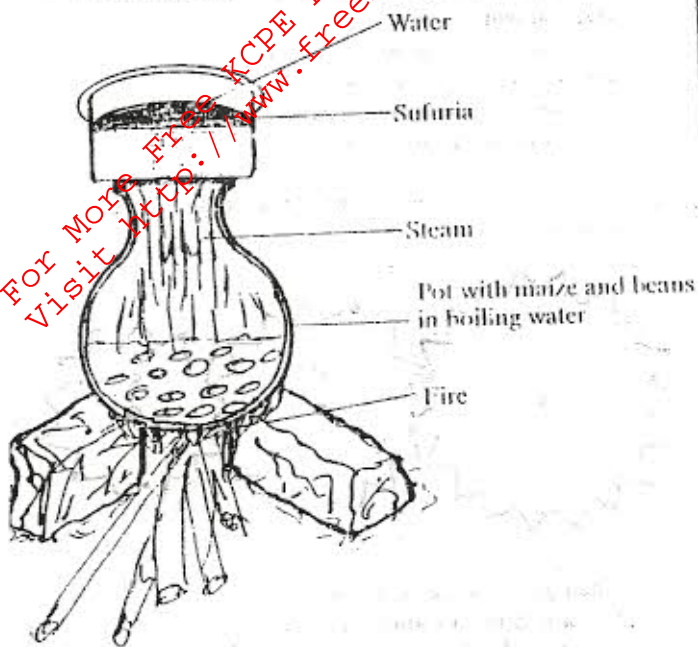


SCIENCE

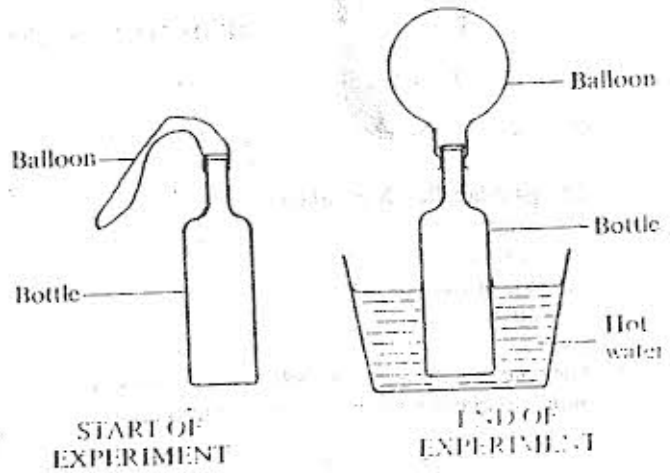
- Which one of the following DOES NOT allow sound to pass through?
 - Air
 - Water
 - Vacuum
 - Wood
- The diagram below represents a set-up that was used to warm water in a *sufuria* placed on top of a cooking pot.



The energy changes involved were

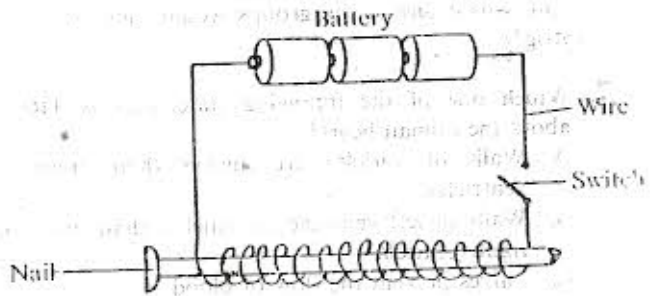
- Chemical → heat → kinetic → heat
- Heat → chemical → heat → kinetic
- Chemical → kinetic → heat → kinetic
- Heat → kinetic → chemical → heat

- In a set-up shown in the diagrams below, a balloon was fixed onto the mouth of a bottle. The bottle was then placed in a container with hot water and left for some time.



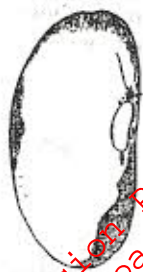
- This experiment shows that when air is heated it
- occupies space
 - exerts pressure
 - increases in weight
 - increases in volume.

- The set-up shown below can be used to make a temporary magnet.



- The magnetic power of the nail can be increased by
- connecting the cells in parallel
 - reducing the number of coils
 - switching it on for a longer time
 - increasing the number of coils.

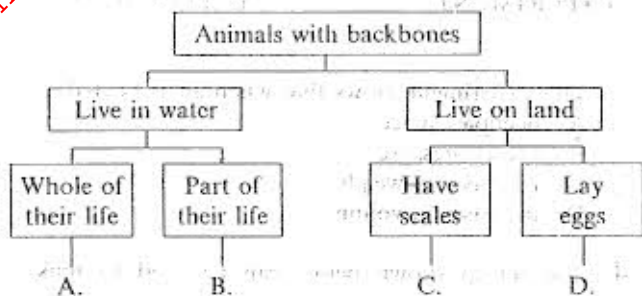
5. The diagram below represents the external structure of a bean seed.



The part labelled X is called

- A. hilum
- B. cotyledon
- C. micropyle
- D. radicle

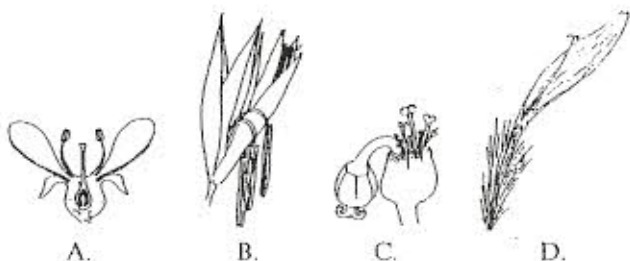
6. The classification chart below was used by some pupils to classify animals they had observed.



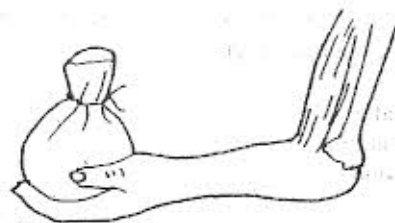
Into which one of the groups would they classify a frog?

7. Which one of the following statements is **TRUE** about the human heart?
- A. Walls of auricles are thicker than those of ventricles.
 - B. Walls of left ventricle are thicker than those of right ventricle.
 - C. Valves prevent the flow of blood.
 - D. Auricles receive oxygenated blood.

8. Which one of the following diagrams **DOES NOT** represent an arrangement of flower parts which prevent self-pollination?



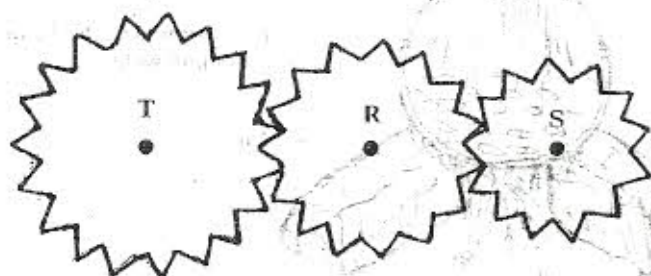
9. The diagram below represents a lever.



Which one of the following groups of levers has the positions of load, effort and fulcrum the same as the lever shown above?

- A. Spade, pair of tongs, fishing line.
- B. Scissors, spanner, pliers.
- C. Bottle opener, nutcracker, wheelbarrow.
- D. Nutcracker, spanner, pliers.

10. The diagram below shows an arrangement of three gear wheels.



When gear T is turned clockwise

- A. gear S moves anticlockwise
- B. gear R moves clockwise and gear S moves anticlockwise
- C. gear R moves anticlockwise and gear S moves clockwise
- D. gear R moves clockwise.

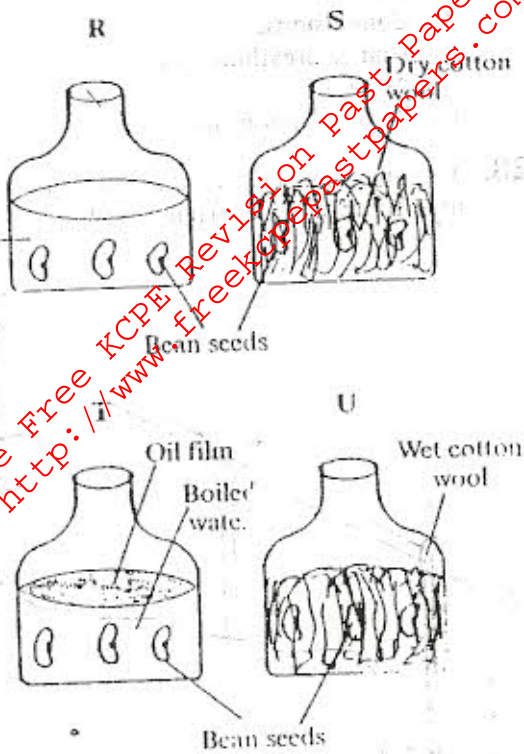
11. Which one of the following will increase the time taken to make one swing in a pendulum?

- A. Increasing angle of swing.
- B. Decreasing mass of pendulum.
- C. Decreasing length of pendulum.
- D. Increasing the height of pendulum.

12. Which one of the following animals is **NOT CORRECTLY** matched with its characteristics?

Animal	Characteristics
A. Frog	Moist skin, lays eggs, varying body temperature.
B. Ostrich	Feathers, lays eggs, constant body temperature.
C. Bat	Hair, gives birth to young, constant body temperature.
D. Snake	Scales, lays eggs, constant body temperature.

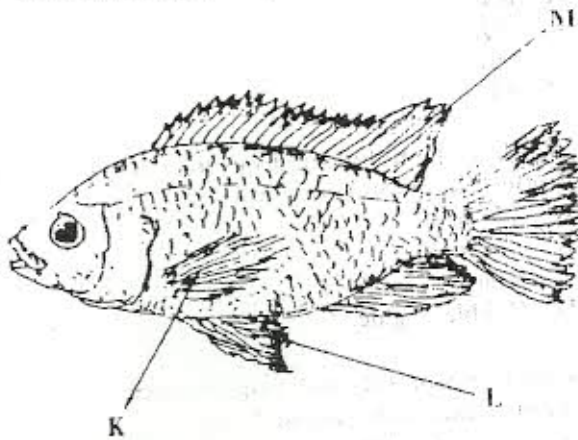
Juma wanted to investigate the conditions necessary for seed germination. The set-up is shown in the diagram below.



Which pair of the set-up will enable Juma make the conclusion that moisture is necessary for seed germination?

- A. R and S
- B. R and T
- C. S and U
- D. T and U.

14. The diagram below represents a fish.



The fins K L M are

- | | K | L | M |
|----|----------|----------|----------|
| A. | Pelvic | Dorsal | Pectoral |
| B. | Pectoral | Pelvic | Dorsal |
| C. | Dorsal | Pelvic | Pectoral |
| D. | Pelvic | Pectoral | Dorsal |

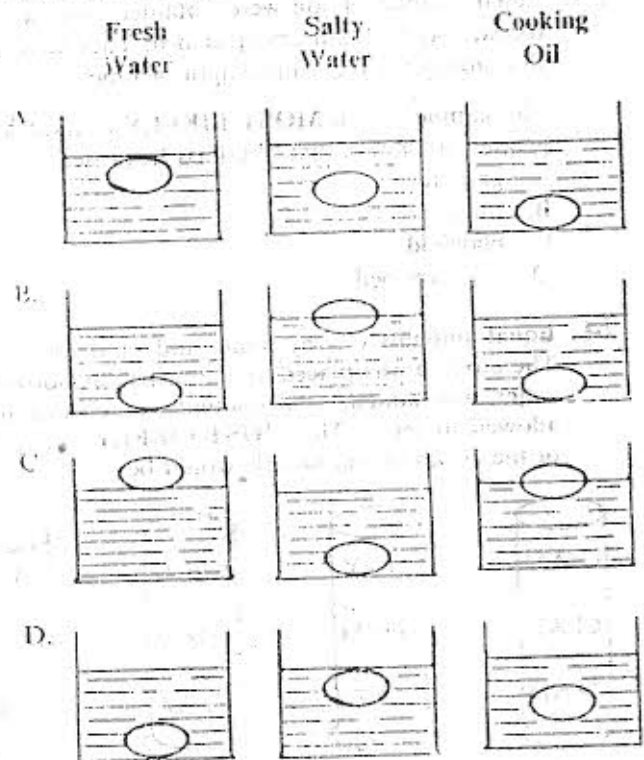
15. Which one of the following body structures in the table below is NOT CORRECTLY matched to its function?

Structure	Function
A. Villi	Absorb digested food.
B. Large intestine	Stores digested food.
C. Pancreas	Produces digestive juice.
D. Mouth	Food broken into small particles.

16. Which one of the following is the most convenient first step in separating a mixture of salt, iron filings, sand and sawdust?

- A. Using a magnet to remove iron filings.
- B. Using a sieve to remove sand and sawdust.
- C. Adding water to dissolve salt.
- D. Burning to get rid of sawdust

17. Fresh eggs were placed in fresh water, salty water and cooking oil. Which set of diagrams CORRECTLY represents what happened?



18. Which one of the following materials has a definite volume and does NOT have a definite shape?

- A. Stone.
- B. Air.
- C. Kerosene.
- D. Sand.

19. Which one of the following liquids can be used to neutralise juice obtained from a raw pineapple?

- A. Lemon juice.
- B. Sour milk.
- C. Vinegar.
- D. Ash solution.

20. Which two components of air take up the greatest volume when put together?
- Carbon dioxide and Nitrogen.
 - Nitrogen and Rare gases.
 - Rare gases and Oxygen.
 - Oxygen and Nitrogen.

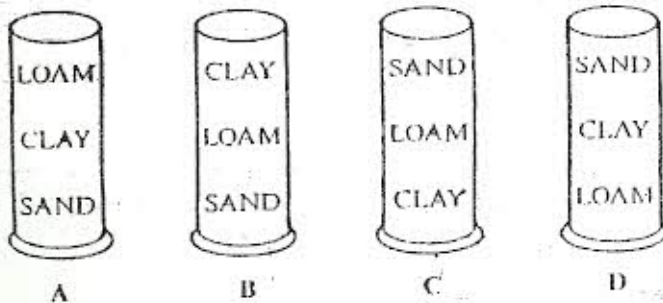
21. Which one of the following DOES NOT pollute river water?
- Spraying of crops with pesticides.
 - Releasing treated sewage water into the river.
 - Use of fertilisers in farming.
 - Planting along river banks.

22. The correct way to get rid of used plastic containers from the environment is to
- bury in the soil
 - throw into the river
 - burn
 - recycle.

23. Equal samples of soil were obtained from a garden, forest, playfield and dry river bed. They were heated thoroughly for the same length of time.

The sample of soil MOST LIKELY to have lost the greatest mass was that obtained from the

- garden
 - forest
 - playfield
 - dry river bed.
24. Equal amounts of clay, loam and sand were mixed. The mixture was placed in a transparent bottle, then water was added. The contents were shaken and allowed to settle. The MOST LIKELY arrangement of the layers of soil sample would be



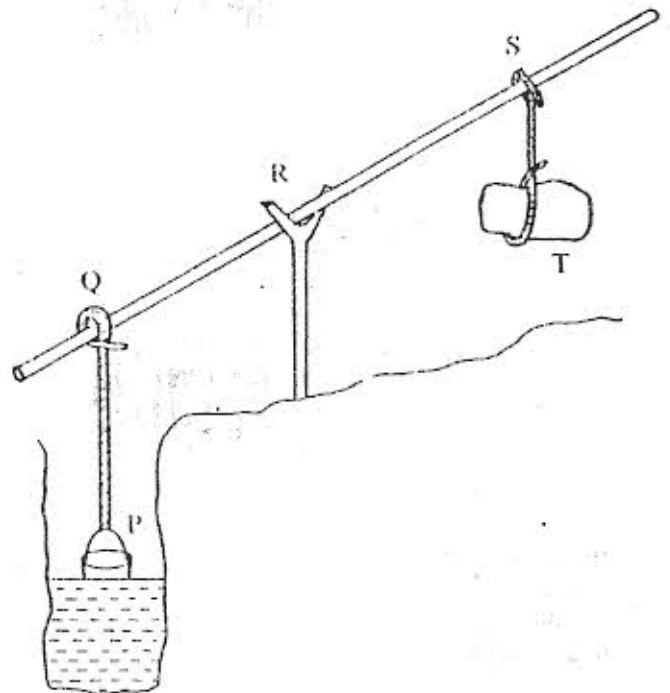
25. The correct order of the planets listed below starting with one closest to the sun is
- Uranus, Neptune, Saturn, Jupiter
 - Saturn, Uranus, Jupiter, Neptune
 - Neptune, Uranus, Jupiter, Saturn
 - Jupiter, Saturn, Uranus, Neptune.

26. What is the name given to the kind of clouds which most often give rise to rain?
- Cirrus.
 - Cumulus.
 - Nimbus.
 - Stratus.

27. Which one of the following complications is brought about by prolonged abuse of mandrax, bhang and cocaine?

- Convulsions.
- Higher breathing rate.
- Addiction.
- Reduced pulse rate.

28. The diagram below represents a simple machine used to draw water from a well.



Which one of the following would help to reduce the effort needed to draw the water? Increasing the length of the part labelled

- RS
- PQ
- QR
- ST.

29. Which of the following drugs may affect your heart if often abused in your presence?

- Tobacco.
- Cocaine.
- Khat.
- Cobbler's glue.

30. Which one of the following practices make use of pressure exerted by liquids?

- Water flowing down from a tank through a pipe.
- Siphoning liquids from containers.
- Filling a petrol tank of a car.
- Drinking soda using a straw.