

# **CLASS 8 TOPICAL QUESTIONS**

# **SCIENCE**

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**CLASS OF KCPE NOVEMBER 2023**

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**FOR MARKING SCHEMES:**

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# CLASS 8 TOPICAL QUESTIONS.

## SCIENCE.

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# KCPE WARM UP

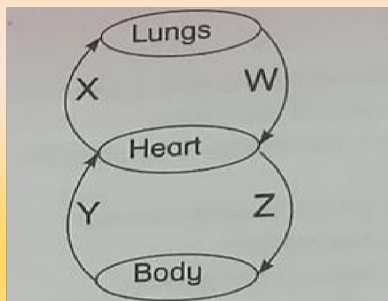
## SCIENCE TOPICAL REVISION QUESTIONS

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### TOPICAL QUESTIONS ON HUMAN BODY

#### EXERCISE 1

- 1) List four types of teeth found in a man.
- 2) Name four problems related to the teeth.
- 3) During exhalation, describe what happens to the:
  - (i) Ribs
  - (ii) Diaphragm
- 4) Which part of the system cleans oxygen and warms the air?
- 5) Male sex is called?
- 6) What is fertilization?
- 7) State two physical changes that occur in boys only in adolescence.
- 8)

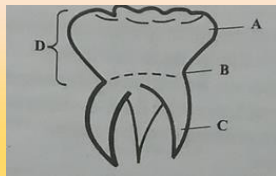


- a) Name the blood vessels marked XZVW respectively.
- b) Blood vessels marked ..... and ..... carry deoxygenated blood.
- c) Blood vessels -----and ..... have valves.

- 9) Urea, water, carbon dioxide and toxic substances are found in the blood, which of these are removed by kidneys?
- 10).....is the largest organ of the body.
- 11)The attachment of embryo to the uterine wall is called.....
- 12)Gestation period in human being is approximately..... months. 13) State the four processes of birth.
- 14)State three functions of the amniotic fluid.
- 15)The foetus gets its nourishment from the mother through the.....

## EXERCISE 2

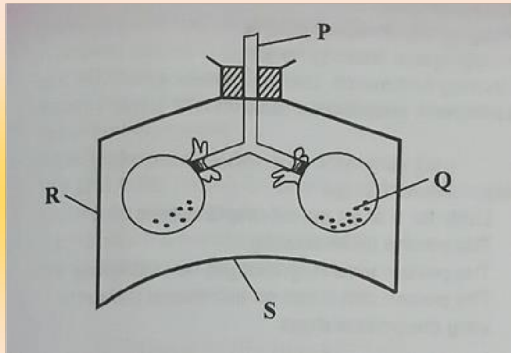
- 1) The two sets of teeth in a man are .....and.....
- 2) State the functions of the following types of teeth in a man.
- a) Canine
  - b) Premolars
  - c) Incisors



Nome the labelled parts ABCD

- 3) Respiratory gases are .....and .....
- 4) What is inhalation?
- 5) Class five made the following model.

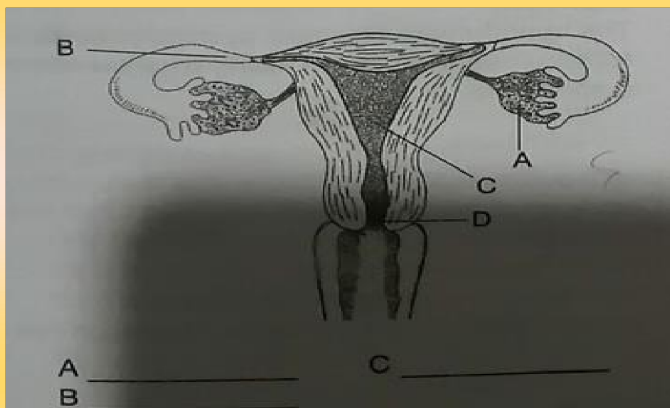
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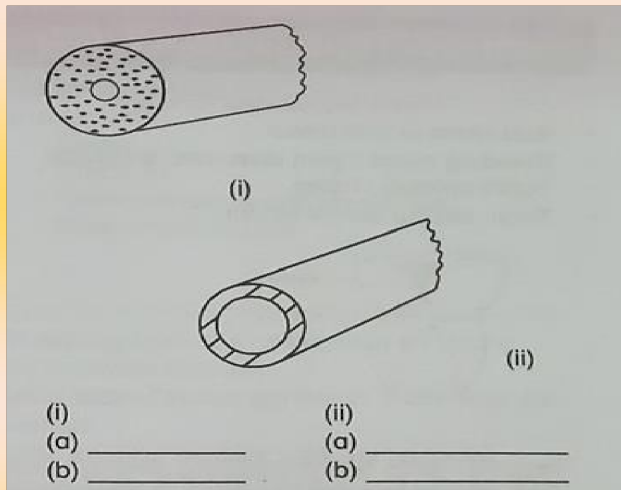
- 6) What is digestion?
- 7) The long tube where digestion takes place is called.....
- 8) Complete the table below.

	Part of gut	Digestive juice
(a)	Mouth	_____
(b)	_____	Gastric juice
(c)	Duodenum	_____
(d)	_____	Intestinal juice

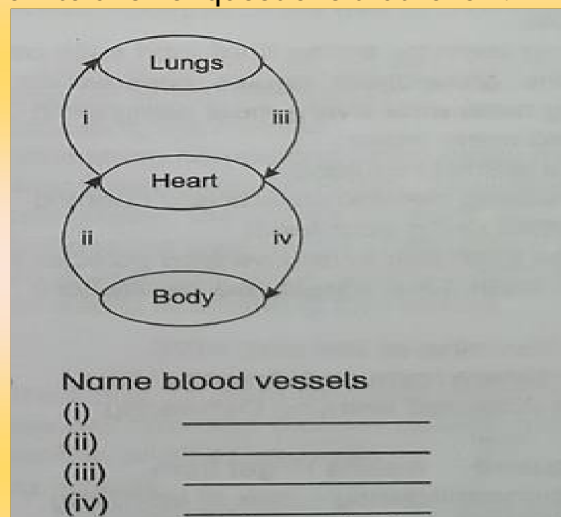
- 9) Starch is first digested in .....
- 10) Name four parts that make male reproductive organ? 11) (a) Name the process that takes place at



- b) Name two functions of port marked D
- 12) Name two characteristics of blood vessels below



13) Use the diagram below to answer questions that follow.



b) Blood vessels marked .....carry deoxygenated blood and .....

c) Which two blood vessels carry pure blood?

14) The outer part of the skin is called.....

15) Immediately after fertilization the new mass of cells formed is called

16) Name the excretory organs.

17) The removal of undigested waste materials is called.....

18) State three functions of the skin

19) State four signs of pregnancy.

20) In human, gaseous exchange takes place in the.....

### **TOPICAL QUESTIONS ON PLANTS**

1) Explain the meaning of Adaptation.

2) List down three adaptations under which plants grow.

3) Plants that grow in dry areas are called..... 4) Plants that grow in wet areas are called .....

5) Plants that grow in normal conditions are called .....

6) Give four examples of plants that grow in dry areas.

7) Give four examples of plants that grow in wet areas.

8) Give four examples of plants that grow in normal conditions.

9) Outline four adaptations of xerophytes.

10) Plants that shed their leaves during the dry season are called..... 11) An example of a plant that sheds leaves is.....

12) List down three factors that increase the rate of transpiration.

13) Xerophytes with fleshy stems are called.....

14) Give two examples of succulent plants.

15) The leaves of a cactus plant are modified into .....

16) Outline three adaptations of hydrophytes.

17) State four signs of unhealthy crops.

18) Outline three effects of crop diseases.

### **TOPICAL QUESTIONS ON HEALTH EDUCATION**

1) What causes AIDS?

2) Name body fluids through which HIV may be passed.

3) Outline four ways through which HIV can be spread.

4) Outline three ways through which HIV cannot be spread.

5) Name the stages of HIV infection.

6) What is HIV and AIDS education?

7) Outline three ways through AIDS education can be carried out.

8) What is educating the masses?

9) Name three types of media.

10) List four places where public awareness can be done.

11) What is STI?

12) Name four examples of STIs.

13) In each of the following STIs state its cause.

- (a) Gonorrhea
- (b) Syphilis
- (c) Chancroid
- (d) Genital herpes

14) Outline four ways through which STIs can be prevented.

#### TOPICAL QUESTIONS ON WEATHER AND ASTRONOMY

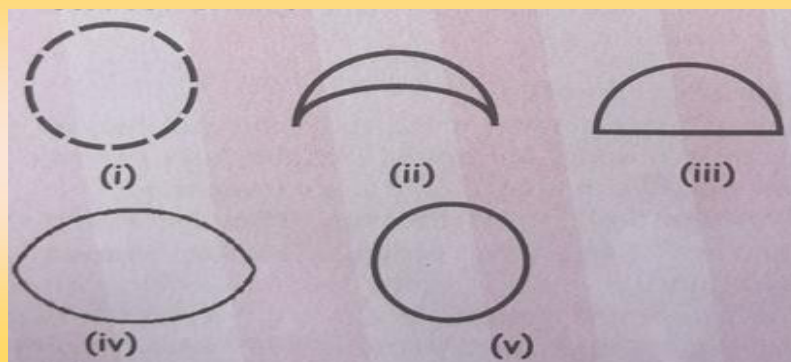
1) The moon moves around the earth in.....days

2) The moon does not produce its own light but it ..... light from the sun.

3) The planet which is seen in the morning in the East is called.....

4) The moon changes its shape. The shapes are.....

5) Which phase of the moon cannot be seen clearly from the earth? 6) Name the phases of the moon below in their correct order \_



7) The .....produce their own light whereas the moon reflects light from the sun.

8) State two characteristics of the following clouds.

- (a) Cumulus



(b) Nimbus

9) Which cloud indicates fair weather?

10) Which cloud is a sign of drizzle?

11) Which cloud form a halo around the sun or moon?

12) What is weather?

13) Scientists who study weather are called .....

14) A place where weather observations are made ..... is called 15) List down any four weather instruments.

16) Name the weather instruments that

i. Measure Temperature

ii. Measure Speed of wind

iii. Show the direction of wind

iv. Measure humidity

v. Measure atmospheric pressure

vi. Measure strength of wind

vii. Measure amount of rainfall 17) Explain why a rain gauge is placed

(a) 30 cm above the ground?

(b) 15cm underground?

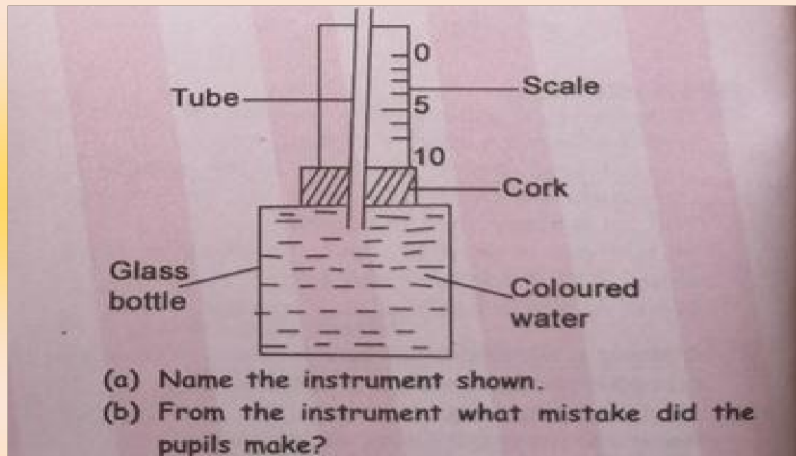
18) The arrow head of a wind vane points..... 19)

State the principles under which the following work.

(a) Liquid thermometer

(b) Air thermometer

20) Standard 5 pupils made the weather instrument shown below



(a) Name the instrument shown.

(b) From the instrument what mistake did the pupils make?

21) Name all the components of the solar system.

22) ..... is the centre of the solar system.

23) The brightest planet in the solar system is .....

24) ..... is the hottest planet.

25) The planet with three beautiful rings is .....

26) ..... is also called the evening star.

27) ..... is also called the morning star.

28) The biggest planet is .....

29) The planet that takes the shortest time to go around the sun is .....

### TOPICAL QUESTIONS ON ANIMALS

1) Animals are classified into two major groups ..... and .....

2) A place where an animal is able to live as a home is called a .....

3) ..... are all the characteristics that enable an animal to either feed or move.

4) Name the groups of animals according to how they feed.

5) Mammals feed on plants, they are called .....

6) The mammals which feed on flesh only e.g. lion are called .....

7) Mammals which feed on both plants and flesh are called ..... 8) Mammals have four types of teeth. Name them

9) The herbivores have got a hard pad in the upper front jaw used for..... 10)

What is the name given to the toothless gap found in the herbivores animals.

11)The work of the toothless gap in the herbivores animals is to.....

12)The dog uses the incisors for.....

13)What are the carnassials teeth?

14)Why are the teeth of carnivores animals widely spaced?

15)A dog slices meat and cracks bones using the .....teeth.

16)Birds are classified as those which feed on

.....and.....

17)Birds which feed on flesh have a .....beak.

18)The beaks drawn below are of birds which feed on.....

19)State three reasons why animals move

20)Animals move by.....and.....

21)The animals which move by flying have hollow bones and have presence of wings.

Name other adaptation of such animals.

22)State three adaptations of swimming animals

23)Animals that hop and leap have strong hind legs. What is their function?

24)State five signs of ill health in animals.

25)Name three effects of ill health in animals.

### TOPICAL QUESTIONS ON ENVIRONMENT

1) What is environment?

2) The living component of the environment is called

3) The nonliving component of the environment is

called 4) List down all the major components of the environment.

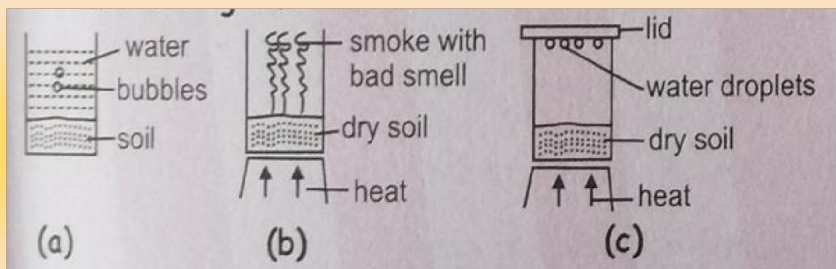
5) Name the biotic components of the environment.

6) Name the abiotic components of the environment.

- 7) Which component of the environment is found everywhere?
- 8) What is pollution?
- 9) List down any four pollutants of soil.
- 10) List examples of farm chemicals that pollute the soil.
- 11) Outline any four effects of soil pollution.
- 12) State two ways of controlling soil pollution.
- 13) What is soil conservation?
- 14) Outline four ways of conserving soil.
- 15) Outline four ways through which air can be polluted.
- 16) Name the gases that are responsible for acid rain.
- 17) State three effects of pollution
- 18) State four ways of controlling air pollution.

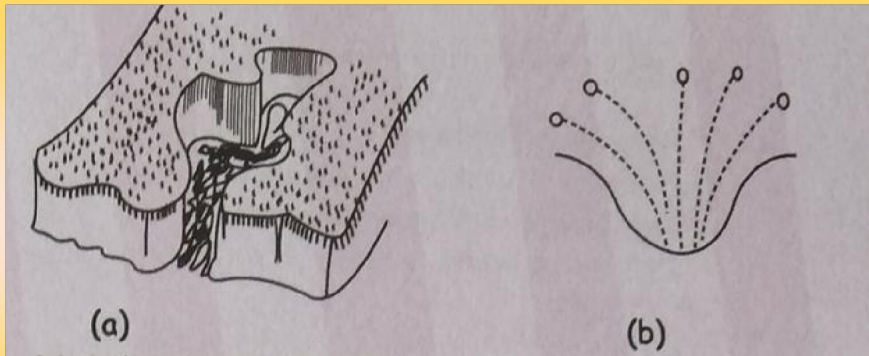
### TOPICAL QUESTIONS ON SOIL

- 1) List down four components of soil.
- 2) Name the components of soil being investigated in the diagrams below.



- 3) Name the three types of soils.
- 4) Outline four characteristics of clay soil.
- 5) State four characteristics of sand soil.
- 6) Loam soil contains.....
- 7) What is soil texture?
- 8) What is drainage?
- 9) Name all the materials needed when investigating drainage in soils.
- 10) Drainage in soils depends on.....
- 11) Which soil has the highest drainage?
- 12) Which soil has the lowest drainage?

- 13)The ability of a soil to hold water is.....
- 14)Which soil holds a lot of water?
- 15)The rising of water in soils is called .....
- 16)List down all materials needed when investigating capillarity in soils.
- 17).....soil has the highest capillarity
- 18)..... soil has the lowest capillarity
- 19)What is soil erosion?
- 20)Name the agents of soil erosion.
- 21)State any three factors that increase the rate of soil erosion.
- 22)Name the four types of soil erosion.
- 23)Name the types of soil erosion shown in the diagrams below.



- 24)What is soil fertility?
- 25)List ways through which a soil loses its fertility.
- 26)Farmers use .....to improve soil fertility. 27) What are organic fertilizers?
- 28)What are inorganic fertilizers?
- 29)Name four types of organic fertilizers.
- 30)Inorganic fertilizers that contain one major plant nutrient are called 31) Name three categories of straight fertilizers.
- 32)State two advantages of organic fertilizers.
- 33)State two disadvantages of inorganic fertilizers.
- 34)State three advantages of inorganic fertilizers.
- 35)State two disadvantages of inorganic fertilizers.

### **TOPICAL QUESTIONS ON WATER**

- 1) State three domestic uses of water.
- 2) State three uses of water on the farm.
- 3) Outline three recreational uses of water.
- 4) State two industrial uses of water.
- 5) Name three ways of storing water.
- 6) Diseases that spread through contaminated water are called 7) Name three diseases that spread through contaminated water.
- 8) Outline four signs and symptoms of cholera.
- 9) Outline three signs and symptoms of typhoid.
- 10) Outline three signs and symptoms of bilharzia.
- 11) Explain four ways of controlling water borne diseases.
- 12) What is water pollution?
- 13) Name three things that pollute water.
- 14) Identify three things that are affected when water is polluted.
- 15) State any four effects of water pollution.
- 16) Explain four ways of conserving water.
- 17) What is hard water 18) What is soft water?
- 19) ..... is formed when hard water mixes with soap
- 20) ..... is formed when hard soft mixes with soap
- 21) ..... water lathers easily with soap 22) Explain three disadvantages of hard water.
- 23) Identify one disadvantage of hard water.
- 24) The process of making hard water soft is called.....
- 25) Hard water can be softened by
- 26) Which chemical is used to soften hard water?

### **TOPICAL QUESTIONS FOOD AND NUTRITION**

- 1) State three reasons why we eat food.
- 2) Name the three basic food groups.

- 3) Give three examples of each of the following.
- (a) Energy giving foods
  - (b) Body building foods
  - (c) Protective foods
- 4) What is a balanced diet?
- 5) Give three examples of a balanced diet.
- 6) What are deficiency diseases?
- 7) List down any 5 deficiency diseases.
- 8) State the causes of the following deficiency diseases.
- (a) Kwashiorkor -
  - (b) Marasmus -
  - (c) Rickets -
  - (d) Scurvy -
  - (e) Night blindness -
- 9) In each of the following deficiency diseases state three signs of
- (a) Kwashiorkor
  - (b) Marasmus
- 10) State three uses of water in our diet.
- 11) To prevent constipation, we should eat foods that have..... 12) What is food preservation?
- 13) State four traditional methods of preserving food.
- 14)..... preserves food by dehydrating organisms that make food go bad.
- 15)..... preserves food by removing water from food.
- 16)..... preserves food by acting as a pesticide.
- 17) List down three modern methods of preserving food.
- 18) Name four people in the family who need special nutritional needs.
- 19) Who is an infant?
- 20) State four reasons why a child needs breast milk.
- 21) What is weaning?
- 22) To promote strong bones and teeth of a developing foetus mothers should eat foods rich in.....

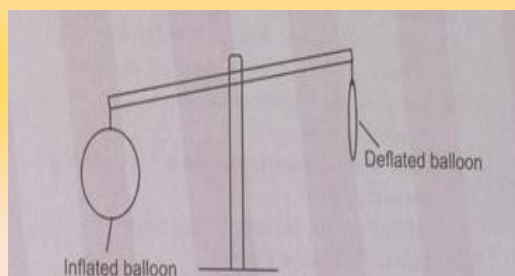
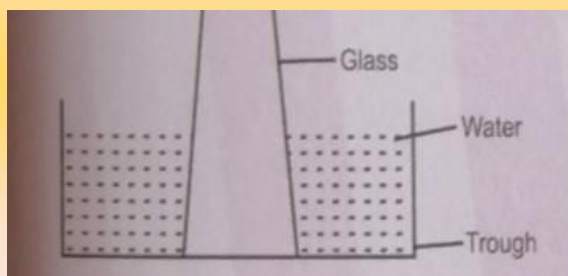
- 23) People suffering from HIV and AIDS should be given foods rich in  
24) People suffering from HIV and AIDS should avoid food that are rich in..... 25)

What is food poisoning?

- 26) What causes food poisoning?  
27) Name the chemicals that can cause food poisoning.  
28) Name three microorganisms that cause food poisoning.  
29) State three signs and symptoms of food poisoning.  
30) Outline four ways of preventing food poisoning.

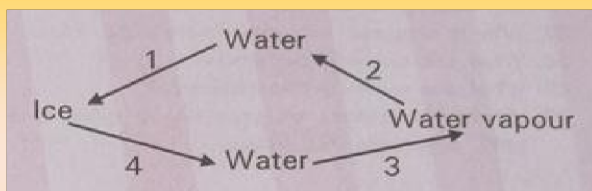
### TOPICAL QUESTIONS ON PROPERTIES OF MATTER

- 1) What is matter?
- 2) State the forms in which matter exists.
- 3) List down any three characteristics of the following.
  - (i) Solids
  - (ii) Liquids
  - (iii) Gases
- 4) In each of the following diagrams, identify the property of matter being investigated.



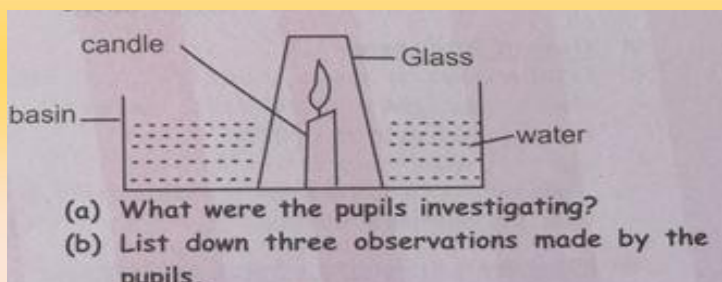
- 5) Pressure in liquids depends on.....
- 6) What four factors that affect sinking and floating
- 7) Changes of state are brought about by changes in ..... 8)

Use the diagram below to answer the questions that follow.





- (a) Name the processes marked 1 - 4.
- (b) From the diagram which two processes need a decrease in temperature?
- (c) From the diagram which two processes need an increase in temperature?
- 9) What is freezing?
- 10).....is a mixture of gases.
- 11)Name all the gases that make up air.
- 12)State the percentage composition of the following components of air.
- Oxygen
  - Rare gases
  - Nitrogen
  - Carbon dioxide
- 13)Complete the sentences below.
- (a) .....and..... form 21% when put together.  
and
- (b) .....and.....form 79% by volume when put together.
- (c) .....and.....forms 99% by volume when put together.
- 14)List down three uses of oxygen.
- 15)Standard 6 pupils carried out the experiment as shown below.



- 16)Outline three uses of carbon dioxide.
- 17)Which gas is used by leguminous plants to make proteins?
- 18)State the uses of the following rare gases.
- Helium
  - Neon
  - Argon
- 19)Solids that dissolve in water are called .....
- 20)Solids that do not dissolve in water are called.....

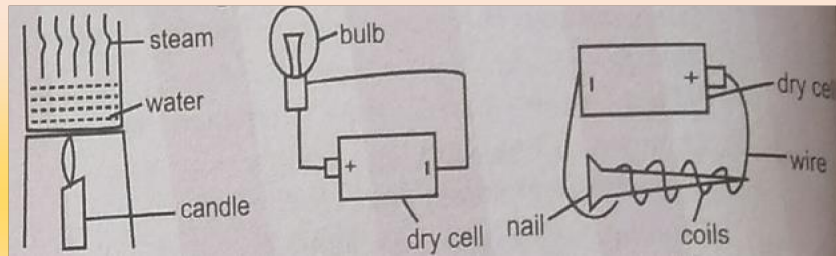
- 21) A liquid in which a solute dissolves is called .....
- 22) Complete the statement below: A solute + a solvent =
- 23) Name the solutions formed when the following are put in water.
- (a) Glucose
  - (b) Sugar
  - (c) Salt
- 24) Liquids that mix are called.....
- 25) Liquids that do not mix are called.....
- 26) State the methods used to separate the following mixture.
- (a) Beans and maize
  - (b) Chaff and maize
  - (c) Flour and iron fillings
  - (d) Bean and sand
  - (e) Flour and water
  - (f) Cooking oil and milk
- 27) Why is charcoal used in a simple water filter?
- 28) What are magnetic materials?
- 29) What are non-magnetic materials?
- 30) State the stages of separating a mixture of sand, sugar and iron fillings.

### **TOPICAL QUESTIONS ON ENERGY**

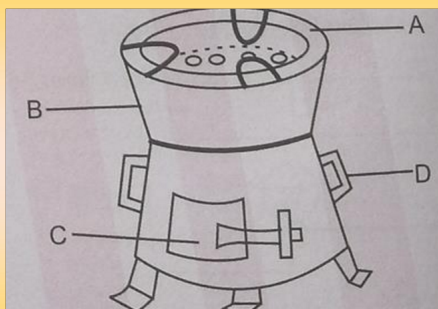
- 1) What is energy?
- 2) List down four types of energy.
- 3) Which forms of energy are produced when fuels are burned?
- 4) List down three uses of heat energy
- 5) List down two ways of lighting a house.
- 6) Outline three reasons why we should light our house properly.
- 7) State two ways through which light travels.
- 8) Explain the following words;
  - i. Reflection
  - ii. Refraction

iii. Dispersion

- 9) What are opaque materials?
- 10) Materials that allow light to pass through them are called?
- 11) Materials that we can see through them are called
- 12) .....energy is produced when things vibrate.
- 13) The highness or lowness of sound is known as 14) State two factors that affect the pitch of a sound.
- 15) What is volume?
- 16) Reflected sound is called..... 17) What is noise?
- 18) The form of energy which increases the temperature of a body is called 19) Outline three effects of heat on substances.
- 20) Explain how heat travels through the following:
  - (a) Water
  - (b) Solids
  - (c) Vacuum
  - (d) Gases
- 21) Name the two types of electricity.
- 22) Static electricity is produced when things are
- 23) What happens when two balloons filled with air are rubbed in the hair and brought near each other?
- 24) Current electricity is produced when.....
- 25) List down four sources of current energy.
- 26) The path through which current electricity flows is called
- 27) What is the function of a switch in a circuit?
- 28) List down any four electrical appliances at home.
- 29) List down four safety precautions when dealing with electricity.
- 30) State any three safety measures during lightning.
- 31) What is energy transformation?
- 32) State the energy changes that occur in the following diagrams



- 33) John ate ugali for lunch. He then left home running to school. What were the energy changes that took place?
- 34) State the energy changes that occur in a radio from broadcasting station to the listener.
- 35) A bicycle dynamo produces electrical energy from..... 36) What is energy conservation?
- 37) List down three ways of conserving energy.
- 38) Outline three ways that show using energy sparingly.
- 39) What are renewable sources of energy?
- 40) List down four sources of renewable energy.
- 41) Name three devices that use solar energy.
- 42) What are non-renewable sources of energy?
- 43) Name the two sources of non-renewable sources of energy. 44) Name the parts of the improved jiko shown



- 45) Outline three advantages of using an improved jiko.

#### TOPICAL QUESTIONS ON MAKING WORK EASIER

- 1) ..... are used to make work easier.
- 2) Explain three ways in which machines make work easier.
- 3) List down any three categories of machines.

- 4) State the uses of the following simple tools.
  - i. Shears
  - ii. Sickle
  - iii. Saw iv. Spade
- 5) Name the tools shown in the diagrams below.
- 6) State three reasons for maintaining simple tools.
- 7) Outline four ways of maintaining simple tools.
- 8) What is mass?
- 9) Mass is measured in units called
- 10) The instrument used to measure mass is.....
- 11) The stones used to balance meat in butchery are called..... 12) List down all the materials needed when making a seesaw.
- 13) Paul weighs 40kg while James weighs 60kg. The two boys are playing on a seesaw. What should they do to balance each other?
- 14) What is motion?
- 15) What causes motion?
- 16) A push or pull on an object is called
- 17) Force is measured in units called
- 18) The instrument used to measure force is called 19) List down three types of forces.
- 20) What is gravitational force?
- 21) What is inertia?
- 22) List down all the materials needed to investigate inertia of rest.
- 23) What is friction?
- 24) List down four advantages of friction force.
- 25) List down four disadvantages of friction force.
- 26) Outline three ways of reducing friction force.
- 27) Outline two ways of increasing friction force.
- 28) Name the three groups of levers.
- 29) In the table below give three examples in each case.

- 30) Explain how an inclined plane makes work easier.
- 31) List down five examples of inclined planes.
- 32) Double inclined planes are also called
- 33) Use the diagram below to answer the questions that follow. From the diagram above; (i) Which slope does one apply the greatest effort?
- (ii) Which slope does one apply the least effort?
- (iii) Which slope is greatest work done?
- 34) Name the simple machine shown in the diagram below.
- 35) A ..... is an example of a single fixed pulley.
- 36) To prevent the rope on a pulley from slipping off, the wheel has ..... to hold the rope
- 37) State three characteristics of a single fixed pulley.

**FOR MARKING  
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