PRIMARY SCIENCE

KCPE MODEL TEST PAPER ON WATER

Based on KCPE 2001-2010 Past Papers

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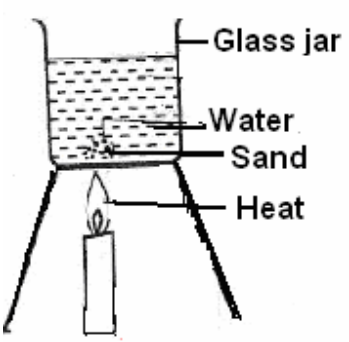
1. The diagram below represents a set up that can be used to demonstrate a certain process.



The process that was demonstrated is?
   A. Convection
   B. Radiation
   C. Diffusion
   D. Condensation

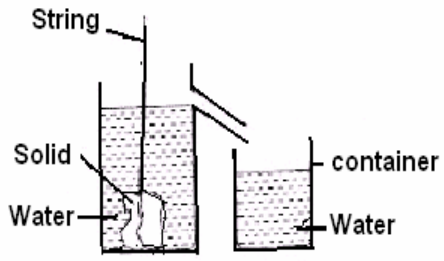
2. Students were provided with liquids P, Q, R, S and T that were either neutral or acidic. They were asked to mix two liquids at a time and use hibiscus flower juice to test whether the mixture was acidic or not. The results obtained are as shown in the table.

3.

Mixture	Change
P + Q	Red
P + R	No change
R + S	Red
R + T	No change
P + T	No change
Q + T	Red
Q + R	Red

Which two liquids were acidic?
   A. R and T
   B. Q and S
   C. T and S
   D. P and Q

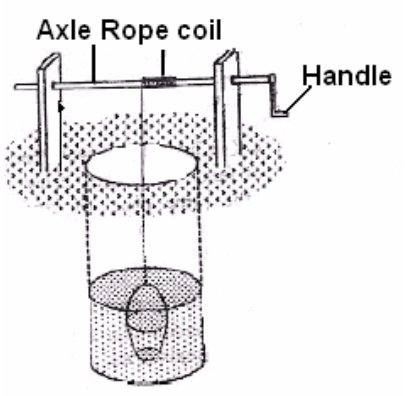
4. A solid was immersed in water in an overflow can. The water that overflowed was collected in a container as shown in the diagram below.



The amount of water collected in the container represented the solids'?
   A. Weight
   B. Density
   C. Mass
   D. Volume

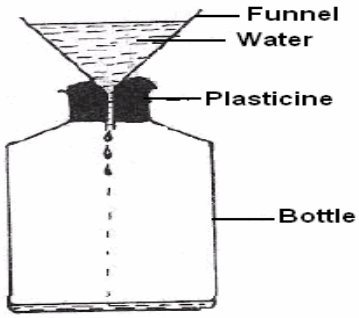
5. Using a base as an indicator, the strength of an acid can be determined by
   A. The time it takes the indicator to change colour
   B. The colour of the indicator
   C. The density of the colour change with the indicator
   D. The number of drops required to change the indicator

6. Below is a diagram representing a can which can be used to raise water from a well.



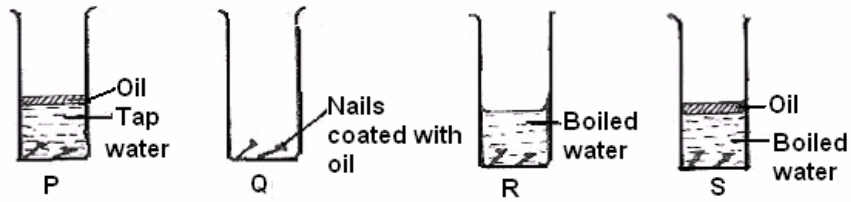
Which of the following should be done to reduce the number of turns made by the handle to raise water to the same height? Increase the
   A. The diameter of the axle
   B. Number of coils
   C. Length of the handle
   D. Width of the rope

7. 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 of the following will make the water flow into the bottle smoothly?
   A. Making a hole in the plasticine
   B. Adding more water in the funnel
   C. Shaking the bottle
   D. Stirring the water in the funnel

8. The diagram below shows set up that was used to investigate conditions necessary for rusting.

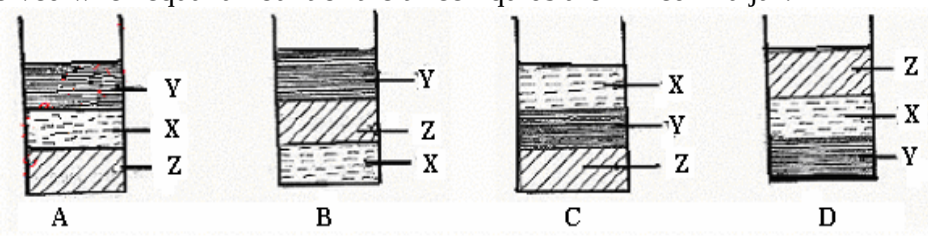


After some days, rusting occurred in
   A. P and S
   B. Q and R
   C. P and R

D. S and P

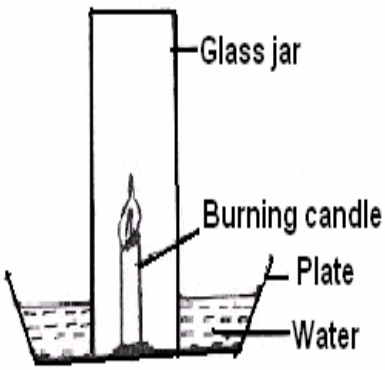
9. Some amount of water was put in a tin can and was heated to boil. The tin can was used, then closed and left to cool. The experiment was used to demonstrate that air?
   A. Contracts on cooling
   B. Exerts pressure
   C. Occupies space
   D. Has weight

10. Liquid X is denser than liquid y. liquid X is less dense than liquid Z. The three liquids do not mix. Which of the following diagrams below correctly represents what will be observed when equal amount of the three liquids are mixed in a jar?



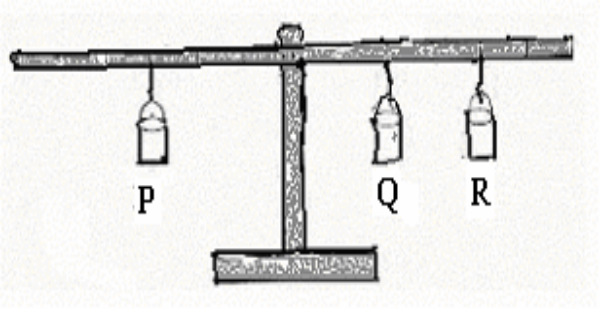
11. Which one of the following factors DOES NOT affect the rate of evaporation of a liquid?
   A. Amount of liquid
   B. Temperature
   C. Surface area
   D. Air movement

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



Which one of the following will eventually happen?
A. Water will enter the jar
B. Amount of air inside the jar will increase
C. Pressure in the jar will increase
D. Amount of carbon dioxide in the jar will decrease

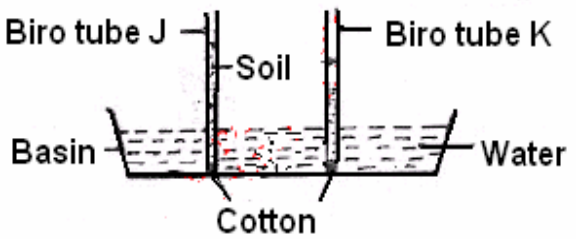
13. Identical containers containing water and labeled P, Q, and R were balanced as shown in the diagram below.



Which of the following statements is correct?
   A. Q and R each contains half as much water as P
   B. P, Q and R contains the same amount of water
   C. P contains three times the amount of water in Q
   D. Q and R contains twice as much water as P

14. A student immersed a small container filled with soil into a basin of water. Bubbles were observed. Which of the following explains the observation made?
   A. Small animal in the soil
   B. Soil reacts with water
   C. Soil contains air
   D. Water contains air

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



From the results observed by the students, the correct conclusion could not be made because students;
   A. Placed tubes in the same basin
   B. Used identical biro pens
   C. Used equal amounts of soil in both biro tubes
   D. Used same type of soil

16. Which of the following explains why flowing water moves objects?
   A. Has energy of movement
   B. Is a liquid
   C. Has potential energy

D. Carries less dense objects only

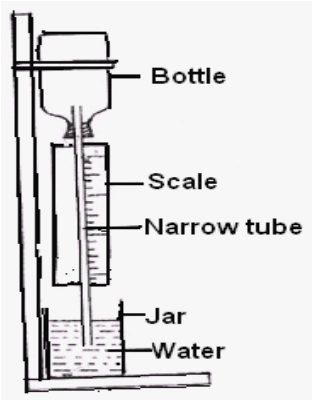
17. Which of the following aspects of a given object DOES NOT affect sinking or floating of the object?
    A. Shape
    B. Size
    C. Material
    D. Weight

18. A purple flower extract was added to substance K, L, M and N to find out whether they were acids or bases. The results are shown in the table below.

Substance	Colour change
K	Pink
L	Blue
M	No change
N	Pink

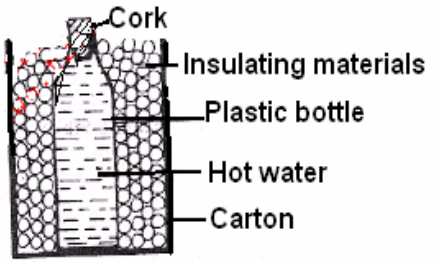
Which two substances react to form a salt and water only?
    A. L and M
    B. K and M
    C. K and L
    D. M and N

19. The below diagram represents an instrument which has been improvised so that it can be used to measure room temperature.



The working of the instrument is based on fact that:
    A. Liquids rise in narrow tubes
    B. Gases exert pressure
    C. Liquids expand when heated and contract when cooled
    D. Gases expand when heated and contract when cooled

20. A bottle made of plastic material was placed in a carton as shown in the diagram below.



The bottle was filled with hot water. Which one of the following would help keep the water hot for a longer time?

A. Using a metal box instead of a cotton
B. Putting a lining of aluminium foil around the carton
C. Using black insulting material
D. Using insulating material with large air spaces

21. Equal amounts of liquids were put in pairs in four identical containers to perform an experiment as follows:
    i. Kerosene and pure water.
    ii. Salty water and kerosene
    iii. Pure water and engine oil
    iv. Methylated spirit and engine oil

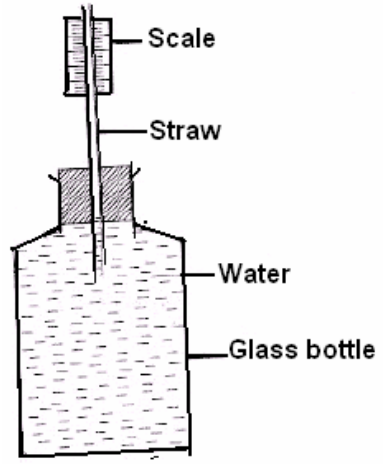
    A flesh egg was then placed in each container. In which container would the egg not sunk too the bottom?
    A. (i)
    B. (ii)
    C. (iii)
    D. (iv)

22. Which of the following is of most important to consider when choosing a method to separate a mixture of a liquid and solid
    A. Mass
    B. Volume
    C. Shape
    D. Density

23. Which of the following is NOT a definite for liquids?
    A. Shape
    B. Density
    C. Mass
    D. Volume

24. One metre of a piece of wood floats on water while one centimeter long piece of iron rod sinks. This is because of difference in?
    A. Length
    B. Materials
    C. Weight
    D. Shape

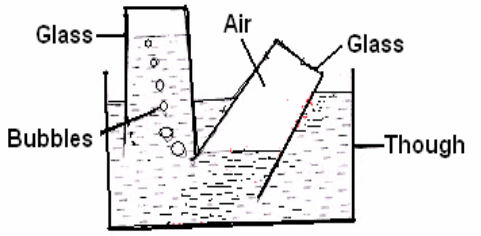
25. Below is an improved liquid thermometer.



Which of the following improvements would make the instrument measure smaller changes in temperature?
   A. Making the straw narrower
   B. Using a larger bottle
   C. Using a plastic bottle
   D. Colouring the water

26. Which of the following activities is correct when comparing the strength of acids in fruit juices to ash solution add;
   A. Indicator and then fruit juice drop by drop
   B. Equal amounts of juice and indicator
   C. Equal amounts of fruit juice and then indicator drop by drop
   D. Fruit juice and then indicator drop by drop

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

	The demonstration shows that air: A. Exerts pressure B. Has weight C. Occupies space D. Absorbed in water

28. A glass containing ice cubes was placed in the open, after sometime the outer surface of the glass become wet. This shows that;
   A. Air contains water vapour
   B. Air can be cooled
   C. Ice melts to form water
   D. Air is a mixture of gases

29. Which one of the following is not required when finding the density of a regular solid?
   A. Spring balance
   B. Ruler

C. Overflow can
D. String

30 Which of the following statements about water is true?
A. Water has definite size
B. Water mixes with all liquids
C. Water has definite shape
D. Water is a good conductor of heat

31. Which one of the following DOES NOT affect floating and sinking of objects?
A. Shape
B. Size
C. Density
D. Weight

32. Which of the following substances will form salt and water only when mixed with an acid?
A. Ash solution
B. Chalk powder
C. Cloves juice
D. Magadi salt

33. Which one of the following is a method of softening hard water?
A. Sieving
B. Boiling
C. Decanting
D. Filtering

34. Which ONE of the following liquids mix?
A. Cooking fat and milk
B. Water and milk
C. Kerosene and water
D. Milk and kerosene

35. Which one of the following is the last step when separating a mixture of sand and salt?
A. Decanting
B. Dissolving
C. Evaporating
D. Filtering

36. The following are liquids added together in glass bottles labeled P, Q, R and S by some pupil.
i. P - kerosene and cooking oil
ii. Q - water and cooking oil
iii. R - milk and water
iv. S - milk and kerosene

Which glass bottle contains liquids that cannot be separated by decanting?

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

37. A bucket made up of steel weighing 100g floats on water while a nail made up of iron weighing 50g sinks. This is because of difference in;
    A. Mass
    B. Shape
    C. Type of material
    D. Volume

38. Which one of the following materials will NOT be required in an experiment to show that pressure in liquids increases with increase the depth?
    A. Water
    B. Tin can
    C. Nail
    D. Collecting jar

38. A farmer noticed small and shallow channels forming in the soil in the garden due to raining water. This type of soil erosion is called:
    A. Gulley
    B. Rill
    C. Splash
    D. Sheet

39. The reason why coloured liquid in the construction of thermometer is to
    A. Make it visible
    B. Decrease density
    C. Make it absorb heat
    D. Make it expand faster

40. Which of the following factors will NOT affect sinking and floating of materials in water? the
    A. Shape of the material
    B. Mass of the material
    C. Type of the material
    D. Size of the material

41. When sand particles are put in a glass of cold water and heated at the bottom. The particles are seen to rise and fall. This is because sand particles
    A. Are carried by hot water which comes down on cooling
    B. And water rise when heated and come down on cooling
    C. Become lighter than water when heated
    D. Rise when heated and come down on cooling

42. The MOST appropriate method of separating a mixture of sand and salt after addition of water is
    A. Evaporating
    B. Sieving
    C. Filtering
    D. Decanting

43. 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. (ii) and (iv)
    B. (I) and (iv)
    C. (ii) and (iii)
    D. (i) and (iii)

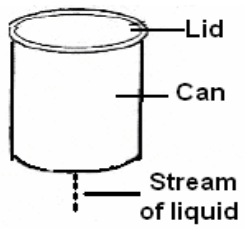
44. Which one of the following is away of controlling water pollution?
    A. Recycling sewage water
    B. Using water sparingly
    C. Reusing domestic water for irrigation
    D. Storing water in dams

45. Which of the following activities can be used to demonstrate rill erosion?
    A. At different positions of a slanting soil surface
    B. On a flat surface using a tin with many holes
    C. In channels of soil on a slanting surface
    D. On flat surface of soil

46. Which one of the following will make a aluminium foil that was floating on water sink?
    A. Making holes on the aluminium foil
    B. Rolling the aluminium foil into a tube
    C. Increasing the amount of water
    D. Crushing the aluminium foil into a ball

47. A bowl made of iron may float when placed on water because of its
    A. Shape
    B. Size
    C. Weight
    D. Density

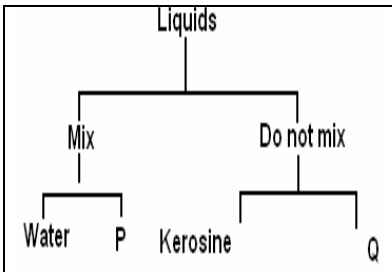
48. The diagram below shows how a liquid flows out of a can with holes at the bottom.



Which of the following will make the liquid flow out smoothly?

A. Making another hole at the top
B. Shaking the can
C. Increasing the size of the hole
D. Raising the container to a higher level

49. 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

ANSWERS

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