



KCPE REVEALED

KENYA NATIONAL EXAMINATIONS

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PREDICTION MASTER

206507

- SCIENCE -

2021

1 hr 40 min

READ THESE INSTRUCTIONS CAREFULLY

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

In the question booklet

16. Which one of the following is **NOT** a storage pest?

A. Termites

B. Aphids

C. Weevils

D. Rodents

The correct answer is **B**

16. [A] [**B**] [C] [D]

In the set of boxes numbered 16, the box with letter B 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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TURN OVER

● Covid -19 Always watch for symptoms

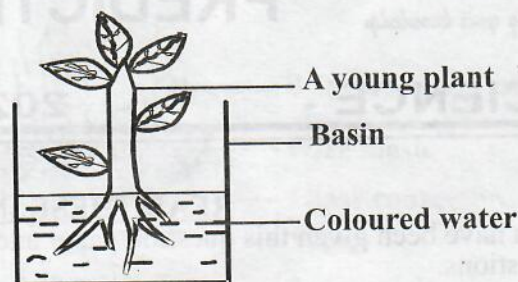
1. The following are feeding adaptations of some animals:

- (i) Molars and premolars grow throughout their lifetime
- (ii) Presence of carnassial teeth
- (iii) Long, muscular and rough tongues
- (iv) Well-spaced teeth

Which group describes the feeding adaptations of a cow?

- A. i, iv
 - B. ii, iii
 - C. i, iii
 - D. ii, iv
2. All the following vertebrates have internal fertilization **except**
- A. whale
 - B. lizard
 - C. hen
 - D. newt.
3. Which one of the following is an effect of crop diseases?
- A. Stunted growth
 - B. Curled leaves
 - C. Spots and streaks
 - D. Reduced yield
4. During fertilization in flowers, a pollen tube is formed in the
- A. pollen grain
 - B. stigma
 - C. style
 - D. ovary.

5. Some pupils from a certain school uprooted a young plant and deeped it in coloured water as shown below.



After some hours, they cut across the stem and made their observations. What were they investigating?

- A. Transportation of water and mineral salts.
 - B. Absorption of water and mineral salts.
 - C. Photosynthesis in plants.
 - D. Food storage in plants.
6. Standard eight pupils from a certain school carried out a project on control measures for HIV and AIDS. They erected a billboard along the roadside as shown below.

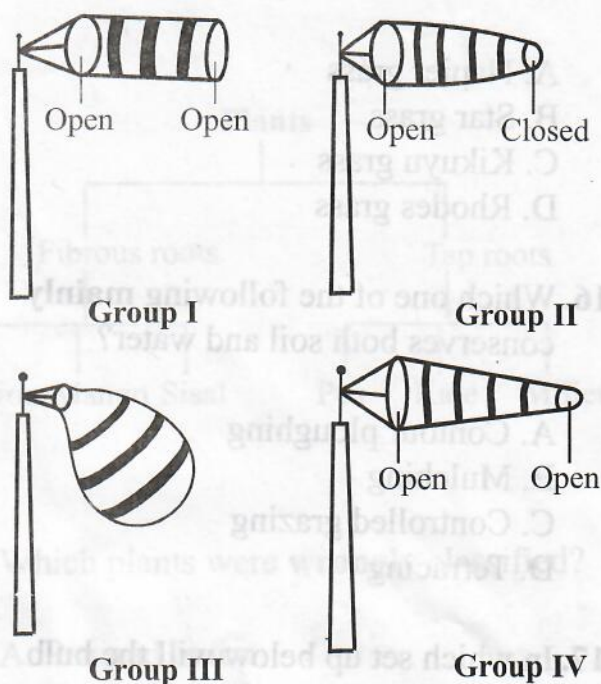


This method of control measure can be classified as

- A. creating public awareness
- B. mass education
- C. mass media
- D. voluntary counseling and testing.

7. Which one of the following is **not** a way in which HIV/AIDS can be transmitted?
- Through sexual intercourse.
 - Through breast feeding.
 - Mother to child during birth.
 - Sleeping with an infected person.
8. Which one of the following is **not** an excretory organ?
- Liver
 - Lungs
 - Kidneys
 - Skin
9. Which statement below is **correct** about blood components?
- Red blood cells - transport carbon dioxide to the lungs.
 - Platelet - Prevents clotting of blood.
 - Plasma - Allows blood to flow freely in our bodies.
 - White blood cells - They are biconcave in shape.
10. Which one of the following drugs is **most** commonly abused in Kenya?
- Tobacco
 - Cocaine
 - Alcohol
 - Miraa
11. A person infected with tuberculosis can **best** prevent himself from spreading the disease to others by
- being vaccinated against tuberculosis.
 - seeking immediate treatment.
 - observing high standards of hygiene.
 - living in a well-ventilated room.

12. Four groups of pupils constructed wind socks as shown below.



Which group constructed the **correct** wind sock?

- Group III
 - Group II
 - Group I
 - Group IV
13. Which one of the following farming activities is **not** likely to be carried out during dry season?
- Transplanting
 - Tilling land
 - Harvesting
 - Irrigation
14. All the following livestock parasites destroy the liver **except**
- roundworms
 - hookworms
 - tapeworms
 - liver flukes.

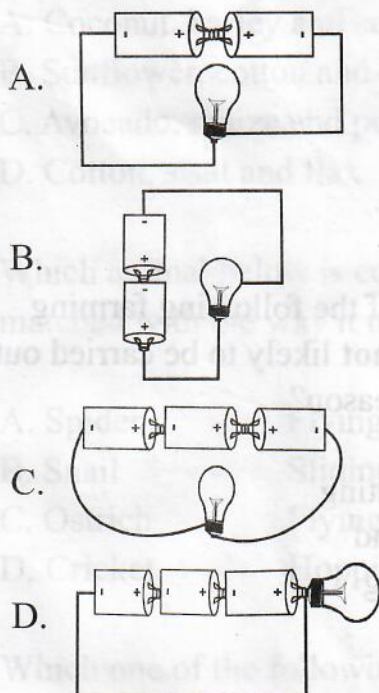
15. Which animal feed below is **least** suitable for making hay?

- A. Napier grass
- B. Star grass
- C. Kikuyu grass
- D. Rhodes grass

16. Which one of the following **mainly** conserves both soil and water?

- A. Contour ploughing
- B. Mulching
- C. Controlled grazing
- D. Terracing

17. In which set up below will the bulb light?



18. All the following substances have indefinite shape **except**

- A. water vapour
- B. smoke
- C. water
- D. sand.

19. Which pair of liquids below are **not** immiscible?

- A. Water and petrol
- B. Cooking oil and methylated spirit
- C. Kerosine and milk
- D. Methylated spirit and milk

20. Which gas is used by some plants to make protein?

- A. Carbon dioxide
- B. Nitrogen
- C. Oxygen
- D. Argon

21. The following are some of the ways of improving the rate of decomposition in a compost heap. Which one is **not**?

- A. Keeping the compost moist
- B. Adding a layer of top soil
- C. Adding a layer of wood ash
- D. Adding a layer of decayed material

22. Which statement below is **not correct** about clay soil?

- A. Spreads easily when dry
- B. Retains a lot of water
- C. Sticks when wet
- D. Has the best capillarity

23. Which component of soil is **least** affected when soil is thoroughly heated?

- A. Living organisms
- B. Air
- C. Humus
- D. Mineral particles

24. Which one of the following water pollutants is **most** likely to encourage the growth of water weeds?

- A. Oil
- B. Farm chemicals
- C. Soil
- D. Industrial waste

25. The following are signs and symptoms of a certain disease:

- (i) *Fever*
- (ii) *Itching at the bowel*
- (iii) *Rash and itchy skin*
- (iv) *Blood in urine and stool*

The above disease **cannot** be prevented by:-

- A. proper disposal of human waste
- B. draining stagnant water
- C. washing hands after visiting the toilet
- D. killing fresh water snails using chemicals.

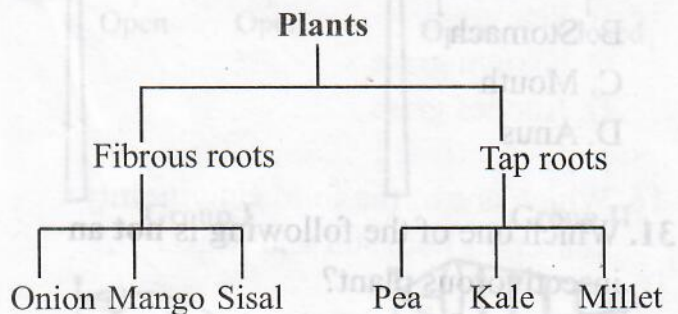
26. Which one of the following diseases is **not** immunisable?

- A. Measles
- B. Malaria
- C. Typhoid
- D. Pneumonia

27. An expectant mother who craves for soil lacks enough

- A. mineral salts
- B. fibre
- C. proteins
- D. vitamin D.

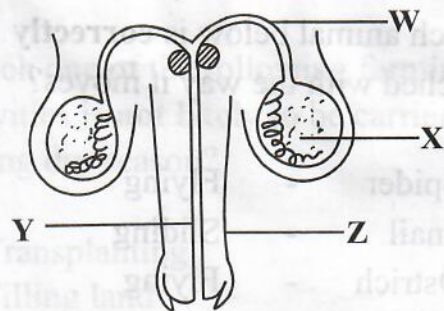
28. The chart below shows classification of plants by the type of their roots.



Which plants were **wrongly** classified?

- A. Pea and onion
- B. Kale and sisal
- C. Mango and kale
- D. Millet and mango

29. The diagram below shows parts of the male reproductive system of a human being.



Which letter represents the part that produces the male reproductive sex cells?

- A. X
- B. Y
- C. Z
- D. W

30. Which one of the following is **not** part of the alimentary canal?

- A. Pancreas
- B. Stomach
- C. Mouth
- D. Anus

31. Which one of the following is **not** an insectivorous plant?

- A. Sundew
- B. Butterwort
- C. Liverworts
- D. Bladder worts

32. Which group below are all oil crops?

- A. Coconut, barley and sunflower
- B. Sunflower, cotton and coconut
- C. Avocado, maize and peas
- D. Cotton, sisal and flax

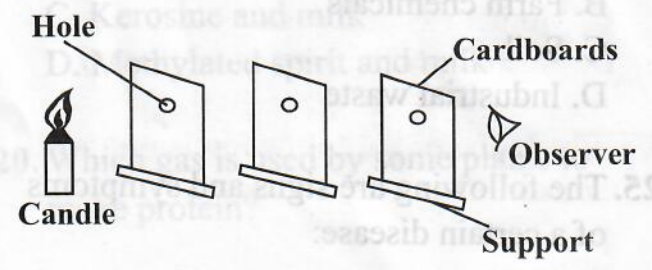
33. Which animal below is **correctly** matched with the way it moves?

- A. Spider - Flying
- B. Snail - Sliding
- C. Ostrich - Flying
- D. Cricket - Hopping

34. Which one of the following is **not** a special sound?

- A. Screaming
- B. Shouting
- C. Hooting of a car
- D. Fire engine siren

35. The experiment below was carried out to investigate a certain property of light.



From the above experiment, one can conclude that

- A. light cannot bend as it travels from one medium to another
- B. light travels in a straight line
- C. light can be reflected
- D. light travels in all directions.

36. All the following are ways of reducing friction. Which one is **not**?

- A. Increasing the surface area of the contact
- B. Streamlining
- C. Greasing the surface
- D. Using wheels, rollers and bearings

37. The gravitational pull applied on an object is called

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

38. Which material below is **not** needed when constructing a simple beam balance?

- A. Scale
- B. Nail
- C. Thread
- D. Lids

39. The following are signs and symptoms of nutritional deficiency diseases:

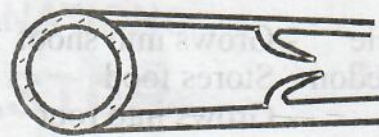
- (i) Sores at the corner of the mouth
- (ii) Almost all the body muscles disappear
- (iii) Severe loss of weight
- (iv) Some parts of the body begin to swell

A child who is not fed on enough quantity of balance diet is **most** likely to experience which signs?

- A. ii, iii
- B. i, ii, iii
- C. i, iv
- D. All the signs

7

40. The diagram below shows a blood vessel.



Which statement is **false** about the above blood vessel?

- A. It transports deoxygenated blood only.
- B. Blood flows at low pressure.
- C. It transports blood from other body organs to the heart.
- D. It has a thin wall which is less elastic.

41. Which ones of the following are both modern and traditional methods of preserving food?

- A. Canning and use of honey
- B. Salting and drying
- C. Use of low temperatures and drying
- D. Smoking and use of low temperatures

42. The diagram below shows a weather chart.

Day	Morning	Midday	Afternoon
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Which statement below is **correct** about the above weather chart?

- A. Whenever it was sunny in the morning, it was windy in the afternoon.
- B. Whenever it was calm at midday, it was windy in the afternoon.
- C. Whenever it was rainy in the morning, it was sunny in the afternoon.
- D. No day of the week was good for winnowing.

43. Which part of the bean seed is **correctly** matched to its function?

- A. Radicle - Grows into shoot
- B. Cotyledon - Stores food
- C. Testa - Grows into root
- D. Hilum - Allows air and water into the seed.

44. Which one of the following is the **correct** description of beaks of birds that feed on nectar? The beaks are

- A. curved, slender and cone-shaped
- B. thick, straight and long
- C. long, slender and straight
- D. curved, strong thick and long.

45. Which one of the following factors does **not** affect sinking and floating of an object?

- A. Density
- B. Type of material
- C. Shape
- D. Size

46. The following is a procedure of separating some mixtures:

- (i) Dissolve
- (ii) Filter
- (iii) Evaporate

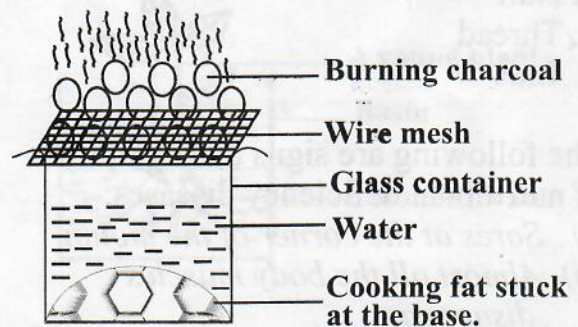
Which of the following mixtures can be **best** separated using the above procedure? A mixture of

- A. water, sugar and maize flour
- B. wheat flour and salt
- C. iron filings and soil
- D. sand and rice.

47. Which one of the following is **not** a safety precaution against electricity?

- A. Do not insert objects in electric sockets.
- B. Avoid scratching wires carrying electricity.
- C. Switch off lights when not in use.
- D. Do not overload elastic sockets.

48. Red hot burning charcoal was placed on a wire mesh over a glass jar containing cooking fat and water as shown below.



It is **true** to say that:

- A. the fat melted due to convection in liquids.
- B. cooking fat melted as a result of radiation.
- C. the fat did not melt because there was no convection.
- D. the fat did not melt because water is a poor conductor of heat.

49. Which maintenance practice of tools is **correctly** matched with its purpose?

- A. Proper storage - To use tools frequently
- B. Repairing broken handles - To access tools easily
- C. Cleaning after use - To avoid accidents
- D. Greasing - To prevent rusting

50. Which one of the following is **true** about fertilizers?

- A. They are not easy to transport.
- B. Excessive use is not harmful to the soil.
- C. Results in high growth rate in crops.
- D. They improve the water retention in soil.