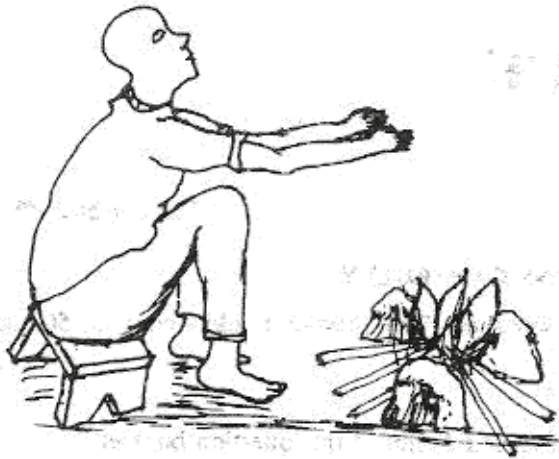


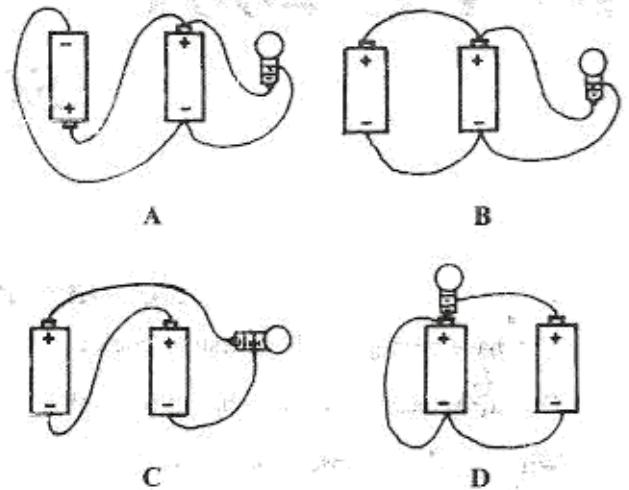
1. The diagram below represents a person warming himself by the fire.



Which one of the following shows how the heat reaches the hands and the feet?

- | Hands         | Feet        |
|---------------|-------------|
| A. Convection | Radiation   |
| B. Radiation  | Conduction  |
| C. Conduction | Convection  |
| D. Radiation  | Convection. |
2. In a geothermal power station steam is led through pipes to generate a form of energy which enables people to see. The energy transformations involved are
- A. chemical  $\rightarrow$  electrical  $\rightarrow$  mechanical  $\rightarrow$  heat  $\rightarrow$  light
- B. heat  $\rightarrow$  mechanical  $\rightarrow$  electrical  $\rightarrow$  heat  $\rightarrow$  light
- C. heat  $\rightarrow$  chemical  $\rightarrow$  mechanical  $\rightarrow$  light  $\rightarrow$  electrical
- D. chemical  $\rightarrow$  electrical  $\rightarrow$  mechanical  $\rightarrow$  light  $\rightarrow$  heat.
3. Which one of the following occurs when rays of light pass from air into water?
- A. Reflection.
- B. Dispersion.
- C. Refraction.
- D. Absorption.
4. Which one of the following factors **DOES NOT** affect how high or low sound produced by a stringed instrument is?
- A. Length of the string.
- B. Thickness of the string.
- C. Tightness of the string.
- D. Force used to pluck the string.
5. Which one of the following is **NOT** a characteristic of seeds dispersed by wind? They are
- A. light
- B. hooked
- C. winged
- D. feathery.

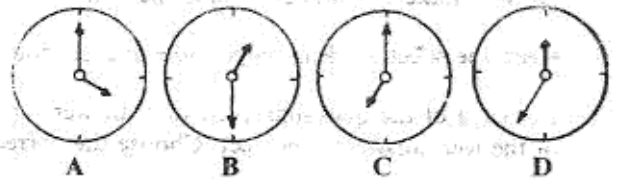
6. In which one of the following circuits would the bulb light brightest?



7. A pupil standing in front of a mirror observed the image of a clock on the wall behind him. The image of the clock appeared as shown in the diagram below.

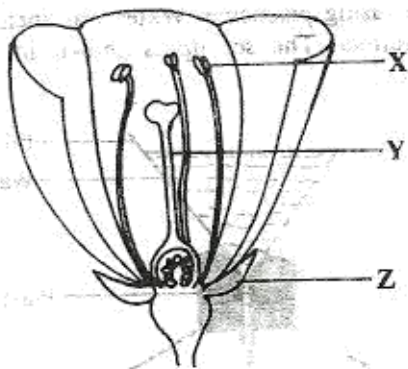


Which one of the following diagrams represents the real time on the clock?



8. Which one of the following has **ALL** the conditions necessary for germination of seeds?
- A. Soil, air, water.
- B. Air, warmth, water.
- C. Warmth, light, soil.
- D. Water, warmth, light.

9. The diagram below shows parts of a flower.



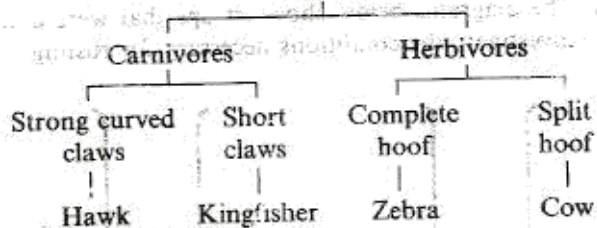
Which parts are represented by X, Y and Z?

X	Y	Z
A. Anther	Style	Sepal.
B. Stigma	Filament	Petal.
C. Anther	Filament	Sepal.
D. Stigma	Style	Petal.

Which one of the following insects **DOES NOT** undergo the stages of egg, larva, pupa and adult in its life cycle?

- A. Housefly.
- B. Mosquito.
- C. Bee.
- D. Locust.

11. The chart below shows classification of some animals.



Which of the following were used in the classification?

- A. Body covering and food eaten.
- b. Food eaten and type of food.
- C. Body covering and type of movement.
- D. Number of legs and type of movement.

12. Which one of the following animals is **NOT** a mammal?

- A. Hippopotamus.
- B. Bat.
- C. Whale.
- D. Shark.

13. The following are functions of roots:

- (i) holding plants firmly in the soil
- (ii) storage of food
- (iii) absorption of water and mineral salts
- (iv) breathing.

Which of the functions are performed by **all** roots?

- A. (i) (iii).
- B. (ii) (iv).
- C. (i) (ii).
- D. (iii) (iv).

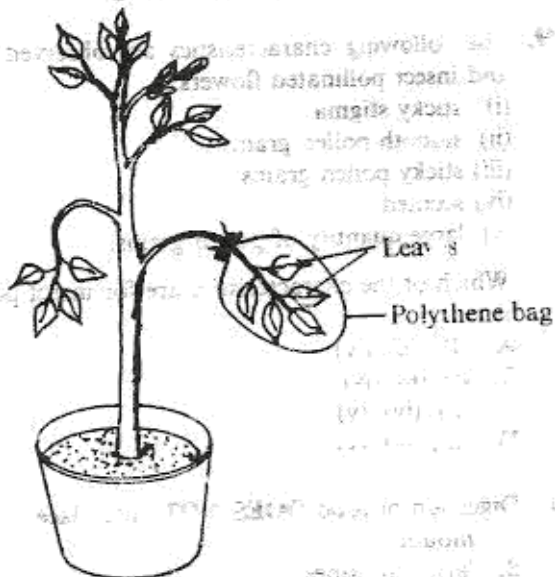
14. Which one of the following features would help a pupil tell that a plant structure is a fruit?

- A. Being fleshy.
- B. Presence of two scars.
- C. Having one cotyledon.
- D. Having a line of weakness.

15. Which one of the following is **NOT** a function of the placenta?

- A. Allows passage of dissolved food materials to the embryo.
- B. Allows exchange of gases between embryo and mother.
- C. Prevents harmful materials from reaching the embryo.
- D. Protects the embryo from shock.

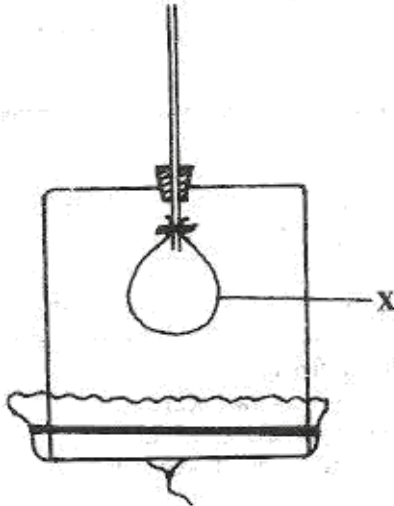
16. The set up below was used to investigate a certain process in plants.



The process investigated was

- A. condensation
- B. transpiration
- C. saturation
- D. evaporation.

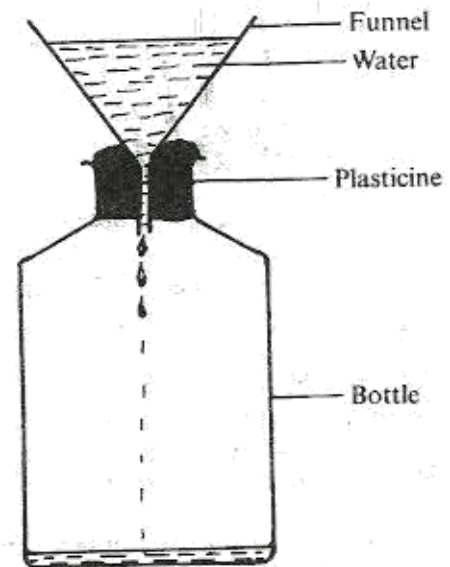
17. The diagram below represents a model that can be used to demonstrate breathing in human beings.



The part labelled X represents

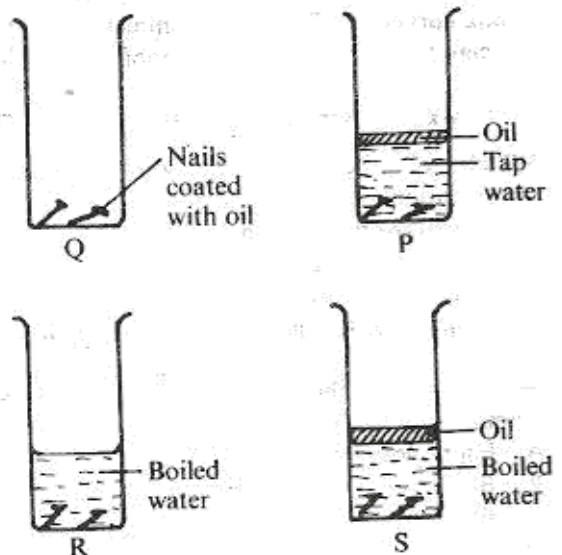
- A. chest  
B. lungs  
C. ribs  
D. diaphragm.
18. Which one of the following statements is NOT TRUE about ALL arteries?
- A. They carry blood away from the heart.  
B. They have thick walls.  
C. Blood pressure in them is high.  
D. They carry blood rich in oxygen.
19. The following characteristics are observed in wind and insect pollinated flowers.
- sticky stigma
  - smooth pollen grains
  - sticky pollen grains
  - scented
  - large quantity of pollen grains.
- Which of the characteristics are for insect pollinated flowers?
- A. (i), (iii), (iv).  
B. (i), (ii), (iv).  
C. (ii), (iv), (v).  
D. (ii), (iii), (v).
20. Digestion of food DOES NOT take place in the
- A. mouth  
B. large intestines  
C. stomach  
D. small intestines.

21. A funnel was tightly fixed onto the mouth of a bottle using plasticine. Water was then poured into the funnel. The set up is shown in the diagram below.



Which one of the following will make the water flow into the bottle smoothly?

- A. Making a hole in the plasticine.  
B. Shaking the bottle.  
C. Stirring the water in the funnel.  
D. Adding more water to the funnel.
22. The diagrams below show set ups that were used to investigate the conditions necessary for rusting.



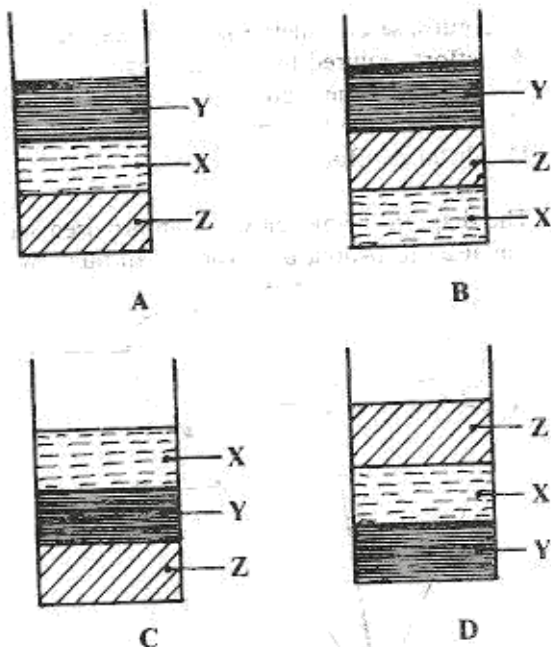
After a few days rusting occurred in

- A. P and S  
B. Q and R  
C. P and R  
D. P and S.



23. A small amount of water was put in a tin can and heated to boiling. The tin can was then closed tightly and left to cool. The experiment was to demonstrate that air
- occupies space
  - exerts pressure
  - has weight
  - contracts on cooling.

24. Liquid X is denser than liquid Y. Liquid X is less dense than liquid Z. The three liquids do not mix. Which one of the diagrams below correctly represents what will be observed when equal amounts of the three liquids are put in a glass jar?



25. Which two components make about 78% of the volume of air?
- Oxygen and carbon dioxide.
  - Nitrogen and oxygen.
  - Carbon dioxide and nitrogen.
  - Rare gases and nitrogen.

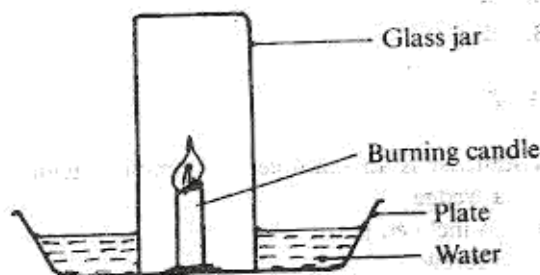
26. A certain indicator obtained from a flower turned pink when mixed with a few drops of clover extract. Which one of the following materials would have similar results when mixed with the indicator?
- Chalk powder.
  - Lemon juice.
  - Wood ash.
  - Baking powder.

27. Force is measured in
- grams
  - gram per cubic centimetre
  - cubic centimetres
  - Newtons.

28. Which one of the following factors DOES NOT affect the rate of evaporation of a liquid?
- Amount of liquid.
  - Surface area.
  - Temperature.
  - Air movements.

29. Which one of the following materials is magnetic?
- Copper.
  - Brass.
  - Steel.
  - Aluminium.

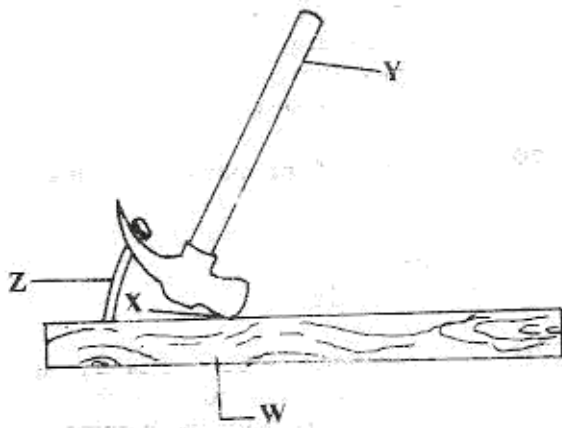
30. In an experiment, a burning candle was fixed onto a plate and some water added to the plate. A glass jar was then inverted over the burning candle. The set up is shown in the diagram below.



Which one of the following would eventually happen?

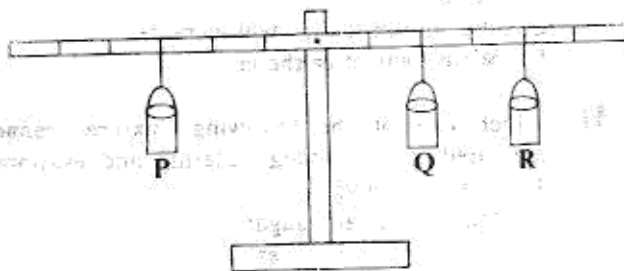
- Amount of air inside the jar will increase.
  - Amount of carbon dioxide inside the jar will decrease.
  - Pressure in the jar will increase.
  - Water will enter the jar.
31. Which one of the following mixtures cannot be separated by dissolving, filtering and evaporating?
- Sand and sugar.
  - Maize flour and sugar.
  - Chalk powder and salt.
  - Salt and sugar.

32. The diagram below represents a simple machine in use.



The load is represented by

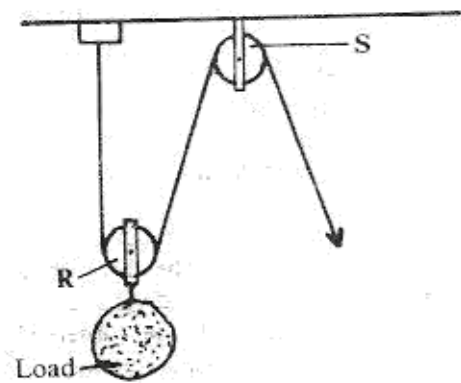
- A. W  
B. X  
C. Y  
D. Z
33. A staircase is an example of a simple machine called
- A. a wedge  
B. an inclined plane  
C. a screw  
D. a lever.
34. Three identical containers P, Q and R containing water were balanced on a beam as shown in the diagram below.



Which one of the following statements is correct?

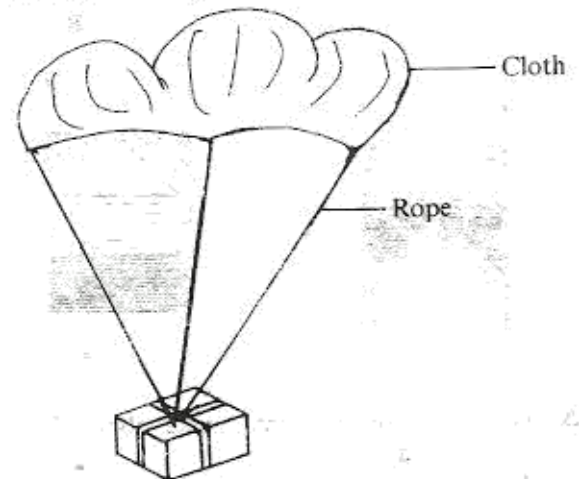
- A. Q and R each contain half as much water as P.  
B. P contains three times the amount of water in Q and R.  
C. Q and R contain twice as much water as P.  
D. P, Q and R contain the same amount of water.

35. The diagram below shows an arrangement of pulleys used to lift a load.



The purpose of pulley S is to reduce the

- A. effort required to raise the load  
B. weight of the load  
C. distance the load moves  
D. distance effort moves.
36. The diagram below shows an improvised set up that was used to drop a box from a tall building.



The speed at which the box drops could be reduced by

- A. reducing the length of the ropes  
B. making small holes in the cloth  
C. increasing the surface area of the cloth  
D. using light cloth.
37. A pupil immersed a small container filled with soil into a basin of water. Bubbles were observed. Which one of the following explains the observation made?
- A. Soil reacts with water.  
B. Water contains air.  
C. Soil contains air.  
D. Small animals in the soil produce air.
38. Which one of the following levers has the same positions of load, effort and fulcrum as wheelbarrow?
- A. Pair of scissors.  
B. Nutcracker.  
C. Fishing rod.  
D. Crowbar.

9. The following are activities carried out when one is making a chisel from a nail:
- sharpening the edge
  - flattening the pointed end
  - cutting off the tip.

The correct order of the activities above should be

- (iii), (i), (ii)
- (i), (iii), (ii)
- (ii), (iii), (i)
- (ii), (i), (iii)

10. Which one of the following will **NOT** cause a reduction in the number of animals in a game reserve?

- Burning charcoal.
- Constructing a railway line through the reserve.
- Fencing using electric wire.
- Operating a quarry.

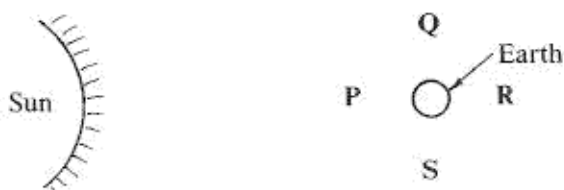
11. Which one of the following would help to conserve the environment?

- Burning heaps of sawdust.
- Burying plastics in the soil.
- Using wood ash to kill pests.
- Using commercial fertilisers to increase crop yield.

12. Which one of the following would **least** pollute the environment?

- Gases from factories.
- Exhaust gases from vehicles.
- Smoke from burning charcoal.
- Rotting plant and animal matter.

13. The diagram below shows some positions of the moon as it goes around the earth.



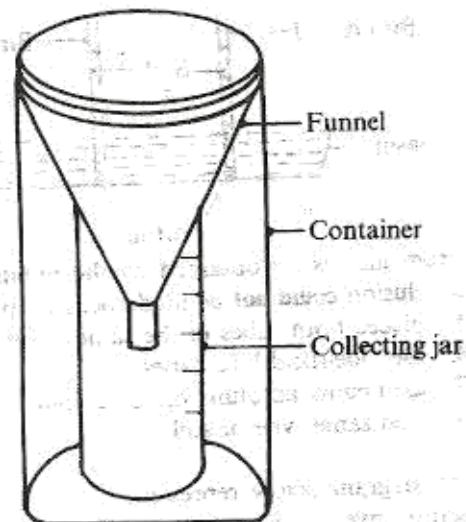
Full moon is observed at position

- P
- Q
- R
- S

44. Which one of the following pairs of planets consists of a planet that takes the longest time and a planet that takes the shortest time to go around the sun?

- Jupiter and Mars.
- Pluto and Mercury.
- Earth and Saturn.
- Venus and Neptune.

45. The diagram below shows an improvised weather instrument.



Which one of the following **DOES NOT** affect the accuracy of the instrument?

- The diameter of the funnel.
- The diameter of the collecting jar.
- The distance between the markings on the collecting jar.
- The material used to make the container.

46. Which one of the following is **NOT** drug abuse?

- Taking prescribed drugs for a long time.
- Taking an overdose of a prescribed drug.
- Using the drug for a wrong sickness.
- Taking less of the prescribed drug.

47. Which one of the following is **NOT** an effect of abusing alcohol?

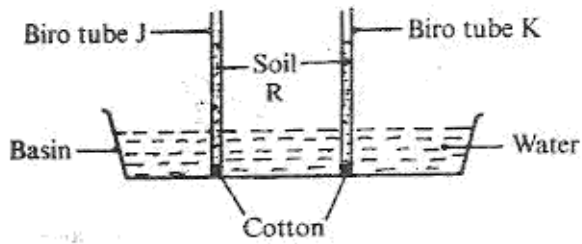
- Loss of memory.
- Social and family problems.
- Hallucinations.
- Poor health.

48. Drugs taken to treat diseases are known as

- curative
- stimulants
- preventive
- pain relievers.

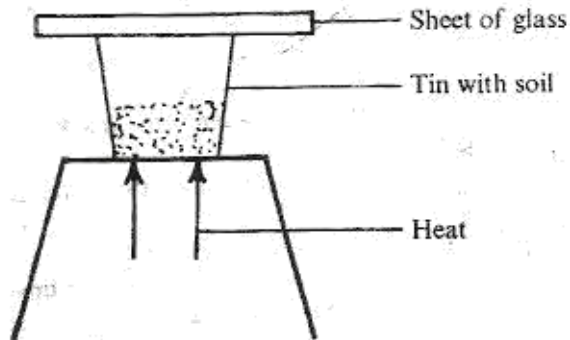


49. A group of pupils wanted to compare the rate at which water rises up in soils. They set up their apparatus as shown in the diagram below.



From the results obtained by the pupils the correct conclusion **could not** be made because pupils

- A. placed both tubes in the same basin
  - B. used identical biro tubes
  - C. used equal amounts of soil in both biro tubes
  - D. used same type of soil.
50. The diagram below represents a set up that can be used to investigate a certain component of soil.



The component being investigated is

- A. air
- B. water
- C. humus
- D. small animals.