



507007

**KENYA NATIONAL ASSESSMENT SERIES
KCPE SECOND PREDICTION 20/21
507**

**- SCIENCE -
1 hour 40 minutes**

INSTRUCTIONS TO CANDIDATES (Please read these instructions carefully)

1. You have been given this question booklet and a separate answer sheet. The question booklet contains 50 questions.
2. Do any necessary rough work in this booklet.
3. When you have chosen your answer mark it on the **ANSWER SHEET**, not in the question paper.

HOW TO USE THE ANSWER SHEET.

4. Use an ordinary pencil only.
5. Make sure that you have written on the answer sheet:-
YOUR INDEX NUMBER
YOUR NAME
NAME OF YOUR SCHOOL
6. By drawing a **dark** line inside the correct numbered boxes mark your full Index Number (i.e. School Code Number and the three-figure Candidate's Number) in the grid near the top of the answer sheet.
7. Do not make any marks outside the boxes.
8. Keep your answer sheet as clean as possible and **DO NOT FOLD IT**.
9. For each of the questions 1-50 four answers are given. The answers are lettered A, B, C, D. In each case only **ONE** of the four answers is correct. Choose the correct answer.
10. On the answer sheet show the correct answer by drawing a **dark line** inside the box in which the letter you have chosen is written.

Example

38. Which one of the following consists of magnetic materials **only**?
- A. Cobalt, tin, steel
 - B. Iron, steel, aluminium
 - C. Tin, aluminium, copper
 - D. Steel, tin, brass

The correct answer is A.

On the answer sheet:

35. [A] [B] [C] [D]

36. [A] [B] [C] [D]

37. [A] [B] [C] [D]

38. [A] [B] [C] [D]

In the set of boxes number 38, the box with letter A printed in it is marked.

11. Your **dark line MUST BE** within the box.
12. For each question **ONLY ONE** box is to be marked in each set of four boxes.



This question paper consists of 8 printed pages.

© Hero Educational Publishing House, 2021

For enquiries call, 0722 424273 / 0111 363432

909507



TURN OVER

1. Objects like wax, plastic and wood normally float on water. This is possible because of their?
 - A. Size
 - B. Material
 - C. Shape
 - D. Weight

2. To protect themselves from noise pollution, workers in noisy factories are provided with
 - A. ear bands
 - B. gas masks
 - C. ear plugs
 - D. ear phones

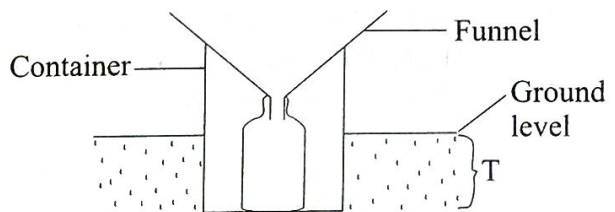
3. Which one of the following animal feeds is a source of proteins?
 - A. Lucern
 - B. Grass
 - C. Molasses
 - D. Sweet potato vines

4. Cirrhosis is a disease of the liver which is **commonly** caused by excessive use of
 - A. smoking of tobacco
 - B. drinking of beer
 - C. chewing of miraa
 - D. inhaling of cobbler's glue

5. One of the following animal parasites **cannot** be controlled by drenching or dosing, which one is it?
 - A. Round worms
 - B. Lung worms
 - C. Liver fluke
 - D. Tsetse fly

6. Which one of the following substances have definite size and shape?
 - A. Wax and steam
 - B. Petrol and oxygen
 - C. Stone and glass
 - D. Milk and water

7. Study the diagram below of a simple rain gauge.



The part marked **T** is placed underground **mainly** to

- A. prevent evaporation of collected water
 - B. collect as much rain water as possible
 - C. make it durable
 - D. prevent the container from direct sunlight
-
8. Which one of the following is **not** an air pollution?
 - A. Loud music
 - B. Aerosal sprays
 - C. Excessive dust
 - D. Farm Yard Manure

 9. In which one of the following pairs of levers is the fulcrum between the load and the effort when they are in use?
 - A. Wheelbarrow and space
 - B. Claw hammer and wheel barrow
 - C. Crow bar and spade
 - D. Crow bar and claw hammer

10. Which one of the following statements is **true** about platypus, bat, ostrich and toad.
All of them
- breath through lungs
 - give birth to young ones
 - have body temperatures that varies with the surrounding
 - spend part of their life on dry land

11. The following are ways in which plants adjust themselves to grow in various habitat:

- Succulent stems*
- Flexible stems*
- Thick and waxy cuticles*
- Spongy stems*
- Needle-like leaves*

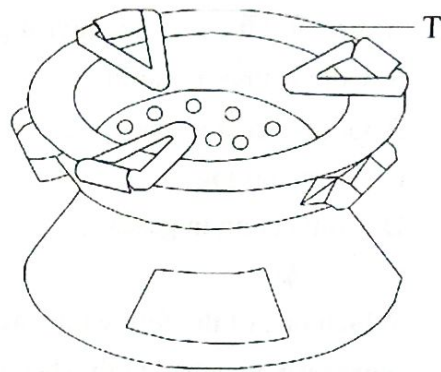
Which set of adjustments are for plants suitable to grow in dry areas?

- ii, iv, v
- i, iii, v
- ii, iii, iv
- ii, i, iv

12. Which one of the following is **not** correct statement about the force that opposes motion? The force
- produces unwanted heat
 - increase the effort required for moving a load
 - makes the load lighter
 - can be reduced by using rollers.

13. The transfer of heat by convection is possible through
- gases only
 - liquid and gases
 - solids and liquids
 - gases and vacuum

14. The diagram below shows an improved jiko.



The part marked **T** is made of clay in order to

- make the jiko durable
- make the charcoal light faster
- reduce the space for charcoal
- reduce the amount of heat loss

15. The following are characteristics of a certain type of cloud:

- Flat-bottomed*
- High in the sky*
- White in colour*

Which statement below is **true**?

- The characteristics are for nimbus clouds
- The cloud gives rise to rainfall
- The cloud also looks like mountains
- This type of cloud also looks like bundles of cotton

16. Which of the following is **not** an excretory organ?
- Kidney
 - Skin
 - Anus
 - Lungs

17. Class five pupils of Jamhuri Primary School did an experiment. They dropped some pieces of papers on burning flames of fire. What were they investigating?
- A. Convection in liquid
 - B. Gases occupy space
 - C. Air in motion
 - D. Convection in gases

18. Which one of the following vaccine is **correctly** matched with when it is administered?

<u>Vaccine</u>	<u>When administered</u>
A. 1st DPT	At birth
B. 2nd Polio vaccine	10 weeks
C. 3rd Hepatitis B	14 weeks
D. 3rd DPT	14 weeks

19. Which one of the following components of the environment do plants and animals depend on directly for their survival?
- A. Soil and water
 - B. Air and soil
 - C. Water and air
 - D. Air only

20. The amount of matter in a substance is measured using all the following units **except**
- A. Grammes
 - B. Kilograms
 - C. Newtons
 - D. Tonnes

21. A certain weed was observed with the following characteristics:
- i. *Purple flowers*
 - ii. *Thorns on the stems*
 - iii. *Yellow fruits when ripe*

The weed was **likely** to be

- A. thorn apple
 - B. wandering jew
 - C. oxalis
 - D. sodom apple
22. Which of the following pair processes involves loss of heat to the surrounding?
- A. Freezing and melting
 - B. Melting and evaporation
 - C. Freezing and condensation
 - D. Condensation and evaporation
23. Which one of the following practices is an economical way of using water?
- A. Harvesting rain water
 - B. Mulching and shading
 - C. Constructing dams to collect rain run-off water
 - D. Practising drip irrigation
24. The following are social effects of drug abuse **except**
- A. truancy
 - B. lack of concentration
 - C. drug induced accidents
 - D. marital conflicts

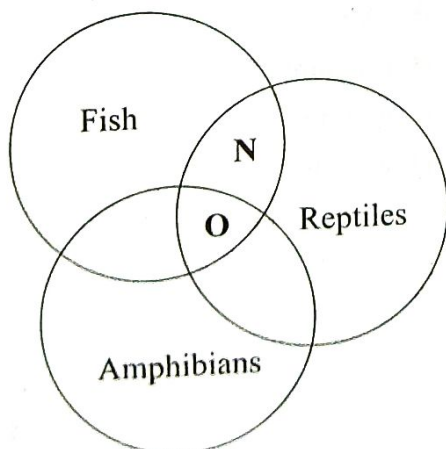
25. In a food chain, which of the following organism is a secondary consumer?
- A. Cabbage
 - B. Grasshopper
 - C. Hawk
 - D. Chicken

26. The following crop pests are correctly matched with the part of the crop they attack **except**

<u>Crop pest</u>	<u>Part attacked</u>
A. Stalkborer	Stem
B. Army worm	Leaves
C. Aphids	Seeds
D. Cutworm	Stems

27. Which of the following pollutes **both** water and soil?
- A. Oil spillage
 - B. Controlled use of farm chemicals
 - C. Domestic wastage
 - D. Industrial waste gases

28. The chart below represents the characteristics of amphibians, fish and reptiles. What do **N** and **O** represent?



- | | |
|------------------|-----------------|
| N | O |
| A. Laying eggs | Warm blooded |
| B. Live in water | Scales |
| C. Cold blooded | Breath by lungs |
| D. Scales | Cold blooded |

29. As Mamε Brian was chopping potatoes she cut her finger with a knife. Which component of blood helped to stop the bleeding?

- A. Plasma
- B. Platelets
- C. White blood cells
- D. Red blood cells

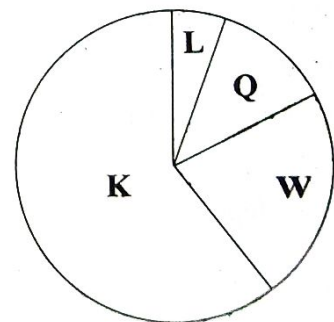
30. Which one is **not** a use of water in recreation?

- A. Irrigation
- B. Boat racing
- C. Surfing
- D. Swimming

31. Which one of the following is a non-luminous source of light?

- A. Moon
- B. Sun
- C. Stars
- D. Fire flies

32. The pie chart below shows a composition of air.



Which letter represent the part used by pre-mature born babies in incubators?

- A. W
- B. L
- C. K
- D. Q

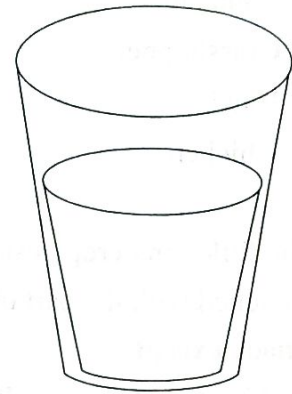
33. Below are statements about second class levers. Which one is **correct**?
- A. Load distance is equal to effort distance
 - B. Load distance is always greater than effort distance
 - C. Effort distance is always greater than load distance
 - D. Effort distance is always twice the load distance

34. Which one is **not** a minor plant nutrient?
- A. Chlorine
 - B. Carbon
 - C. Iron
 - D. Manganese

35. Expectant mothers **mainly** feed on food rich in calcium and vitamin D for?
- A. Help to prevent rickets to the foetus
 - B. Providing energy to the foetus
 - C. For proper bones formation of the foetus
 - D. For growth and development of the foetus

36. Which one of the following is observed in a container that has been used to boil hard water?
- A. Scum
 - B. Bubbles
 - C. Fur
 - D. Soap deposits

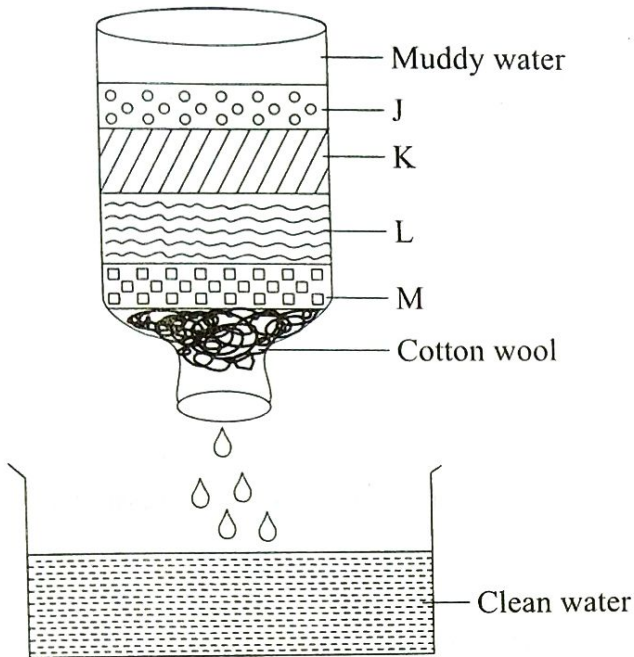
37. The diagram below shows a glass which was put inside another glass and got stuck.



What should be done to separate the two glasses?

- A. Put the glasses into boiling water
 - B. Put hot water in the inner glass
 - C. Put the glass in cold water
 - D. Immerse the outer glass in hot water
38. A simple electric circuit should have the following **except**
- A. bulb
 - B. fuse
 - C. wires
 - D. dry cells
39. The amount of space occupied by a body is its
- A. mass
 - B. pressure
 - C. volume
 - D. weight

40. The diagram below shows a home-made water filter.



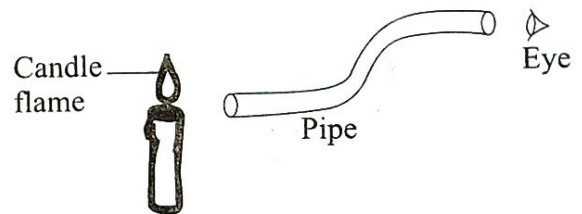
Which of layer represents charcoal?

- A. J
 B. K
 C. L
 D. M
41. The following are problems related to teeth **except**
- A. bad breath
 B. bleeding gums
 C. dental floss
 D. cavities
42. The following are ways of maintaining simple tools **except**
- A. oiling
 B. cleaning tools after use
 C. sharpening cutting tools
 D. using them regularly

43. Which one of the following livestock parasites attacks **only** the small intestines?
- A. Hookworms
 B. Lungworms
 C. Tapeworms
 D. Roundworms

44. Which of the following mixtures can be separated by dissolving, filtering and evaporation?
- A. Iron fillings, flour and salt
 B. Salt and sugar
 C. Kerosene, water and turpentine
 D. Sand and sugar

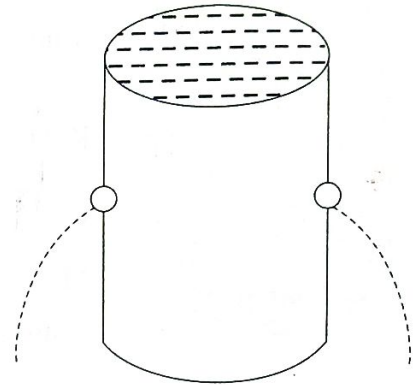
45. The diagram below represents a set up that is used to investigate a certain aspect of light.



- The aspect investigated is
- A. light travels in a straight line
 B. refraction
 C. reflection
 D. passage of light through materials

46. Large furrows in the soil indicate
- A. rill erosion
 - B. gully erosion
 - C. splash erosion
 - D. sheet erosion
47. Which one of the following helps us to drink using a straw?
- A. Force of gravity
 - B. Adhesion
 - C. Capillarity
 - D. Air pressure
48. The **best** method of controlling human intestinal worms is by
- A. deworming
 - B. vaccination
 - C. rotational grazing
 - D. proper sanitation

49. Standard four pupils set up the experiment shown below.



- The pupils concluded that pressure in liquids
- A. increase with depth
 - B. decrease with height
 - C. is equal at the same height
 - D. is the same in all directions
50. A fish is able to remain a float on water even if it is not swimming due to the presence of
- A. lateral line
 - B. air bladder
 - C. air sacs
 - D. fins