

KCPE 2005

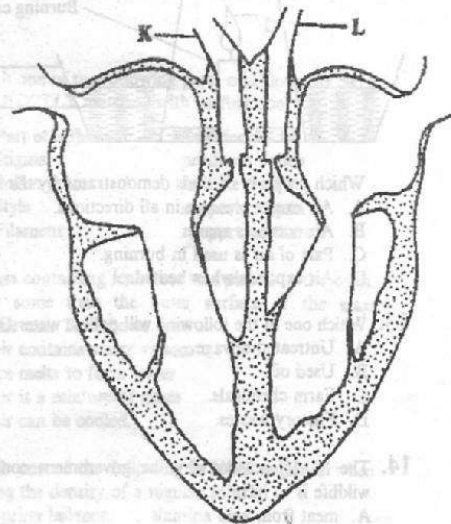
SCIENCE

- Which one of the following sources of energy is renewable?
 - Kerosene.
 - Biogas from cowdung.
 - Coal.
 - Cooking gas from crude oil.
- Which one of the following is the MAIN reason why the inside of a solar drier is painted black?
 - To prevent rusting.
 - To make it last longer.
 - To make it absorb heat.
 - To decorate it.
- The image formed in a pinhole camera is
 - upright and smaller than the object
 - upside down and formed on the screen
 - upside down and same size as the object
 - upright and formed on the screen.
- In a box guitar high sound can be produced without changing the tension of the strings by
 - plucking the strings hard
 - increasing the lengths of the strings
 - using thinner strings
 - increasing the size of the box.
- Below is an energy transformation:
Chemical → electrical → heat → light.
 In which one of the following does the energy transformation shown take place when used to produce light?
 - Geothermal.
 - Car battery.
 - Electric bulb.
 - Bicycle dynamo.
- Flowers P, Q, R and S have the following characteristics:

P: Large and loosely held anthers
Q: Presence of nectar
R: Strong scent
S: Light pollen grains.

 Which two flowers are wind pollinated?
 - P and S.
 - Q and R.
 - P and R.
 - Q and S.
- A fish is able to move EASILY in water because it
 - has fins
 - has hard scales
 - is streamlined
 - has gills.

- Which one of the following plants stores food in the stem?
 - Carrot.
 - Irish potato.
 - Sweet potato.
 - Onion.
- A food chain in a grassland is shown below.
Grass → Grasshoppers → Frogs → Snakes → Secretary birds.
 Which one of the following would most likely happen immediately all snakes are killed?
 - Frogs would decrease in number.
 - Grasshoppers would increase in number.
 - The amount of grass would increase.
 - Secretary birds would decrease in number.
- The diagram below represents a section of a heart of a mammal.



- Which one of the following statements is TRUE?
- K carries blood into the heart whereas L takes it out.
 - K has a thin wall whereas L has a thick wall.
 - K carries deoxygenated blood whereas L carries oxygenated blood.
 - K has valves whereas L has no valves.

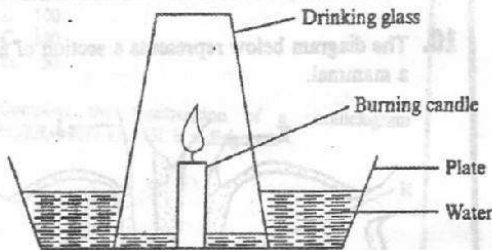
11. The following are the activities which are carried out when comparing strengths of acids in fruit juices.

- (i) Counting the number of drops of each fruit juice required to change the colour.
- (ii) Adding the different fruit juices drop by drop in each of the bottle tops.
- (iii) Adding equal amounts of indicator in each of the bottle tops.
- (iv) Putting equal amounts of wood ash solution into different bottle tops.

Which one of the following is the CORRECT order of the activities?

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

12. The diagram below represents a set up that can be used to demonstrate a certain property of air.



Which property of air is demonstrated by the set up?

- A. Air exerts pressure in all directions.
- B. Air occupies space.
- C. Part of air is used in burning.
- D. Air expands when heated.

13. Which one of the following will pollute water ONLY?

- A. Untreated sewage.
- B. Used oil.
- C. Farm chemicals.
- D. Factory wastes.

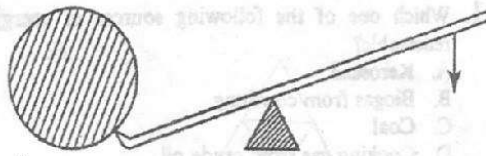
14. The MAIN reason why the government conserves wildlife is to have

- A. meat from wild animals
- B. plant and animal products
- C. a balance of nature
- D. animals for export.

15. When an object is thrown up in the air it falls because it

- A. is pulled by the earth
- B. exerts pressure
- C. is resisted by air
- D. is as heavy as air.

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



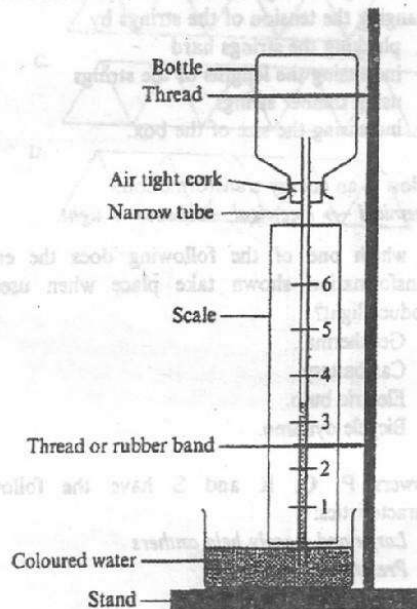
The machine is an example of

- A. an inclined plane
- B. a wheel and axle
- C. a lever
- D. a pulley

17. The reason for using rollers when moving heavy objects on a floor is to

- A. make objects lighter
- B. avoid damaging the floor
- C. increase speed of moving objects
- D. reduce force that opposes movement.

18. The diagram below represents a weather instrument constructed by a group of pupils who made a mistake while constructing it.



The mistake made during the construction was

- A. closing the mouth of the bottle
- B. using little amount of coloured water
- C. having the container with coloured water open
- D. having the scale reading from the bottom.

19. Which of the following planets are in the second, fifth and eighth positions respectively from the Sun?
- Uranus, Jupiter, Venus.
 - Mars, Saturn, Neptune.
 - Venus, Jupiter, Neptune.
 - Earth, Saturn, Uranus.

20. The function of plasma is to
- fight germs
 - combine with oxygen
 - help in clotting of blood
 - transport food.

21. Which pair of characteristics is common to lizard, toad, hawk and platypus?
- Lay eggs, breathe by lungs.
 - Body temperature varies, breathe by lung.
 - Have scales, lay eggs.
 - Body temperature varies, have scales.

22. The table below shows characteristics of four different fruits U, V, W and X.

Fruit	Characteristics
U	Small and hairy
V	Long with lines of weakness
W	Brightly coloured with hard seed coat
X	Hollow and fibrous

Which one of the fruits is likely to be dispersed by exploding?

- U.
- V.
- W.
- X.

23. The diagram below represents a foot of a certain bird.



Which one of the following diagrams of beaks belongs to the same bird?



A



B



C



D

24. Which one of the following parts of a flower is NOT CORRECTLY matched with its function?

Part of a flower	Function
A. Stigma	produces pollen
B. Pollen grains	fertilize ovules
C. Style	supports stigma
D. Filament	supports anthers

25. A glass containing ice cubes was placed in the open. After some time the outer surface of the glass became wet. This shows that
- air contains water vapour
 - ice melts to form water
 - air is a mixture of gases
 - air can be cooled.

26. Which one of the following is NOT required when finding the density of a regular solid?
- Spring balance.
 - Ruler.
 - Overflow can.
 - String.

27. Which one of the following statements about water is TRUE?
- Water mixes with all liquids
 - Water has definite size
 - Water has definite shape
 - Water is a good conductor of heat.

28. The BEST way of handling tin cans after using the contents is by
- burying them deep in the soil
 - smelting and moulding them into other products
 - throwing them in the pit latrine
 - throwing them in the river.
29. Which one of the following pairs of levers has the position of load, fulcrum and effort as a forearm?
- Fishing rod and pliers.
 - Spade and tongs.
 - Bottle top opener and nutcracker.
 - Scissors and claw hammer.
30. Which one of the following statements about a windsock is TRUE? A windsock
- measures speed of wind
 - shows direction wind is blowing from
 - shows strength of wind
 - works the same way as a windvane.
31. Which one of the following NEED NOT be the same when comparing capillarity in different types of soil?
- Diameter of the tubes.
 - Amount of each type of soil.
 - Time allowed for the experiment.
 - Amount of water used.
32. Which one of the following characteristics of sandy soil DOES NOT explain why water drains through it easily?
- Rough texture.
 - Large particles.
 - Large air spaces.
 - Shiny particles.
33. Which one of the following drugs has similar effects to *miraa* (khat) when abused?
- Heroin.
 - Tobacco.
 - Mandrax.
 - Excessive alcohol.
34. Which one of the following correctly shows the path taken by urine from the kidneys?
- Ureter → urethra → bladder.
 - Urethra → ureter → bladder.
 - Ureter → bladder → urethra.
 - Urethra → bladder → ureter.
35. Which one of the following groups consists of only plants with fibrous roots?
- Cowpeas, maize, wheat.
 - Rice, millet, maize.
 - Carrot, millet, wheat.
 - Cowpeas, rice, carrot.
36. The component of air used in making plant food is
- 0.03%
 - 0.97%
 - 21%
 - 78%.
37. Which one of the following lists consists of only drugs of abuse that are prohibited in Kenya?
- Khat, tobacco, cocaine.
 - Cocaine, heroin, mandrax.
 - Bhang, beer, tobacco.
 - Cobblers' glue, khat, beer.
38. Which two of the following processes involve loss of heat to the surroundings?
- Melting and freezing.
 - Evaporation and condensation.
 - Freezing and condensation.
 - Melting and evaporation.
39. The leaf of a cactus plant
- reduces water loss
 - makes plant food
 - stores water
 - allows gaseous exchange.
40. Which one of the following DOES NOT affect floating and sinking of an object?
- Size.
 - Shape.
 - Density.
 - Weight.
41. Which one of the following soil components is LEAST affected when soil in a container is heated?
- Air.
 - Water.
 - Organic matter.
 - Mineral salts.
42. Which one of the following insects DOES NOT undergo the stages of egg, larva, pupa and adult?
- Wasp.
 - Locust.
 - Bee.
 - Moth.
43. Which one of the following substances will form a salt and water only when mixed with an acid?
- Ash solution.
 - Chalk powder.
 - Clover juice.
 - Magadi soda.
44. Which one of the following pairs of substances will give the same colour when mixed with flower extract?
- Lemon juice and lime solution.
 - Aspirin solution and acetal solution.
 - Lemon solution and aspirin solution.
 - Lime solution and acetal solution.

45. Sifting, picking and sieving are some methods of separating mixtures. Which one of the following mixtures can be separated by all the three methods?
- Maize and beans.
 - Sand and rice.
 - Maize flour and small pieces of iron.
 - Sugar and tiny pieces of glass.

46. Which one of the following is NOT a reason why drugs should be stored in their properly-labelled container? To avoid
- contamination
 - getting expired
 - getting spoiled
 - wrong usage.

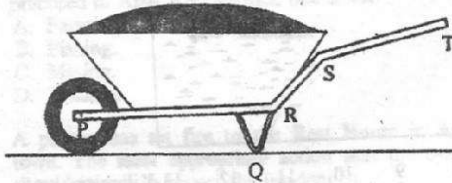
47. Which one of the following materials is magnetic?
- Aluminium plate.
 - Steel razor blade.
 - Silver coin.
 - Copper ring.

48. The following are steps followed by pupils' when making a certain tool.
- Flattening one end of a nail.
 - Fixing the flattened end into a piece of wood.
 - Cutting off the head of the nail.
 - Flattening and sharpening the exposed nail.

The tool is a

- hammer
- chisel
- drill
- saw

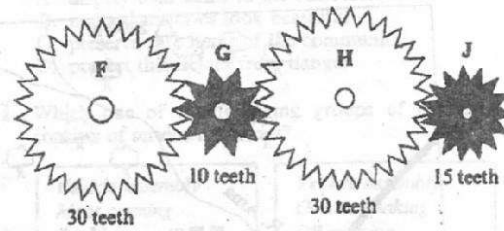
49. The diagram below represents a loaded wheelbarrow.



The effort needed to push the wheelbarrow can be reduced by increasing the length of the part between

- P and R
- Q and R
- R and S
- S and T.

50. The diagram below represents an arrangement of gear wheels.



When wheel H is rotated once in a clockwise direction,

- wheel G rotates three times anticlockwise and J twice anticlockwise
- wheel G rotates three times anticlockwise and J twice clockwise
- wheel F rotates once clockwise and G three times clockwise
- wheel F rotates once anticlockwise and J twice anticlockwise.

