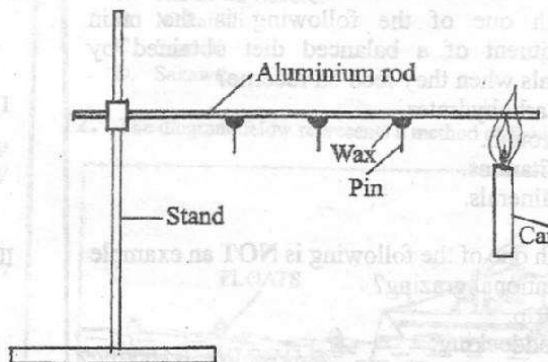


SCIENCE KCPE 2009

- Which one of the following components of blood is involved in clotting after an injury?
 - Plasma.
 - White blood cells.
 - Red blood cells.
 - Platelets.
- Which one of the following shows the **CORRECT** order of blood flow in the heart?
 - Vena cava → pulmonary artery → pulmonary vein → aorta.
 - Pulmonary artery → vena cava → pulmonary vein → aorta.
 - Pulmonary vein → aorta → pulmonary artery → vena cava.
 - Aorta → pulmonary vein → vena cava → pulmonary artery.
- Which one of the following pairs consists only of social effects of drug abuse?
 - Rape and truancy.
 - Lack of concentration and addiction.
 - Accidents and withdrawal.
 - Impaired judgement and loss of consciousness.
- Which one of the following statements is **TRUE** about the incubation stage of HIV infection?
 - If HIV test is carried out, the result is negative.
 - This is the first stage of infection.
 - There are no visible signs.
 - The body cannot fight diseases.
- Which one of the following is **NOT** a **CORRECT** statement about a foetus?
 - Receives oxygen through placenta.
 - The blood of the mother and that of the foetus mix.
 - Receives food substances from the mother's blood.
 - Waste products are removed through the placenta.
- Which one of the following pairs of infections consists only of those that are sexually transmitted?
 - Chancroid and HIV.
 - Gonorrhoea and Bilharzia.
 - Syphilis and Typhoid.
 - Gonorrhoea and Tuberculosis.

- A ruler placed slanting and partially immersed in water appears bent because light
 - from that part of the ruler under water is reflected
 - from that part of the ruler under water is refracted
 - from that part of the ruler under water is scattered
 - travels in a straight line in the same medium.
- The diagram below represents a set-up that can be used to demonstrate a certain aspect of heat.



The aspect demonstrated is that

- solids melt when heated
 - metals expand when heated
 - solids conduct heat
 - metals bend when heated.
- Which one of the following is a storage pest?
 - Weaverbird.
 - White ant.
 - Cutworm.
 - Aphid.
 - Which one of the following stores food in the same part of the plant as Irish potato?
 - Carrot.
 - Sweet potato.
 - Sugarcane.
 - Cassava.
 - The embryo of a seed is made up of
 - plumule and testa
 - cotyledon and plumule
 - radicle and plumule
 - cotyledon and radicle.

12. The following are some characteristics of certain animals:

- (i) *body covered with scales*
- (ii) *lay eggs*
- (iii) *body temperature varies with the surroundings*
- (iv) *breathe through lungs.*

Which one of the following pairs of animals has ALL the characteristics listed?

- A. Turtle and shark.
- B. Lizard and tortoise.
- C. Tilapia and frog.
- D. Crocodile and platypus.

13. Which one of the following is the main constituent of a balanced diet obtained by animals when they feed on lucerne?

- A. Carbohydrates.
- B. Protein.
- C. Vitamins.
- D. Minerals.

14. Which one of the following is NOT an example of rotational grazing?

- A. Strip.
- B. Paddockging.
- C. Tethering.
- D. Herding.

15. The following are activities carried out when modelling the solar system, but not in their correct order.

- (i) *Draw circles on manilla paper to show orbits*
- (ii) *Model the planets and the sun using clay*
- (iii) *Put name tags on models of planets and the sun*
- (iv) *Fix models of planets to orbits and the model of the sun at the centre*
- (v) *Paste manilla paper on soft board.*

Which one of the following is the CORRECT order in which the activities are carried out?

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

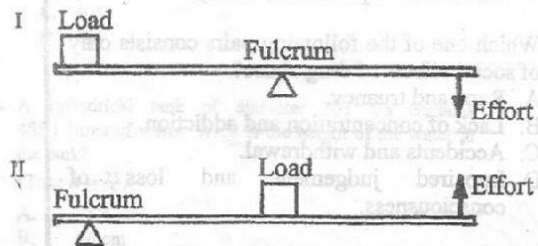
16. The following are some uses of components of air:

- (i) *manufacture of electric bulbs*
- (ii) *supporting burning*
- (iii) *manufacture of soft drinks*
- (iv) *germination of seeds*
- (v) *putting out fires.*

Which of the uses are for carbon dioxide?

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

17. A certain machine, when in use, can work with load, effort and fulcrum at different positions as shown in the diagrams I and II.



The machine is a

- A. wheelbarrow
- B. crowbar
- C. spade
- D. clawhammer.

18. The following are methods of separating mixtures:

- (i) *picking*
- (ii) *filtering*
- (iii) *decanting*
- (iv) *sieving.*

Which two methods are suitable for separating a mixture of water and sand?

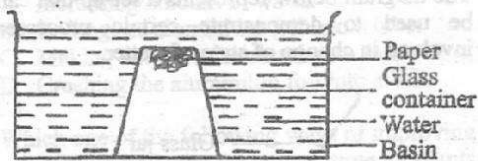
- A. (i) and (iii).
- B. (i) and (iv).
- C. (ii) and (iii).
- D. (ii) and (iv).

19. Which one of the following is a CORRECT food chain?

- A. Grass → Rabbit → Eagle → Leopard.
- B. Maize → Grasshopper → Lizard → Snake.
- C. Grass → Grasshopper → Eagle → Rabbit.
- D. Kales → Aphid → Weaverbird → Rabbit.

20. When pieces of paper are dropped above a fire they rise. This is because
- heat makes the paper lighter than air
 - paper expands when heated
 - hot air carries the paper upwards
 - heat from the fire carries the paper upwards.

21. The diagram below represents a set-up that was used to demonstrate a certain property of matter.



The property demonstrated was

- air occupies space
 - water exerts pressure
 - air has mass
 - water occupies space.
22. Which one of the following materials allows light to pass but one cannot see through it clearly?
- Frosted glass.
 - Mirror.
 - Clean water.
 - Milk.
23. Which one of the following is the BEST method of managing plastic waste?
- Burning.
 - Burying.
 - Recycling.
 - Reusing.
24. Which one of the following diseases can be prevented by wearing gumboots and gloves?
- Typhoid.
 - Malaria.
 - Bilharzia.
 - Cholera.
25. Which one of the following practices is an advantage to the soil?
- Ploughing across the contours.
 - Disposal of vegetable refuse.
 - Burning of crop remains.
 - Use of herbicides.

26. Which one of the following DOES NOT explain why an improved jiko conserves energy? It has

- a cone shape
- walls made of clay
- a small space for holding charcoal
- an outer cover made of metal.

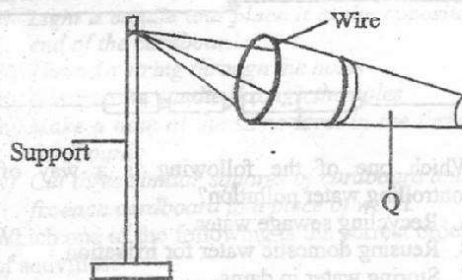
27. In which one of the following is work made easier by changing the direction of force applied?

- Ladder.
- Flag post.
- Staircase.
- A road winding up a hill.

28. Which one of the following groups of foodstuffs constitutes a balanced diet?

- Potatoes, beans, eggs.
- Chicken, cabbage, beans.
- Rice, chapatti, beef.
- Peas, ugali, spinach.

29. The diagram below represents a windsock constructed by pupils.

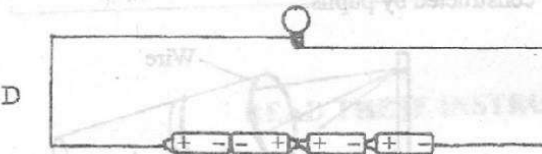
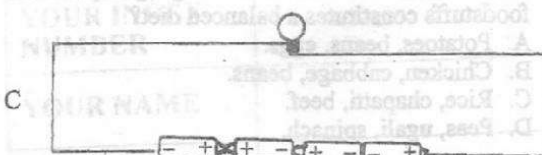
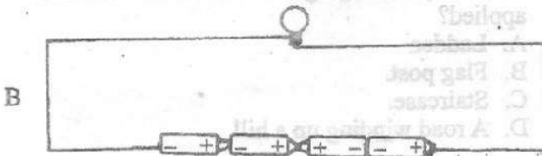
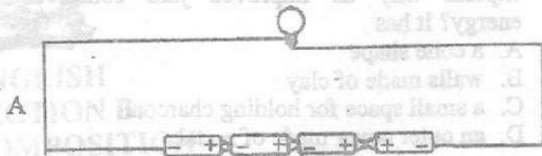


A suitable material that can be used to make the

part labelled Q is

- sheet of metal
- manilla paper
- polythene sheet
- piece of mosquito net.

30. In which one of the following circuit diagrams will the bulb not light?



31. Which one of the following is a way of controlling water pollution?

- A. Recycling sewage water.
- B. Reusing domestic water for irrigation.
- C. Storing water in dams.
- D. Using water sparingly.

32. The MAIN reason why a baby needs to be breastfed by the mother is that the milk produced

- A. helps to build the baby's immunity
- B. helps the baby to grow fast
- C. helps the baby's bones to be strong
- D. is easily digested.

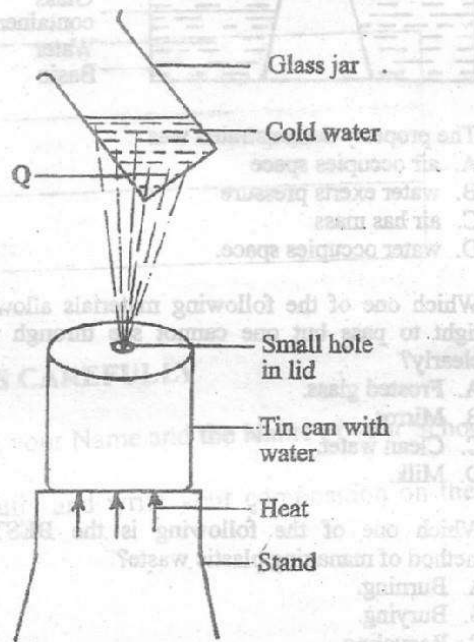
33. The following are features of certain types of clouds:

- (i) white in colour
- (ii) appear like bundles of cotton
- (iii) dark grey in colour
- (iv) mountainous in shape.

Which pair of features are for nimbus clouds?

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

34. The diagram below represents a set-up that can be used to demonstrate certain processes involved in change of state of matter.



The process that takes place at point labelled Q is

- A. boiling
- B. condensation
- C. evaporation
- D. freezing.

35. Which one of the following activities can be used to demonstrate rill erosion?

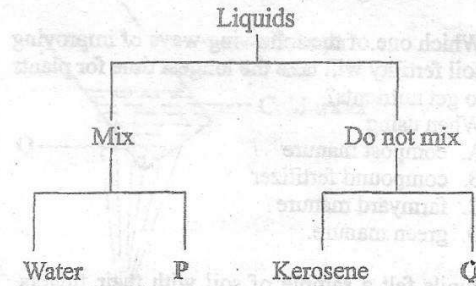
- A. Pouring water at different positions of a slanting soil surface
- B. in channels of soil on a slanting surface
- C. on a flat surface of soil
- D. on a flat surface using a tin with many holes.

36. Which one of the following pairs consists only of materials that are non-magnetic?
- Copper and aluminium.
 - Steel and zinc.
 - Silver and steel.
 - Iron and aluminium.
37. Which one of the following activities will make an aluminium foil that was floating on water sink?
- Increasing amount of water.
 - Rolling the aluminium foil into a tube.
 - Making holes on the aluminium foil.
 - Crushing the aluminium foil into a ball.
38. Which one of the following ways of improving soil fertility will take the longest time for plants to get nutrients?
- When using
- compost manure
 - compound fertilizer
 - farmyard manure
 - green manure.
39. Pupils felt a sample of soil with their fingers. This activity was done to investigate
- soil texture
 - presence of water in the soil
 - soil capillarity
 - presence of small animals in the soil.
40. Which one of the following is NOT a practice for maintaining simple tools?
- Oiling.
 - Using them for the right purpose.
 - Sharpening.
 - Storing in a safe place.
41. Newton is a unit for
- mass
 - force
 - pressure
 - volume.
42. Which one of the following pairs consists of only animals that have webbed feet?
- Turkey and crocodile.
 - Kingfisher and flamingo.
 - Hippopotamus and toad.
 - Frog and duck.
43. Corrugated iron sheets can be damaged when they come into contact with
- oil spills
 - herbicides
 - industrial gases
 - dust.
44. The MAIN reason why black jack weed should be uprooted from a vegetable farm when they are still young is
- because it is easy to uproot the weed
 - to avoid loss of soil nutrients
 - to reduce loss of water
 - to control the spread of the weed.
45. Which one of the following is a modern method of preserving food?
- Canning.
 - Salting.
 - Smoking.
 - Drying.
46. The following are activities involved in demonstrating that light travels in a straight line:
- Light a candle and place it at the opposite end of the cardboards
 - Thread a string through the holes
 - Observe the candle through the holes
 - Make a hole at the same level in the three cardboards
 - Cut three similar squares of cardboard and fix each cardboard to a piece of wood.
- Which one of the following is the correct order of activities?
- (v), (i), (iv), (iii), (ii).
 - (v), (iv), (ii), (i), (iii).
 - (v), (i), (iv), (ii), (iii).
 - (v), (iii), (iv), (ii), (i).
47. Which one of the following groups consists only of cash crops?
- Maize, tea, yams.
 - Arrow roots, groundnuts, cotton.
 - Bananas, Irish potatoes, sorghum.
 - Sunflower, sisal, coffee.
48. The purpose of using rollers to move a load is to
- increase the force required to push the load
 - reduce the force that hinders movement of the load
 - make the load lighter
 - control the direction of the movement of the load.

49. Which one of the following is TRUE about heat transfer by convection?

- It takes place in
- A. solids only
 - B. liquids and gases
 - C. gases only
 - D. solids and gases.

50. The chart below represents a simple classification of liquids.



Which liquids are represented by P and Q?

- | | |
|----------------------|-------------------|
| P | Q |
| A. Methylated spirit | Milk. |
| B. Engine oil | Methylated spirit |
| C. Cooking oil | Milk |
| D. Turpentine | Engine oil. |