A

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Second Term Evaluation 2023 – 2024
Basic Science

E 706

Class : 7

Time : 2 hrs

Instructions

- 15 minutes is given as cool - off time. This time is to be used for reading the question paper.
- Attempt any 8 from the 10 questions given below.

Activity – 1

A) A child is trying to catch the image of a distant object on the classroom wall. The child has used various mirrors for the experiment. Complete the table showing the findings of the child.

Mirror	Image	Peculiarity
i)	can be projected on the wall.	ii) .....
Convex mirror	iii)	virtual image
Plane mirror	cannot be projected on the wall	iv) .....

B) Write two situations in which the multiple reflection of a plane mirror is utilized.

C) Find out the correct statement related to the formation of image using a convex mirror.

i) Forms small and inverted virtual image.
ii) Forms large and inverted real image.
iii) Forms small and erected virtual image.
iv) Forms large and erected real image.

Activity – 2

Some observations related to acids and alkalis are given below.

Solution - 1

No change in colour while adding Phenolphthalein. The colour changed into pale pink while adding Methyl orange. The colour did not change when the solution was added to the cloth rubbed with turmeric.

Solution - 2

Formed pink colour while adding Phenolphthalein. Formed pale yellow colour on adding Methyl orange. Formed red colour when the solution was added to the cloth rubbed with turmeric.

A) List out the chemical properties of solution 1 & solution 2 in the given table.

Solution	Chemical properties
Solution - 1	
Solution - 2	

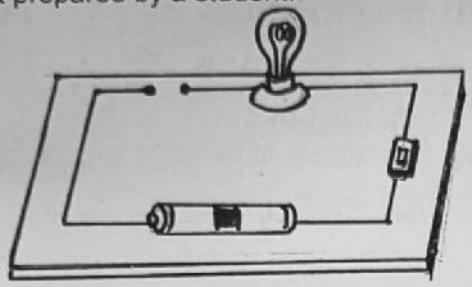
B) Write down any two general properties of solution 2.

C) Find out the right pair from the following.

Automobile battery - hydrochloric acid
Manufacturing of soap - caustic soda
Preparation of pickle - sulphuric acid
Manufacture of paint - caustic soda

Activity – 3

This is an electric circuit prepared by a student.



A) Which materials given below can be used to light the bulb in the circuit?

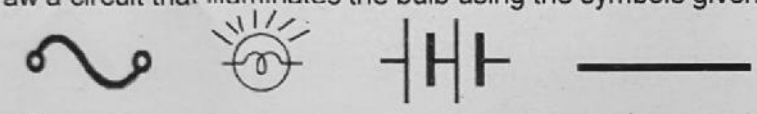
i) thick copper wire ii) empty refill

iii) dried rib of a coconut leaf iv) a special type of wire made up of lead and tin

v) paper

B) Which object from this can be used to arrange fuse in this circuit?

C) Draw a circuit that illuminates the bulb using the symbols given below.



Activity – 4

Due to 30% shortage of rainfall, Kerala will be in darkness. If monsoon is not received in full, we will be facing severe power crisis. This can be overcome to some extent by using electricity judiciously and avoiding its wastage.

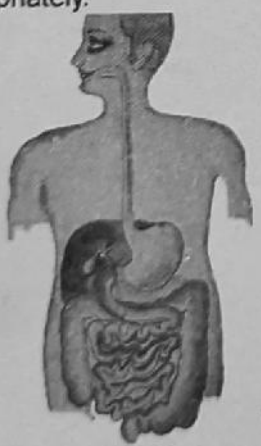
Have you noticed the news report?

A) Write down two precautions to avoid the wastage of electricity.

B) What first aid will be given to a person affected with electric shock?

Activity – 5

A) The picture and process related to human digestive system is given below. Complete the table appropriately.



excretion

ingestion

peristalsis

absorption of water and salt

digestion

absorption of nutrients

Parts of the digestive system	Process
mouth	ingestion
oesophagus	i) .....
ii) ....., ...	digestion
iii)	absorption of nutrients
large intestine	iv) .....

B) The flowchart indicating various stages of nutrition is given below. Find out the correct one.

1) ingestion → absorption → digestion → assimilation → excretion
2) ingestion → assimilation → absorption → digestion → excretion
3) ingestion → digestion → absorption → assimilation → excretion
4) ingestion → assimilation → digestion → absorption → excretion

C) Explain the digestive process that takes place in the small intestine.

Activity – 6

The stages of experiment related to neutralisation is given below.

1. Take dilute sodium hydroxide in a conical flask.
2. Pour two drops of phenolphthalein into the solution in the flask.
3. Take dilute hydrochloric acid in a burette.
4. Close the stop cock of the burette when the solution in the flask become colourless.
5. Open the stop cock and add the acid drop by drop into the flask.

A) Arrange the stages from 2 to 5 in the correct order.

B) Name the substances formed in the flask after this experiment.

C) Write down any one situation where neutralisation is used in our daily life.

Activity – 7

Some findings of an experiment conducted to know the water absorption capacity and organic content of the soil is given below.

Observe the table.

Soil	Changes occurred while adding hydrogen peroxide	No. of water drops added	No. of drops that came out
Sample 1	less effervescence	100	15
Sample 2	highest effervescence	100	8
Sample 3	no change	100	25

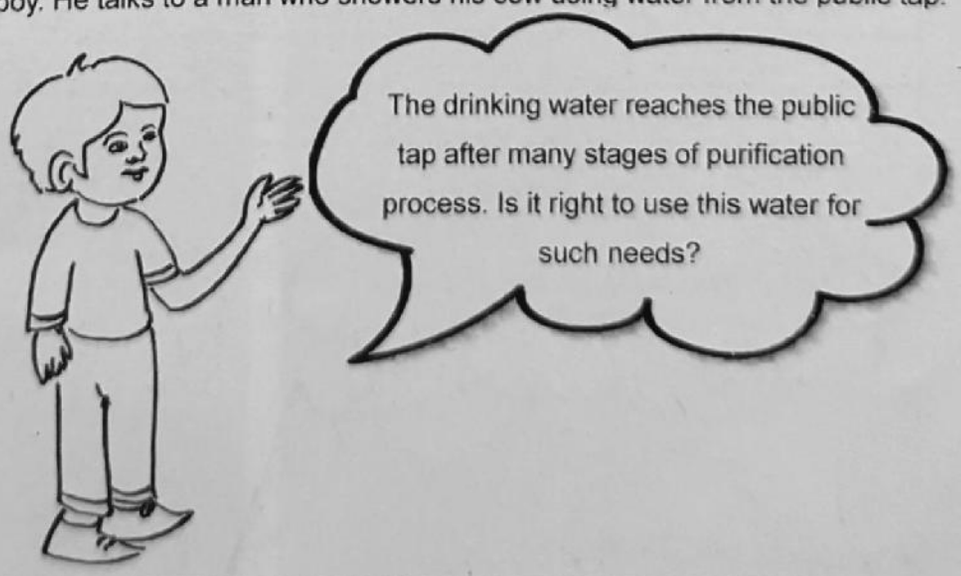
A) Which is the best soil suitable for agriculture? Why?

B) Which are the components that influence the water content of soil?

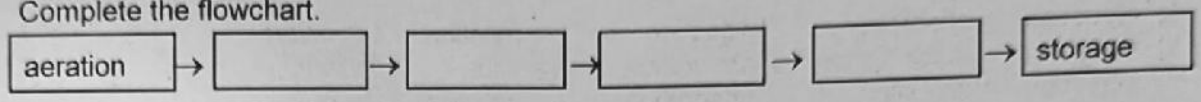
C) What are the situations leading to the loss of top soil, rich in organic content?

Activity – 8

Look at the boy. He talks to a man who showers his cow using water from the public tap.



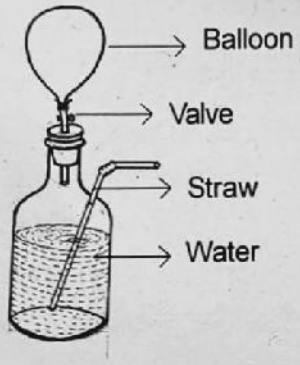
A) Water reaches the public tap after various stages of purification process. Which are they? Complete the flowchart.



B) What is the pH value of pure water?

C) On testing water, the presence of E-coli bacteria has been found higher in the wells of an area. Give some suggestions to avoid such situation.

Activity – 9



A) Observe the picture. What will happen if the valve shown in the picture is opened? Why?

B) Find two devices that work on air pressure from the given group.

thermometer	siphon	periscope	barometer	lactometer

Activity – 10

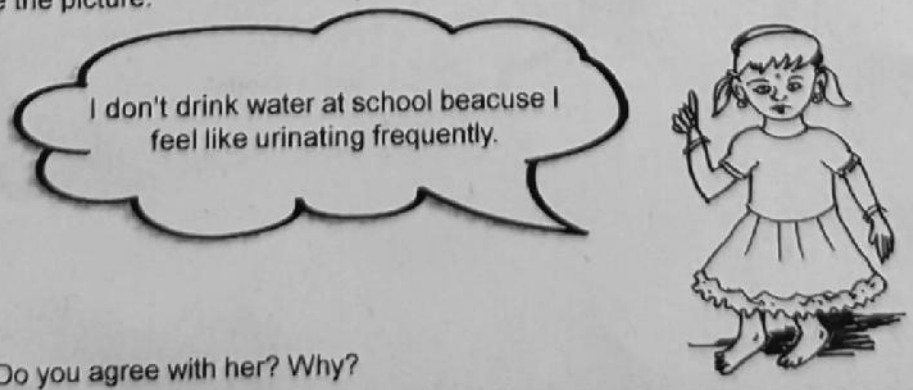
The substances that reach blood as part of metabolic activities and body parts related to it are given below.

lungs, urea, nutrients, carbon dioxide, small intestine, oxygen, liver, cells

A) Complete the table by writing the parts of body and the components that reaches the blood.

Parts of body	Components that reaches the blood
lungs	1. .....
2.	urea
3.	4. .....
5.	6. .....

Observe the picture.



B) Do you agree with her? Why?