>
</tr>
</tbody>
</table>

As stated in the teacher’s handbook, the annual final mark attained by each student will be out of 85. In addition, teachers will add the student’s average mark attained from the practical work component carried out during the scholastic year.

15% of the final mark is allotted to the practical work presented during the year.