SAMAGRA PLUS

SECOND TERM SAMPLE PRACTICE PAPER

BASIC SCIENCE

Time :2 Hours **Score : 30**

1.There is a 'Cool-off time' of 15 minute in addition to the writing time.
2.Use the 'Cool-off time' to get familiar with questions and to plan your answers.
3.Read questions carefully before answering.
4.There are total 8 activities out of which answer 6 activities.

Activity 1

1. Roy and his mother are making tea, and Roy is observing and listing the events that occur while making tea.

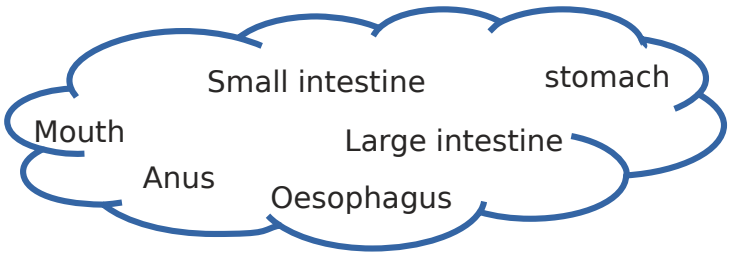
A) Complete the table.

1.	2	Radiation
The water boils	The vessel is getting hot	3.....

(Convection, Conduction, Feeling hot)

B) Write examples for Good Conductors ?
C) What is the role of molecules in the transmission of heat by conduction and convection?

Activity 2
Some organs in our digestive system are listed below.



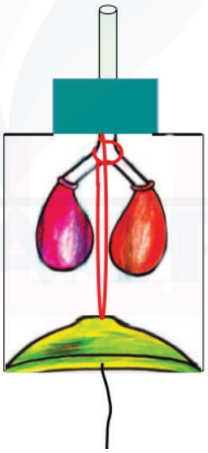
A) In which part of the digestive system is the digestion of food completed?
B) What is peristalsis ?
C) The canines of carnivores are highly developed. How is this related to their dietary habits?
D) Complete the flowchart by including the stages of nutrition.

Activity 3

A) Manu's mother said that he is suffering from fever. Which instrument is used to measure Manu's body temperature?
B) What are the units of temperature?
C) What is the normal human body temperature?
D) Which instrument is used to measure temperature in the laboratory?

Activity 4

Observe the model of the lung.



You may also have prepared a model of the lungs.

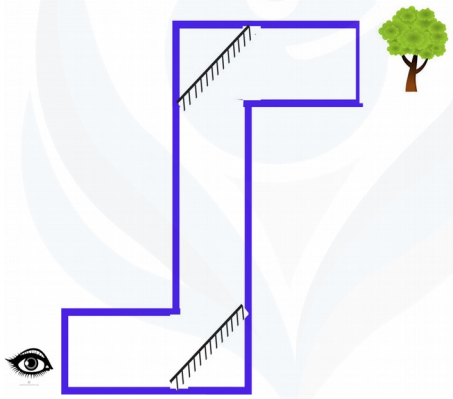
A) In this model, which part of the respiratory system is indicated by the balloons attached to the Y-tube?
B) Inhaled air contains 21% oxygen, whereas exhaled air contains 15% oxygen. What is the reason for this difference?
C) Arrange the given statements in the table appropriately.

Inhalation	Exhalation

- The volume of the thoracic cavity decreases.
- The pressure in the thoracic cavity increases.
- The pressure in the thoracic cavity decreases.
- Atmospheric air enters the lungs.
- The volume of the thoracic cavity increases.
- The air from the lungs moves out.

Activity 5

Look at the picture of the periscope made by a student in the class.



A) Are there any defects in the construction of the periscope? Explain.

B) Draw the image correctly and illustrate the path of light.

C) Which scientific principle is used in this device?

Activity 6

A child in a barbershop could see his reflection both in front, behind and side mirrors.

A)Which phenomenon allows the child to see his reflection everywhere?

B) What is the relationship between the angle between two plane mirrors and the number of images?

C) Complete the table.

Angle	Number of images
30^0	
60^0	5
90^0	
120^0	

Activity 7

A) Complete the table below related to the blood circulation system.

Blood cells	Parts of the Circulatory system
Red blood cells	Heart
1	3. .....
2	4. .....

B) Which component gives blood its red color?

C) What are the measures to be taken to maintain heart health? Write any two.

Activity 8

8. Raju went to the beach with his father at 11 a.m. and spent a few hours there.

A) Was it a sea breeze or a land breeze they experienced?

B) Is it hotter during the day on the land or on the sea?

C) Which has colder air at night, the land or the sea?

D) How does a sea breeze occur?

<table>
<tr><th>No</th><th>Keypoints</th><th>Score</th><th>Total</th></tr>
<tr><td>Activity 1</td><td>A)1. Conduction
2. Convection
3. Feeling hot
B) Aluminium, Iron..... (Any one)
C) Molecules serve as the medium</td><td>1
1
1
1
1</td><td>5</td></tr>
<tr><td>Activity 2</td><td>A) Small intestine
B) Wave-like movement of the oesophageal wall
C) For biting and tearing meat.
D) Digestion, Assimiliation</td><td>1
1
1
2</td><td>5</td></tr>
<tr><td>Activity 3</td><td>A Thermometer
B) Degree celsius (0 C) and degree fahrenheit (0 F).
C) 37^0 C
D) Laboratory thermometer</td><td>1
2
1
1</td><td>5</td></tr>
<tr><td>Activity 4</td><td>A) Lungs
B) Uses for body activities
C)
<table>
<tr><th>Inhalation</th><th>Exhalation</th></tr>
<tr><td>Atmospheric air enters the lungs.
The volume of the thoracic cavity increases.
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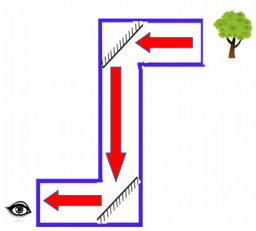
</table></td><td>1
1
3</td><td>5</td></tr>
<tr><td>Activity 5</td><td>A) It is wrong, The polished part of the mirror is facing the tree
B)
 
C) Multiple reflection</td><td>2
2
1</td><td>5</td></tr>
<tr><td>Activity 6</td><td>A) Multiple reflection
B) When the angles increases number of images decreases.
C) 30^0 11
90^0 3
120^0 2</td><td>1
1
1
1
1</td><td>5</td></tr>
<tr><td>Activity 7</td><td>A) 1. White blood cells
2. Platelet
3. Blood</td><td>1/2
1/2
1/2</td><td>5</td></tr>
</table>

	4. Blood vessels B) Haemoglobin C) Good food habits, regular exercise and better life styles.	1/2 1 2	
Activity 8	A) Sea breeze B) Land C) Land D) The Sea Breeze air over the sea is cooler compared to that over the land. As the warm air over the land rises up, the cold air over the sea moves towards this place. Thus, sea breeze is formed.	1 1 1 2	5