

SOARING HIGH IN KCPE EXAM



SECOND PREDICTION 2021

SCIENCE

Time: 1 hour 40 minutes

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 only an ordinary pencil.
5. Make sure that you have written on the answer sheet:

YOUR INDEX NUMBER
YOUR NAME
NAME OF YOUR SCHOOL

SCIENCE

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 mark outside the boxes.
8. Keep the answer sheet as clean as possible and **DO NOT FOLD IT**.
9. For each of the questions 1-50, 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 the correct answer is to be shown by drawing a **dark line** inside the box in which the letter you have chosen is written.

Example

In The Question Booklet.

24. Animals that feed on plants **ONLY** are called _____.

- A. rodents
- B. omnivorous
- C. carnivores
- D. herbivorous

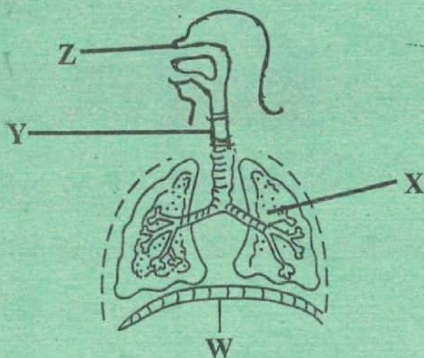
The correct answer is **D** on the answer sheet:

20 [A] [B] [C] [D] 21 [A] [B] [C] [D] 22 [A] [B] [C] [D] 23 [A] [B] [C] [D] 24 [A] [B] [C] [D]

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

This questions papers consist of 8 printed pages

- In one of the following parts, digestion of food takes place but no digestive juice is produced. Which one is it?
 - Mouth
 - stomach
 - Duodenum
 - Ileum
- The diagram below shows the human breathing system



In which pair of parts labeled W,X,Y and Z is air cleaned, warmed and moistened?

- W and X
 - X and Y
 - W and Z
 - Y and Z
- A person looks healthy, tested negative and could infect others. The stage of HIV/AIDS the person likely to be is ?
 - Window
 - Incubation
 - Symptomatic
 - Full blown

- Which of the following sexually transmitted diseases is not caused by a bacteria?
 - Syphilis
 - gonorrhoea
 - HIV/AIDS
 - chancroid

- Which one of the following pairs of planets takes the shortest time to go round the sun.
 - Mars and Mercury
 - Venus and Jupiter
 - Earth and Saturn
 - Mercury and Venus

- In order to make a certain weather instrument, a pupil assembled the following materials.
 - a sheet of aluminium metal
 - some short and long nails
 - wooden planks
 - a biro pen casing

Which one of the following instruments was the pupils likely to make?

- wind vane
 - liquid thermometer
 - rain gauge
 - windsock
- Three of the following are some adaptations of plants that grow in dry areas except.
 - Very small leaves
 - reduced number of stomata
 - thin stem cuticle
 - reserved opening and closing of the stomata

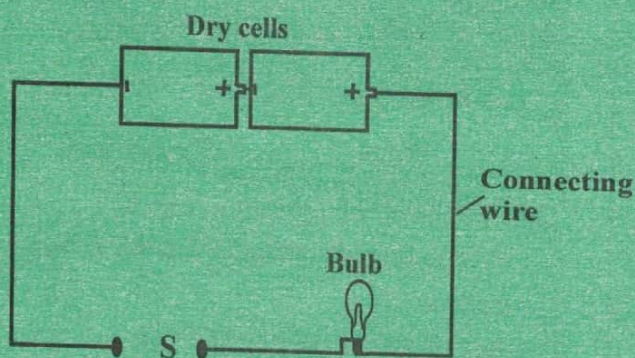
8. Which one of the following groups consists only of storage pests.

- A. Weevils, aphids, weaver birds
- B. aphids, weaver birds, white ants
- C. Weevils, white ants, stalk borers
- D. weevils, white ants, rats

9. Which one of the following is a characteristic of reptiles

- A. lay their eggs in water
- B. live partly in water
- C. have internal fertilization
- D. breathe through gills in water

10. Pupils investigating good and poor conductors of electricity used a set-up shown in the diagram below.



Material E when used to connect wires at position S would make the bulb not light and material F would make the bulb light.

Materials E and F are likely to be

- A. Pencil and iron nail
- B. Paper sheet and piece of thread
- C. Cello tape and silver coin
- D. Aluminium foil and razor blade

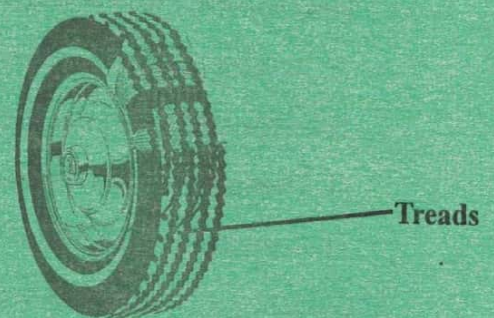
11. In which of the following activities is water used for recreation

- A. cleaning tools and equipment
- B. boat racing
- C. washing cars
- D. watering plants

12. Which one of the following is an advantage of soft water?

- A. saves soap during washing
- B. does not lather easily with soap
- C. used in the brewing industry
- D. forms scum with soap

13. The diagram below represents a tyre of a vehicle.



The treads on the vehicle tyre

- A. improve grip on the road
- B. control the direction of movement
- C. reduce the force that hinders movement
- D. make it last longer

14. The following are methods of maintain simple tools

- i) Cleaning after use
- ii) Proper storage
- iii) Sharpening cutting edges
- iv) Proper use of tools

Which of the methods increases the efficiency of a machine

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

15. Which of the following components of air is used for making fire extinguishers one that has _____

- A. 78%
- B. 21%
- C. 0.03%
- D. 0.97%

16. Which one of the following pairs of processes are as a result of losing heat and absorbing heat respectively?

- A. melting and evaporating
- B. evaporating and melting
- C. freezing and condensing
- D. condensing and evaporating

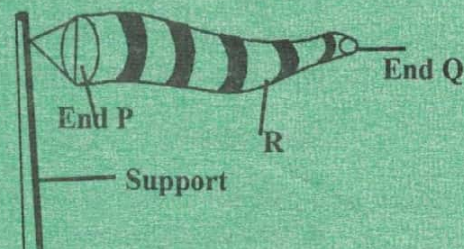
17. Which one of the following is true about solids and liquids?

- A. they have a definite volume
- B. they have a definite shape
- C. they have an indefinite mass
- D. they have an indefinite weight

18. Which one of the following mixtures cannot be separated easily?

- A. salt and sugar
- B. sand and wheat flour
- C. rice and small stones
- D. copper and steel

19. The diagram below shows an improvised windsock.



The part labeled R should

- A. have end P open and end Q closed
- B. be painted in big bright strips
- C. have end Q larger than end P
- D. be made of a light polythene sheet

20. Formation of a rainbow can be demonstrated by the following activities except when

- A. observing the sun through a horizontally held transparent biro pen casing
- B. placing a mirror in water to face the sun
- C. spraying water in the air from the mouth in bright sunshine
- D. placing a biro pen casing on water in a glass container

21. Which one of the following is not a source of natural light?

- A. moon
- B. sun
- C. Erupting volcano
- D. fire flies

22. Which one of the following consists of food that mainly protect us from diseases?

- A. beef, cassava, potatoes
- B. mutton, maize, pawpaw
- C. peas, beans, eggs
- D. mangoes, cabbages, kales

23. The diagram below shows a type of clouds



The presence of the type of clouds shown is a sign of

- A. low temperatures
- B. fine weather
- C. strong winds blowing
- D. heavy rain falling soon

24. Which of the following pairs shows the correct use of rare gases?

- A. Germination and burning
- B. advertisements and making electric bulbs
- C. extinguishing fire and breathing
- D. respiration and photosynthesis

25. Which one of the following is mostly polluted when farmers excessively use farm chemicals?

- A. Water
- B. soil
- C. air
- D. crops

26. Which one of the following is a function of plasma?

- A. carrying oxygen
- B. clotting of blood
- C. fight germs
- D. carrying waste products

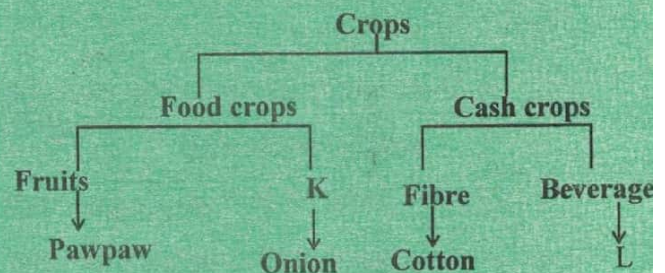
27. The following are some effects of drug abuse

- i) Rape
- ii) Addiction
- iii) Truancy
- iv) Impaired judgment
- v) Drug induced accidents

Which one of the following pairs consists of health and Social effects respectively

- A. i, iii
- B. ii, iv
- C. ii, v
- D. i, v

28. The chart below represents a simple classification of crops



Which one of the following options correctly represents K and L

- A. Vegetable and Sunflower
- B. Legume and Coconut
- C. Vegetable and Coffee
- D. Tuber and Tea

29. Which one of the following plants are likely to be found growing in soils that lack nitrogen?

- A. Pitcher plant and sundew
- B. Mushroom and butter wort
- C. Sunflower and toadstool
- D. Sundew and toadstool

30. The diagram below shows the type of arrangement of teeth on the jaws of a certain animal.



The part labeled X is for

- A. holding vegetable material tightly
- B. allowing space for more food
- C. preventing the animal from biting its tongue
- D. turning vegetable material in the mouth for chewing

31. Which one of the following animals can be kept for producing milk for sale?

- A. Goat and cow
- B. Sheep and Pig
- C. Poultry and cattle
- D. Sheep and goats

32. The following are characteristics of animals

- i) Internal fertilization
- ii) have scales
- iii) lay eggs in water
- iv) Breathe through lungs

Which two characteristics are true for fish only?

- A. i,ii
- B. ii,iv
- C. ii,iii
- D. iv,iii

33. The method of grazing whereby a rope is the main requirement is

- A. Tethering
- B. Herding
- C. Paddocking
- D. Stall feeding

34. Which one of the following pairs of machines is made up of levers only?

- A. Spade and crowbar
- B. ladder and staircase
- C. staircase and wheelbarrow
- D. claw hammer and ladder

35. In which one of the following is friction a disadvantage?

- A. Having treads on tyres
- B. Breaking of a bicycle on road
- C. Shoes having rough soles
- D. Production of heat on moving parts

36. In an investigation on factors affecting floating and sinking pupils carried out the following activities.

- i) Cut a small piece of copper wire and put it in water
- ii) Cut a longer piece of copper wire and put it in water

Which of the following factors were the pupils investigating?

- A. Material
- B. size
- C. mass
- D. shape

37. Which one of the following does not require a medium to pass?

- A. Electricity and sound
- B. heat and light
- C. sound and light
- D. electricity and heat

38. Which one of the following is an opaque material?

- A. Kerosene
- B. Mirror
- C. frosted glass
- D. clean water

39. Which one of the following is a safety measure against current electricity?

- A. Leaning against the wall.
- B. not sheltering under a tree
- C. not operating switches with wet hands
- D. not being a tallest object in an open space.

40. A mother who has just given birth needs a lot of iron in order to _____

- A. produce enough milk
- B. formation of blood for the baby
- C. formation of strong bones for the baby
- D. to replace blood lost during parturition

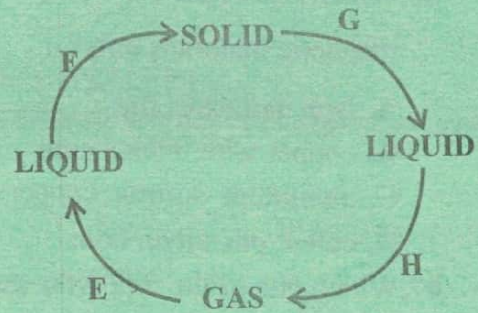
41. Which one of the following methods conserves soil by conserving soil moisture?

- A. terracing
- B. mulching
- C. tree planting
- D. contour farming

42. When pupils put some soil in a container with water, they saw bubbles coming out, this indicated presence of

- A. Air in the soil
- B. organic matter
- C. mineral particles
- D. water in the soil

43. The diagram below represents processes E, F, G and H which bring out changes in states of water.



The processes which requires decrease in temperatures are presented by?

- A. E and F
- B. C. G and F
- C. G and H
- D. D. E and H

44. The following are characteristics of soil

- i) Fine particles
- ii) cracks when dry
- iii) large particles
- iv) good water retention
- v) good drainage

Which of the following are characteristics of the soil that has a lot of air in it?

- A. i,ii
- B. iii,iv
- C. iii,v
- D. ii,iii

45. A teacher described a certain weed as follows:

- i) has large white flowers
- ii) fruits have thorns

Pupils identified the weed as

- A. Mexican Marigold
- B. Pig weed
- C. Black jack
- D. Datura

46. Which one of the following has magnetic materials only?

- A. Iron nail, steel rod
- B. copper wire, nickel coin
- C. aluminum sulfuria, copper coin
- D. cobalt pin, silver coin

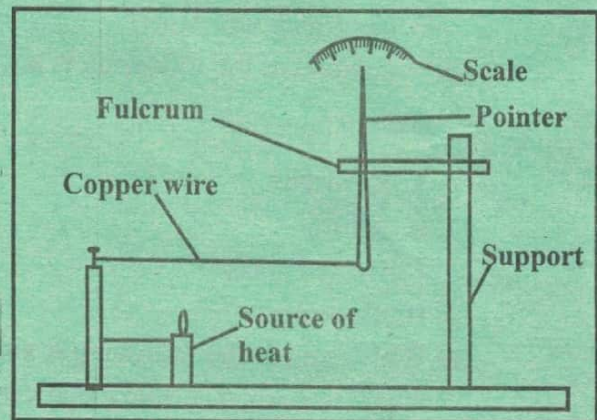
47. Which one of the following gases makes approximately 21% in air

- A. Oxygen and nitrogen
- B. Oxygen and carbon dioxide
- C. carbon dioxide and rare gases
- D. rare gases and nitrogen

48. Which one of the following does not pollute soil?

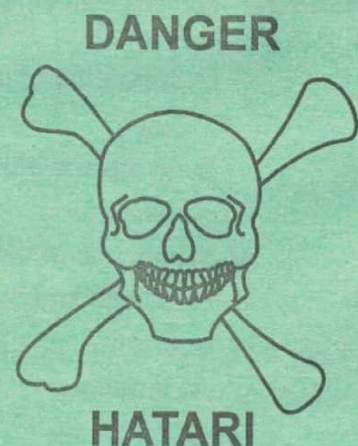
- A. Excess fertilizers
- B. engine oil
- C. organic waste
- D. polythene papers

49. The diagram below represents a set-up that can be used to demonstrate a certain aspect of matter



The aspect that can be demonstrated is

- A. conduction and convection
 - B. conduction and contraction
 - C. expansion and convection
 - D. expansion and contraction
50. The sketch below represents a safety sign when dealing with electricity



The sign is warning not to

- A. overload electricity socket
- B. use appliances with damaged plugs
- C. play near electrical equipment
- D. insert objects into electricity

10-50
1-40
14-30