

## KCPE SCIENCE 2004

1. After the incubation period the chick comes out of the shell by
  - A. The mother cracking the shell open
  - B. Cracking the shell open using its beak
  - C. Growing bigger thus forcing the shell to Break.
  - D. The shell cracking on its own using her beak.
2. Some curative drugs are also called.
  - A. antibiotics
  - B. vaccines
  - C. stimulators
  - D. painkillers
3. A jar used of measuring rainfall should be
  - A. narrow
  - B. wide
  - C. short
  - D. long
4. Which one of the following statements about adaptations in animals is **NOT CORRECT**?
  - A. Cheetahs have sharp, curved claws to help them catch their prey.
  - B. Eagles have strong, curved beaks to help them cut and tear flesh.
  - C. Crocodiles have saw-like teeth to help them grip their prey firmly.
  - D. Snakes have fangs to hold their prey firmly
5. Which one of the following is formed first after fertilization?
  - A. foetus
  - B. embryo
  - C. zygote
  - D. sex cell
6. Which one of the following **DOES NOT** increase the strength of an electromagnet? Increasing the
  - A. number of coils
  - B. amount of current
  - C. size of soft iron
  - D. length of connecting wires
7. A change in the force of gravity on an object will change its
  - A. mass
  - B. weight
  - C. volume
  - D. density
8. In which one of the following machines is the effort equal to the load and the effort distance equal to the load distance?
  - A. Inclined
  - B. wheel and axle
  - C. Lever
  - D. single fixed pulley
9. The force that acts on a given area is called
  - A. Weight
  - B. gravity
  - C. Pressure
  - D. friction
10. Which of the following properties of clay soil would greatly contribute to flooding in an area?
  - A. High capillary
  - B. poor drainage
  - C. Fine texture
  - D. stickiness
11. The main reason why sandy soil is mixed with cement in building is because it

- A. drains well
- B. has large air spaces
- C. has large particles
- D. mixes easily with cement

12. When choosing a method of separating a mixture of liquid and a solid it is important to consider the
  - A. density of the liquid
  - B. size of particles of the solid
  - C. density of the solid
  - D. solubility of the solid

13. Which one of the following is **NOT** definite for liquids?

- A. Shape
- B. Volume
- C. Mass
- D. Density

14. In feeding relationships, mice belong to the same group as

- A. Vultures
- B. snakes
- C. Antelopes
- D. lions

15. The table below shows parts of the human digestive system and their functions

Part	Function
Small intestine	Absorption of food
Stomach	Y
X	Absorption of water

Which one of the following options represents X and Y?

- |                    |                            |
|--------------------|----------------------------|
| <b>X</b>           | <b>Y</b>                   |
| A. Oesophagus      | Passage of food            |
| B. Large intestine | Digestion of food          |
| C. Rectum          | Storage of undigested food |
| D. Mouth           | Taking in food             |

16. The following were reasons given by pupils to explain why smoke rises. It

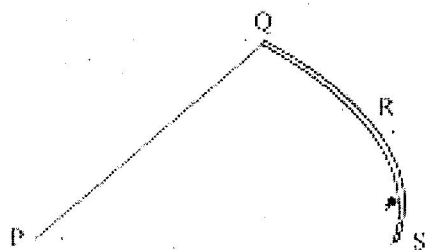
- (i) Has hot air in it
- (ii) Is less dense
- (iii) Has particles suspended in air
- (iv) Is cloudy

Which **TWO** reasons are correct?

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

17. A one metre long piece of wood floats on water while a one centimetre long piece of iron rod sinks. This is because of difference in
  - A. length
  - B. material
  - C. weight
  - D. shape

18. The diagram below represents a fishing rod with points labeled P, Q, R and S.



When in use the fulcrum is at point

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

19. The table below shows observations made when four soils samples P, Q, R and S were mixed with water and then rolled out to make ribbons

**Soil sample Characteristic**

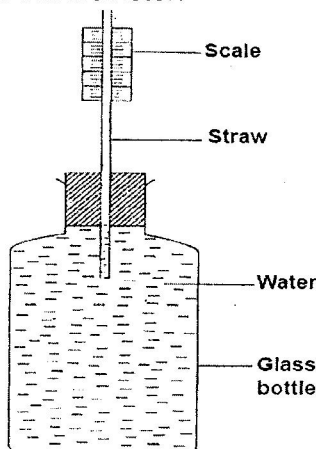
- P Held its shape.  
Q Cracked  
R could not be rolled  
S could not hold its shape.

Which one of the samples has the lowest capillarity?

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

20. Which one of the following drugs causes drowsiness when abused?  
A. Cocaine B. Heroine C. Tobacco D. Khat

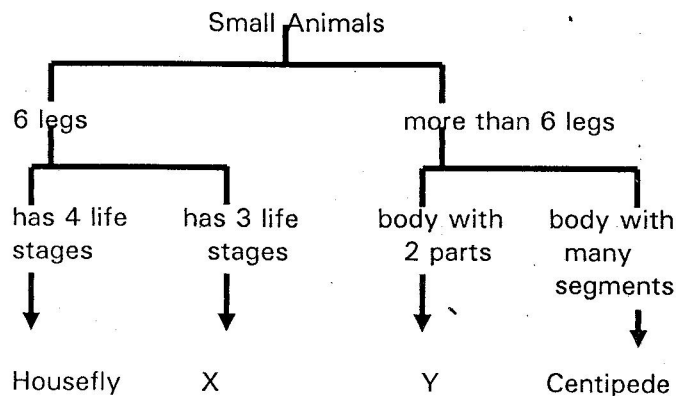
21. The diagram below represents an improvised liquid thermometer.



Which one of the following improvements would make the instrument measure smaller changes in temperature?

- A. making the straw narrower  
B. colouring the water  
C. using a plastic bottle  
D. using a larger bottle

22. The chart below shows a simple classification of small animals.



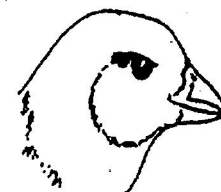
Which animals are represented by X and Y?

- |              |          |
|--------------|----------|
| <b>X</b>     | <b>Y</b> |
| A. Butterfly | Flea     |
| B. Wasp      | Crab     |
| C. Cockroach | Tick     |
| D. Mosquito  | Spider   |

23. Which one of the following practices helps to conserve soil by preventing soil erosion?  
A. crop rotation B. use of manure  
C. mulching D. planting cover crops

24. Which one of the following pairs of processes involves absorption of heat from the surrounding?  
A. Condensation and evaporation  
B. Freezing and condensation  
C. Melting and freezing  
D. Evaporation and melting

25. The diagram below shows the beak of a certain bird.



The bird most likely feeds on \_\_\_\_\_.

- A. insects B. nuts C. grains D. flesh

26. Which one of the following sources of energy is non-renewable?

- A. Kerosene B. firewood C. solar D. Biogas

27. OUT OF SYLLABUS

28. A stone at the bottom of a pond appears nearer the surface due to

- A. refraction B. dispersion  
C. diffraction D. reflection

29. Which one of the following shows the correct order of the parts in the human eye through

which light passes?

- A. Cornea → pupil → lens → retina
- B. Pupil → lens → cornea → retina
- C. Pupil → cornea → lens → retina
- D. Cornea → lens → pupil → retina

30. Which one of the following parts of a passion plant is modified for climbing?

- A. Stem B. Branch C. Leaf D. Bud

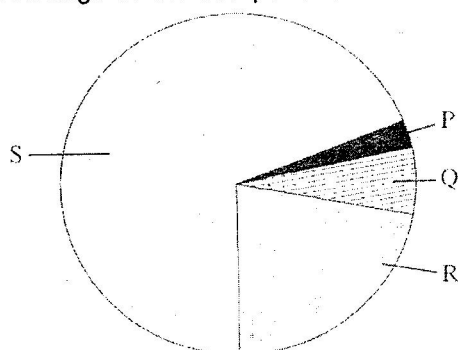
31. Which one of the following waste materials is not a product of excretion?

- A. Sweat B. Urine
- C. Carbon dioxide D. Faeces

32. Which one of the following describes cross-pollination?

- A. The transfer of pollen grains from the anther to the stigma of the same flower.
- B. The transfer of pollen grains from the anther to the stigma of different flowers on plants of different kinds.
- C. The transfer of pollen grains from the anther to the stigma of another flower on the same plant
- D. The transfer of pollen grains from the anther to the stigma of different flowers on plants of the same kind.

33. The chart below represents approximate percentage of the components of air.

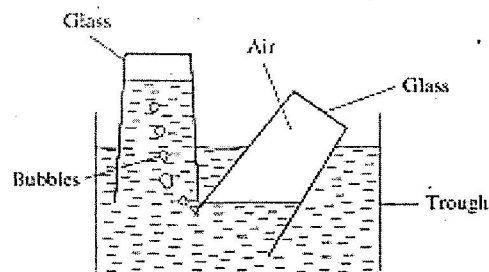


Which portion represents the gas that is necessary for burning?

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

34. OUT OF SYLLABUS

35. The diagram below represents a set up that is used to demonstrate a certain property of air



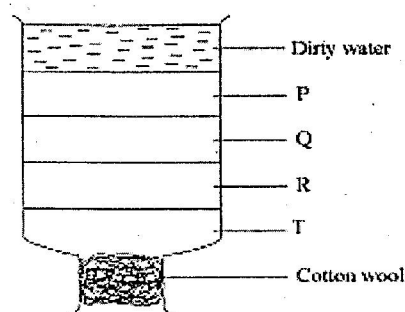
The demonstration shows that air \_\_\_\_\_.

- A. is dissolved in water
- B. has weight
- C. occupies space
- D. exerts pressure

36. Which one of the following statements about a wind vane is **NOT TRUE**?

- A. The tail should be larger than the arrowhead
- B. It should be placed in an open place
- C. The arrow points the direction in which the wind is blowing
- D. Its compass points should correspond to the geographical compass points.

37. In the diagram below P, Q, R and S represent different layers of materials in a water filter.



Which materials are represented by P, Q, R and S?

	P	Q	R	S
A	Charcoal	Fine sand	Coarse sand	Pebbles
B	Fine sand	Charcoal	Fine sand	Coarse sand
C	Pebbles	Coarse sand	Fine sand	Charcoal
D	Coarse sand	Charcoal	Pebbles	Fine sand

38. Which one of the following materials **CANNOT** be recycled?

- A. Rubber tyres B. Glass bottles
- C. Candle wax D. Saw dust

39. Which one of the following pairs of machines consists of levers only?

- A. Pliers and wedge
- B. Crowbar and nutcracker
- C. Screw and scissors
- D. Bottle opener and knife

40. Clothes on a clothesline took too long to dry. The weather was most likely \_\_\_\_\_.

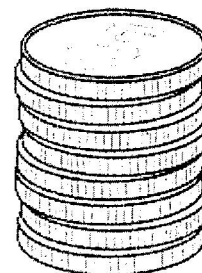
- A. dry and calm                      B. cold and windy  
C. dry and cold                      D. cold and calm
41. Standard five pupils observed a flower with brightly coloured petals in their compound. Which one of the following is likely to be the other characteristics of that flower?  
A. Feathery stigma and few pollen grains  
B. Large pollen grains and feathery stigma  
C. Sticky stigma and few pollen grains  
D. Light pollen grains and sticky stigma
42. Which one of the following statements about blood circulation is TRUE?  
A. Aorta receives oxygenated blood from the left auricle.  
B. Oxygenated blood from the lungs is received by the aorta.  
C. Pulmonary vein takes oxygenated blood to the lungs.  
D. Pulmonary artery receives deoxygenated blood from the right ventricle.
43. Which one of the following is a part of the embryo of a seed?  
A. Micropyle                      B. Endosperm  
C. Radicle                      D. Cotyledon
44. Which one of the following is **NOT** important to consider when taking medicine?  
A. The dose  
B. The date of manufacture  
C. Duration to complete dose  
D. How to store the medicine
45. Which one of the following characteristics is **TRUE** for both plants and animals? They  
A. move, use carbon dioxide  
B. make their food, grow  
C. reproduce, transpire  
D. excrete, respond to changes in the environment
46. Which one of the following practices is used for controlling pollution in soil, water and air?

- A. Avoiding dumping cans and plastic materials  
B. Treating chemical waste from factories.  
C. Burning rubbish in metallic or concrete structures.  
D. Avoiding excess use of fertilizers.

47. In which of the following cases is friction both an advantage and a disadvantage?

- A. dragging a heavy box along the floor  
B. moving parts of a machine  
C. climbing up a hill  
D. drawing water from a well using rope

48. Coins were arranged in a pile as shown in the diagram below



When the coin at the bottom was knocked out suddenly using a ruler, it moved out leaving the pile intact. The pile remained intact because of

- A. friction    B. gravity    C. inertia    D. weight

49. An inclined plane makes work easier by

- A. changing direction of effort  
B. increasing effort distance  
C. decreasing load distance  
D. decreasing the load

50. Which one of the following is **NOT** important when comparing solubility of solids in a liquid?

- A. Amount of the solid  
B. Size of containers used  
C. Temperature of liquid  
D. Amount of liquid