

KCPE NOVEMBER 2023 PREDICTION MASTER CYCLE 4

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KENYA NATIONAL PREDICTION TESTS
KCPE



516006

SCIENCE

Time: 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 this question booklet.

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 the 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 and 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

In the Question Booklet.

5. Which one of the following components of blood is involved in clotting after an injury?
A. White blood cells.
B. Red blood cells.
C. Plasma.
D. Platelets.

The correct answer is D.

On the answer sheet:

5. (A) (B) (C) (D) **15.** (A) (B) (C) (D) **25.** (A) (B) (C) (D) **35.** (A) (B) (C) (D) **45.** (A) (B) (C) (D)

In the set of boxes numbered **5**, the box with the letter **D** 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.



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This question paper consists of 8 printed pages.

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1. In the immunization schedule, which two vaccines are given together at the age of ten weeks?
 - A. The third dose of oral polio and third dose of DPT
 - B. BCG and third dose of oral polio
 - C. The third dose of oral polio and second dose of DPT
 - D. The fourth dose of oral polio and third dose of DPT
2. Chemicals should be properly handled. Which one of the following should be **LEAST** considered when storing chemicals?
 - A. Flammable chemicals should be kept away from fire
 - B. Dangerous chemicals should not be stored in cupboard
 - C. Chemical containers should be stored away from children reach
 - D. Chemicals should not be stored near foods
3. Carnassial teeth in carnivores are adapted to:-
 - A. holding and crushing bones
 - B. holding and grinding flesh
 - C. grinding and crushing bones
 - D. grinding and tearing flesh
4. As class 8 pupils in Mamboleo primary school had gone for an outing, they saw plants with the following adaptations:
 - (i) *Needle-like leaves*
 - (ii) *Sharp spines*
 - (iii) *Thin cuticle*
 - (iv) *Thick cuticle*
 - (v) *Large flat leaves*
 - (vi) *Silvery shiny hairs*
 Which adaptations are for desert vegetation?

A. (iii), (iv), (vi)	B. (v), (ii), (vi)
C. (iv), (vi), (ii)	D. (iii), (v), (ii)
5. Liver, kidney, meat, eggs and green leafy vegetables provide _____ which helps to make the _____ healthy.

A. calcium, bone	B. vitamin, skin
C. iron, blood	D. phosphorous, bones
6. Which of the following group shows how mixtures can be separated?
 - A. Miscible, immiscible, use of magnets, decanting
 - B. Winnowing, sieving, picking, filtering and evaporation
 - C. Stirring, mixing, evaporating, decanting
 - D. Magnetic, non-magnetic, evaporating, mixing
7. Standard five pupils from Rwanyambo primary school put water in different containers as shown below.



 This demonstrated that:-
 - A. water occupies space
 - B. water has no definite shape
 - C. water has no definite volume
 - D. water has no weight
8. Food remains should be reheated properly under high temperature before eating in order to:-
 - A. ensure that any micro-organism in the food is killed
 - B. ensure the food is made sweet and have a good smell
 - C. ensure no wastage of food
 - D. ensure that the foods eaten raw are clean

9. To control HIV/AIDS effectively, AIDS education need to be provided to members of the community. The following are some methods of controlling the spread of HIV/AIDS **EXCEPT:-**

- A. testing for the virus
- B. creating public awareness
- C. campaigns through mass media
- D. educating the masses

10. Which of the following statements is **NOT** true about how a single fixed pulley works?

- A. The load distance is equal to the effort distance
- B. It makes work easier by changing the direction of effort
- C. The effort distance is longer than the load distance
- D. An example of a pulley is the flag post

11. Which one of the following statements is **NOT TRUE** about veins?

- A. They carry blood to the body
- B. They have a wide lumen
- C. They have thin elastic walls
- D. They carry blood under low pressure

12. Class five pupils were learning about a balanced diet. They give the following answers.

- Tom : Ugali, chapati, beans
- Mary : Beans, meat, milk
- Jane : Maize, beans, spinach
- Jim : Cabbage, kales, fruits

Who give the **CORRECT** answer?

- A. Jim B. Jane C. Mary D. Tom

13. Which one of the following animals are all **NOT** correctly classified?

	Reptiles	Amphibians	Mammals
A.	Lizard	toad	ape
B.	Snake	frog	lion
C.	Crocodile	salamander	ant-eater
D.	Newt	tortoise	bat

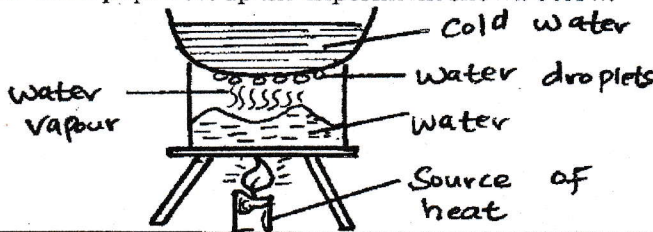
14. Three of the following are affected by the size of soil particles. Which one is **NOT**?

- A. Drainage B. Texture
- C. Water retention D. Colour

15. Plants depends on others for all the following **EXCEPT**?

- A. Support B. Shade C. Oxygen D. Habitat

16. Std 5 pupils set up the experiment shown below.



What process were they demonstrating?

- A. Evaporation B. Condensation
- C. Freezing D. Melting

17. Mr. Ndung'u a teacher at Churiri Primary School asked his Std 4 pupils to name the classes of crop and give three examples in each case. Who gave **WRONG** answer?

A.	Njeri	Cereals	sorghum, barley and wheat
B.	Wambui	Legumes	beans, cowpeas and castor
C.	Kimani	Beverages	tea, coffee and cocoa
D.	Njuguna	Tubers	carrots, cassava and arrow roots

18. The following is a feeding relationship that was observed in a certain habitat.

Producer → Primary consumer → Secondary consumer → Tertiary consumer

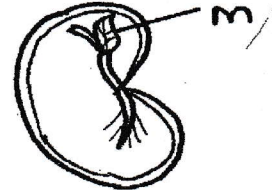
Which among the following animals can represent the secondary consumer?

- A. Zebra B. Buffalo C. Eagle D. Lion

19. Which among the following is **NOT** a field pest?

- A. Aphids B. Cut worms
- C. Stalkborers D. Weevils

20. The diagram below shows parts of a germinating bean seed.



The part marked M:

- A. grows into a root
- B. stores food for the seed
- C. grows into a shoot
- D. protects the inner parts

21. Pupils in Njabini Primary School had the following materials.

- two bottles - scale
- stand - tube / straw
- coloured water

Which weather instrument did they intend to make?

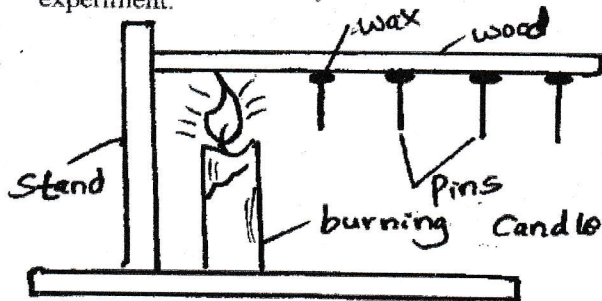
- A. Barometer B. Rain gauge
- C. Liquid thermometer D. Air thermometer

22. When railway lines are constructed, gaps are left in between. This is to allow:-

- A. expansion
- B. contraction
- C. expansion and contraction
- D. movement of the train

23. The following are safety measures when dealing with current electricity **EXCEPT**:-
- A. not touching switches with wet hands
 - B. not putting sticks in the sockets
 - C. not overloading sockets
 - D. not sheltering under trees when raining

24. Pupils in class five arranged the following experiment.



After sometime, they observed the set-up and found out that the pins did not fall. Why?

- A. The wood was burnt
- B. The stand fell
- C. The candle went off
- D. Wood is a poor conductor of heat

25. The following are ways of increasing friction. Which one is **NOT**?

- A. Putting treads on shoes
- B. Spreading coarse materials on the ground
- C. Streamlining objects
- D. Putting treads on tyres

26. The tooth shown below is called _____ and it is used for _____



- A. incisor, cutting
 - B. molar, grinding and chewing
 - C. canine, tearing
 - D. premolar, grinding
27. During digestion of food, the food nutrients are absorbed at the _____ and water and mineral salts are absorbed at the _____ respectively.
- A. ileum and stomach
 - B. rectum and duodenum
 - C. small intestines and large intestines
 - D. large intestines and small intestines
28. The following are parts and functions of the male reproductive organs. Which one is **NOT CORRECTLY** matched?

- A. Urethra - carries urine and sperms out of the body
- B. Sperm duct - allows the sperms to pass from the testis
- C. Testes - produces sperms
- D. Penis - stores sperms

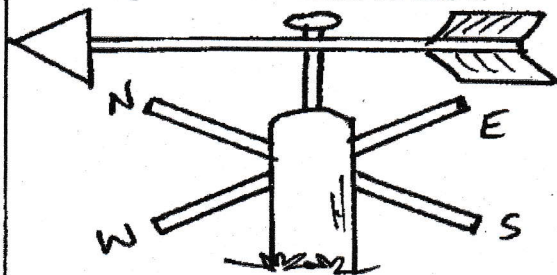
29. Water can be used in many ways. Which grouping indicates domestic uses of water?

- A. Washing, bathing and transport
- B. Washing, cooking and drinking
- C. Drinking, bathing and irrigation
- D. Cooling, bathing and surfing

30. Among the following ways of conserving water, which one does not indicate minimal use of water?

- A. Re-using water
- B. Drip irrigation
- C. Recycling sewage water
- D. Harvesting rain water

31. Std 5 pupils in Jamit Primary School constructed a simple windvane as shown below.



Which one of the following principles **DOES** the above instrument work under?

- A. Matter expands when heated
- B. Matter occupies space
- C. Matter contracts when cooled
- D. Air in motion

32. Which is the **CORRECT** order of furthest planet from the sun, the smallest planet and the fourth planet from the sun?

- A. Neptune, Mercury and Mars
- B. Neptune, Venus and Mars
- C. Neptune, Mercury and Venus
- D. Neptune, Earth and Mars

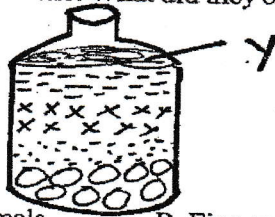
33. During which of the following weather conditions are clothes likely to dry quickly? When the weather is:-

- A. calm and sunny
- B. sunny and windy
- C. windy and cloudy
- D. sunny and cloudy

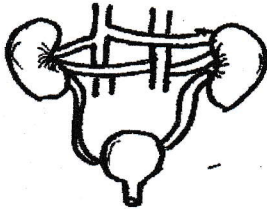
34. Stella saw a bird that had a long, flat and serrated beak. Which one of the following birds was she **MOST LIKELY** to have seen?

- A. Eagle
- B. Duck
- C. Chicken
- D. Sunbird

35. Which one of the following levers has the position of the effort between the fulcrum and the load?
 A. Crowbar B. Wheelbarrow
 C. Spade D. Claw hammer
36. Std 4 pupils made different models using plasticine. After placing them in water some models floated while others sank. Which of the following factors affected floating and sinking?
 A. Size B. Material
 C. Shape D. Density
37. Class four pupils collected soil and added water to the bottle. They shook the bottle well and left it for sometimes to settle. What did they observe at point y?



- A. Small animals B. Fine soil
 C. Water D. Humus
38. Which one of the following is NOT a cause of air pollution?
 A. Industrial spray
 B. Improper disposal of plastics
 C. Farm chemicles
 D. Vehicle exhaust fumes
39. The diagram below shows an excretory organ.



- The above organ is used to excrete:
 A. urea B. carbon dioxide
 C. sweat D. lactic acid
- A. They hit the ground the same time
 B. The pencil reached ground first
 C. The book reached ground first
 D. They remained in the air
40. _____ is the gas contained in tobacco. It interferes with the ability of the _____ to transport oxygen.
 A. Carbon monoxide, blood
 B. Nicotine, lungs
 C. Tar, arteries
 D. Nicotine, blood
41. Jane a Std 6 pupil was observing some insect pollinated flowers outside her classroom. Which among the following did she NOT observe?

- A. Large in size
 B. Brightly coloured petals
 C. Large loosely attached anthers
 D. Heavy sticky pollen grains
42. Mkulima keeps an animal that gives him the following products, milk, meat and mohair. The animal is likely to be:-
 A. sheep B. pig C. rabbit D. goat
43. Std five pupils were asked by their Science teacher to collect the following materials:
 (i) A Y-Shaped tree trunk
 (ii) A panga
 (iii) A long and strong pole or timber
 What were they making?
 A. See-saw B. Beam balance
 C. Weighing balance D. Spring balance
44. Which of the following is TRUE about a soil that has the poorest capillarity? It has:-
 A. a smooth texture B. small air spaces
 C. the finest particles D. large particles
45. The following are methods of controlling external parasites in livestock EXCEPT:-
 A. dipping B. deworming
 C. hand picking D. rotational grazing
46. Which one is a disadvantage of friction?
 A. Helps to remove dirt
 B. Makes work harder
 C. Helps to light a matchstick
 D. Helps in writing
47. When soil is polluted, most of the pollutants do not decay, so they interfere with the growth of plants. These pollutants affect plants since they interfere with the following except:-
 A. air circulation in the soil
 B. growth of roots of plants
 C. absorption of water and mineral salts
 D. killing of small animals in the soil
48. Which one of the following is NOT a force?
 A. Weight B. Gravity
 C. Mass D. Inertia
 D. solar panels are not source of current electricity
49. Listed below are uses of light. Which group shows how light is used by the biotic part of the environment to enhance growth?
 A. Plants during photosynthesis and animals for sight
 B. Animals for sight and germinating seeds
 C. Plants during photosynthesis and animals for breathing
 D. Animals for sight and breathing
50. The following are translucent EXCEPT:-
 A. iron sheet B. dirty water
 C. oiled paper D. frosted glass