

KCPE 2022 PREDICTION SCIENCE

1. Which one of the following pairs of blood vessels carries blood from the lungs to the heart and from the heart to the body respectively?

- A. Pulmonary vein and aorta.
- B. Venacava and aorta.
- C. Pulmonary artery and aorta.
- D. Aorta and venacava.

2. During birth, the following procedures take place

- i) The baby comes out through the vagina.
- ii) The uterine wall contractions cause labour pains.
- iii) The amnion is broken and amniotic fluid is released.
- iv) The umbilical cord is tied and then cut.

Which of the following are in their **CORRECT** order?

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

3. A ship will float on water because of its

- A. size
- B. shape
- C. material
- D. weight

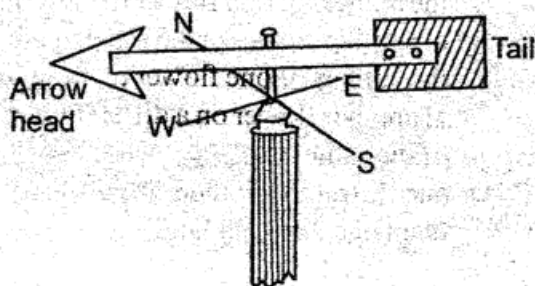
4. When breathing in

- A. the ribs move upwards and inwards.
- B. the volume of the chest decreases.
- C. pressure in the lungs decreases.
- D. The diaphragm gets dome-shaped

5. Which one of the following shows the **CORRECT** urine passage from the kidneys during excretion?

- A. Ureter → bladder → urethra
- B. Urethra → bladder → ureter
- C. Bladder → ureter → urethra
- D. Bladder → urethra → ureter

6. The illustration below is a windvane made from locally available materials



Which one of the following statements about the instrument is **INCORRECT**?

- A. It measures the direction of the wind.
- B. Its arrowhead points to the direction where the wind is going to.
- C. The arrowhead should be smaller than the tail.
- D. It should be placed far away from tall buildings and trees.

7. Which one of the following vaccines is administered at birth?

- A. DPT
- B. BCG
- C. Antimeasles
- D. Antipolio

8. One of the following animals does **NOT** have mammary glands. Which one?

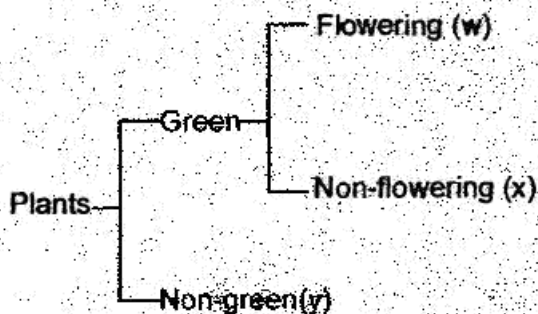
- A. Whale
- B. Dolphin
- C. Shark
- D. Seal

9. Which one of the following types of teeth is **NOT** correctly matched with its function?

| Types of teeth | Function |
|----------------|----------|
| A. Canine | cutting |
| B. Incisor | biting |
| C. Pre-molar | chewing |
| D. Molar | grinding |

10. Cross pollination is the transfer of pollen grains from
- the anthers to the stigma.
 - the anthers of one flower to the stigma of another flower in the same plant.
 - the anthers of one flower to the stigma of another flower on a different plant of the same type.
 - one flower to another on a different plant of a different kind.

11. The illustration below shows classification of plants.



Which of the following **CORRECTLY** shows an example from each group of the classification shown?

| | W | X | Y |
|----|--------|--------|-----------|
| A. | Maize | Fern | Cypress |
| B. | Lichen | Algae | Mushroom |
| C. | Beans | Cactus | Puffballs |
| D. | Acacia | Cedar | Toadstool |

12. Which one of the following is the function of white blood cells?
- Combine with oxygen.
 - Fight disease causing germs.
 - Carry digested food materials.
 - To clot blood when injured.

13. Which one of the following reproduction processes takes place immediately after the sperm cell has united with the ovum?
- Fusion
 - Fertilization
 - Ovulation
 - Implantation

14. Children born to mothers who smoke a lot during pregnancy are **LEAST** likely to
- be underweight.
 - have weak immunity.
 - be strong and healthy.
 - have poor mental growth.

15. Dairy milk and mutton are **MOST** likely to be obtained from
- goats only
 - cows only
 - sheep only
 - all of the above

16. Which one of the following shows a list of drugs which are **NOT** illegal in Kenya?
- Bhang, miraa, cocaine
 - Tobacco, heroin, alcohol
 - Cocaine, tobacco, bhang
 - Miraa, tobacco, alcohol

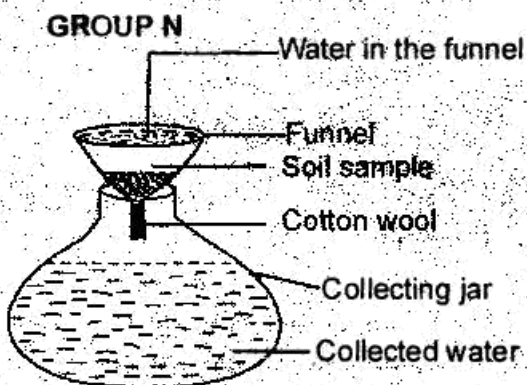
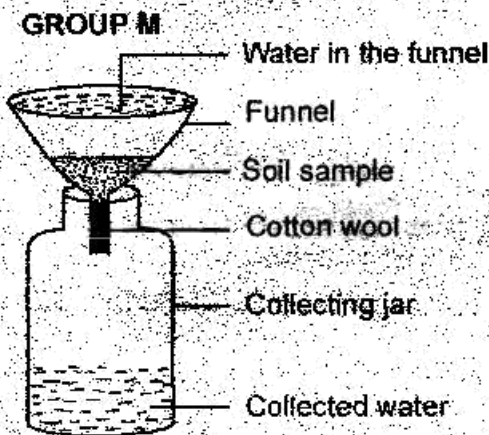
17. The **MOST** effective way of controlling HIV and AIDS among married couples is by
- abstinence
 - using condoms
 - having one partner
 - being faithful

18. Which one of the following shows a list of major non-living components of the environment **ONLY**?
- Water, air and soil
 - Plants and animals
 - Sound, light and heat
 - Food, buildings and soil

19. Which one of the following statements does NOT show interdependence among plants and animals?
- Animals getting shade.
 - Animals getting shelter on trees.
 - Animals getting carbon dioxide from plants.
 - Plants getting pollination services from insects.

20. In a feeding relationship yellow cabbage can be grouped under
- decomposers
 - primary consumers
 - producers
 - tertiary consumers

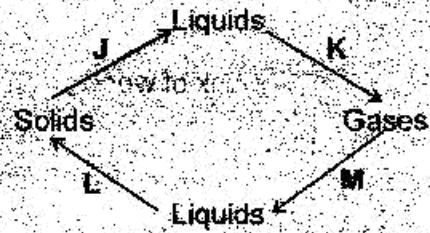
21. The illustrations below was set up by standard six pupils to carry out an investigation on some aspect of soil.



If the two groups were to learn from each other, what common mistake did they make? They used

- different shapes of collecting jars.
- different sizes of funnels.
- different types of soils.
- same sizes of cotton wool.

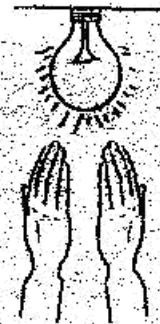
22. Matter can change from one state to another as shown below



Which two processes as shown in the illustration above require an increase in temperature?

- J, K
- J, L
- L, M
- M, K

23. The bulb shown can reach heat to the hands below it by ___ process.



- conduction
- convection
- radiation
- convection and radiation

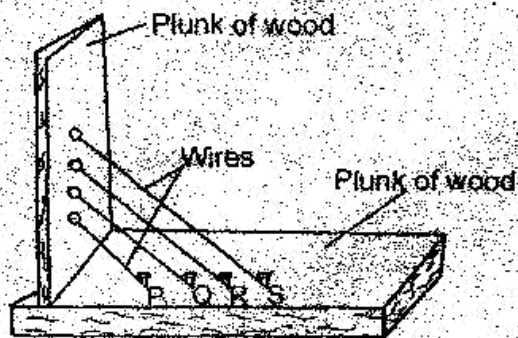
24. Below are characteristics of matter:

- Definite shape
- Definite size
- Define mass

Which two of the above will BEST describe a soda?

- (i) and (ii)
- (ii) and (iii)
- (iii) and (i)
- None

25. Different strings of the same thickness but different lengths were stretched on two wooden plunks nailed together as shown below.



Which wire produced the highest sound when gently plucked?

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

26. The following pests are matched with the part of the plant it attacks. Which one has been **INCORRECTLY** matched?

| Types of pest | Part of plant attacked |
|-----------------|------------------------|
| A. Aphids | grains of all kind |
| B. Cutworms | stems of young plants |
| C. Weaver birds | grains of cereals |
| D. Stalkborers | inside of the stem |

27. Which one of the following is **NOT** a function for the leaves of a green plant?

- A. Absorption
- B. Breathing
- C. Transpiration
- D. Photosynthesis

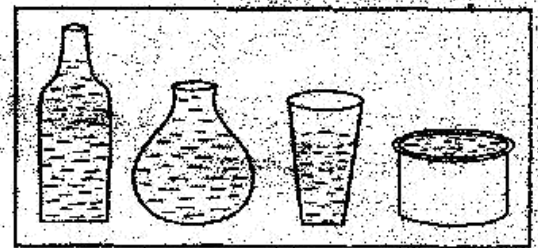
28. Which one of the following **CORRECTLY** shows a list of food crops only?

- A. Legumes, fruits, tuber crops and cereals.
- B. Vegetables, legumes, fibre crops and cereals.
- C. Cereals, legumes, oil crops and vegetables.
- D. Legumes, beverages, vegetables and fruits

29. The second and seventh planets in the solar system are

- A. Earth and Uranus
- B. Venus and Saturn
- C. Earth and Neptune
- D. Venus and Uranus

30. From the illustration of the drawings shown below, it is possible to conclude that



- A. liquids occupies space.
- B. pressure in liquids is equal at the same depth.
- C. pressure in liquids increases with depth.
- D. liquids take the shape of the container.

31. Plants adapted to little or no rain areas do **NOT**

- A. have large flat leaves
- B. roll or fold their leaves
- C. have needle like leaves
- D. lose or shed their leaves

32. One of the following is **NOT** a sign of unhealthy crop. Which one?

- A. Stunted growth
- B. Nice colouration on leaves and stems
- C. Curled leaves
- D. Wilting

33. The type of beak shown below is well suited for



- A. sucking nectar
- B. filter feeding
- C. eating grains
- D. eating flesh

34. Which one of the following is **NOT** an effect of livestock diseases?

- A. Blood in stool
- B. Reduced yields
- C. Reduced quality of products
- D. Death of the animals

35. When soft water is mixed with soap it forms

- A. scum
- B. lather
- C. scale
- D. salt

36. Too much fertilizer when used to improve the quality of the soil may lead to

- A. soil pollution only
- B. water pollution only
- C. air pollution only
- D. soil and water pollution

37. One of the following soil conservation methods can help to control sheet erosion. Which one?

- A. Mulching
- B. Planting cover crops
- C. Terracing
- D. Building gabiions

38. Which one of the following parasites will attack livestock without living in it?

- A. Tick
- B. Tsetse fly
- C. Flea
- D. Mite

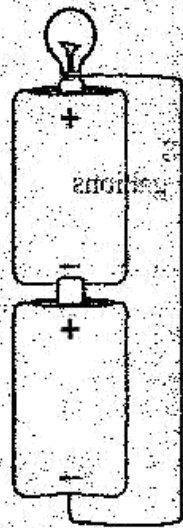
39. When preparing a compost manure farmers are advised to add manure to the compost **MAINLY** in order to

- A. introduce bacteria to the compost to encourage decomposition.
- B. supply additional nutrients to the compost manure.
- C. speed up the process of decomposition.
- D. provide nutrients to the bacteria that bring about decomposition.

40. Which one of the following is a modern method of preserving food by removing moisture?

- A. Canning
- B. Salting
- C. Freezing
- D. Drying

41. The illustration shown below is an arrangement that can generate electricity.



Therefore it is a

- A. cell
 B. battery
 C. dynamo
 D. generator
42. While carrying out an experiment on mixing liquids, standard seven pupils accidentally mixed the following liquids in equal amounts in one large container;
- water
 - spirit
 - kerosene
 - fresh milk
 - cooking oil.

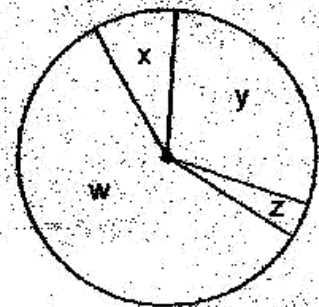
If they left the mixture to settle overnight, how many layers would they observe formed in the transparent container?

- A. Three
 B. Five
 C. One
 D. Two

43. Which one of the following methods of separation is the **MOST** convenient one to use in separating an insoluble solid from a liquid?

- A. Decantation
 B. Winnowing
 C. Filtering
 D. Sieving

44. Below is an illustration representing the relative amount of gases found in the atmosphere.



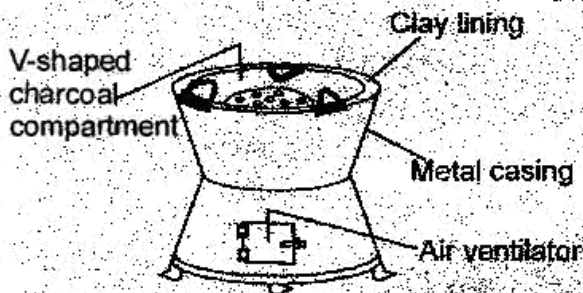
Which part marked by the letters W, X, Y and Z shows part of the air used during germination?

- A. W
 B. X
 C. Y
 D. Z
45. The following are advantages of breast feeding: it
- i) boosts the baby's immunity
 - ii) is always ready when required
 - iii) allows mother to child bonding
 - iv) is easier for the infant to digest
- Among these advantages which one is the **MAIN** reason why mothers are advised to use this method compared to others?
- A. (i)
 B. (ii)
 C. (iii)
 D. (iv)

46. Three of the following are sources of potential energy EXCEPT one. Which one?

- A. Foods
- B. Fuels
- C. Car-battery
- D. Motor-oil

47. The diagram shown below represents an improved charcoal jiko



The jiko is an important energy device because it saves energy MAINLY because it

- A. uses less charcoal
- B. is 'V' shaped
- C. has a metal casing outside
- D. has a clay lining inside

48. The illustration below shows a simple crowbar in real use



Which one of the following simple practices should be done in order to lift the load using the LEAST effort?

- A. Crush the stone.
- B. Push the fulcrum closer to the load.
- C. Pull the fulcrum closer to the effort.
- D. Apply effort closer to the fulcrum.

49. Force acting against movement is usually referred to as

- A. friction
- B. magnetic
- C. inertia
- D. gravitational

50. The soil that holds the LEAST amount of water

- A. has the highest capillarity
- B. makes the longest ribbons
- C. has the largest air spaces
- D. sticks when wet