



# TARGETER KCPE PREDICTION STANDARD EIGHT - YEAR 2022

# 1

## SCIENCE

Time: 1 hour 40 mins

**INSTRUCTIONS TO CANDIDATES (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 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 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.

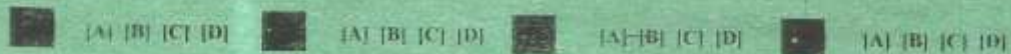
**Example:-**

**In the Question Booklet:**

16. Which component of blood transports carbon dioxide?
- A. White cells
  - B. Plasma
  - C. Red cells
  - D. Platelets

The correct answer is **B**.

**On the Answer sheet:**



In the set of boxes number 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.



This question paper consists of 8 printed pages.

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TURN OVER

1. Which of the following statements about sound is false?
  - A. Can be reflected
  - B. Is transmitted at different speeds in different states of matter
  - C. Is a form of energy
  - D. Travels best in air
  
2. Standard 7 pupils mixed different liquids in four glasses as given below
 

Glass E - Water and petrol

Glass F - Spirit and kerosene

Glass G - Kerosene and cooking oil

Glass H - Methylated spirit and diesel

Which glass contains liquids that cannot be separated by decanting?

  - A. F
  - B. E
  - C. G
  - D. H
  
3. The following are methods of preserving food.
  - (i) Canning
  - (ii) Use of low temperatures
  - (iii) Salting
  - (iv) Drying
  - (v) Freezing

Which methods are both traditional and modern?

  - A. (iii) and (iv)
  - B. (i) and (iii)
  - C. (ii) and (iv)
  - D. (iv) and (v)
  
4. The principle behind the working of a rain gauge is that
  - A. liquids expand when heated
  - B. matter occupies space
  - C. liquids contract when cooled
  - D. water has a definite shape.
  
5. Which one of the following consists of health effects of drug abuse?
  - A. Rape and lack of concentration
  - B. Fits and withdrawal symptoms
  - C. Addiction and drug-induced accidents
  - D. Lack of concentration and truancy.
  
6. Which one of the following groups of crops consists of fibre crops only?
  - A. Cotton, sisal, flax
  - B. Castor seed, sisal, cotton
  - C. Cotton, coconut, groundnut
  - D. Wheat, rice, sisal
  
7. Which one of the following components of soil improves soil aeration?
  - A. Living organisms
  - B. Organic matter
  - C. Water
  - D. Mineral particles
  
8. Which one of the following simple machines can be put in the same group with a claw hammer?
  - A. Wheelbarrow
  - B. Crow bar
  - C. Spade
  - D. Shovel

9. A certain soil has the following properties

- (i) It is less porous
- (ii) It is found in anthills
- (iii) It is sticky when wet
- (iv) It has little air space

The soil described above is also likely to

- A. cause flooding.
- B. have good drainage
- C. have low capillarity
- D. have big particles

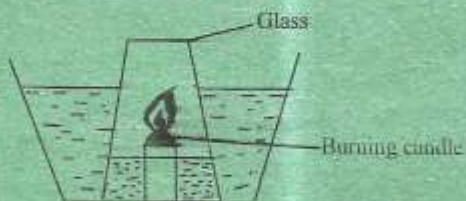
10. Which one of the following methods of separating mixtures is the most appropriate for separating a mixture of cement and beans?

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

11. Which one of the following is **not** a way of increasing friction?

- A. Making the surfaces in contact rough
- B. Using ball bearings
- C. Using treaded wheels
- D. Increasing the weight of the bodies in contact

12. The diagram below shows a set-up that was used by standard 7 pupils to demonstrate a certain property of air.



Which one of the following statements is **not** true about the set-up?

- A. Part of air is used in burning
- B. The water level in the basin went up
- C. A fifth of the glass was filled with water
- D. The candle stopped burning after sometime.

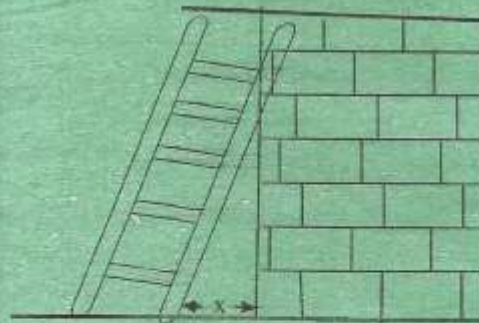
13. For fast decomposition of compost manure, all the following should be done **except**

- A. adding top soil to the compost heap
- B. adding animal manure to the compost
- C. sprinkling water during the dry season
- D. keeping the compost wet

14. Which of the following materials can be attracted by a magnet?

- A. Steel wool
- B. Copper wire
- C. Aluminium plate
- D. Silver coin

15. The diagram below shows a certain simple machine.



What is likely to happen if the distance X is decreased?

- A. The effort used will be reduced
- B. The amount of work done will be reduced
- C. The effort will be increased
- D. The effort used will be the same

16. Three of the following are renewable sources of energy **except** one. Which one is it?

- A. Charcoal
- B. Petrol
- C. Biogas
- D. Wind

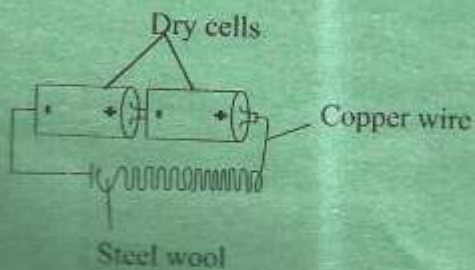
17. The diagram below represents the structure of human heart.



It is true to say that

- A. Q carries oxygenated blood
- B. the blood carried by S is bright red in colour
- C. T carries deoxygenated blood
- D. R is the pulmonary vein.

18. The diagram below represents a simple electric circuit.



Which is the correct energy transformation that takes place in the above circuit?

- A. Chemical  $\rightarrow$  Electrical  $\rightarrow$  Heat  $\rightarrow$  Light

B. Chemical  $\rightarrow$  Heat  $\rightarrow$  Electrical  $\rightarrow$  Light

C. Electrical  $\rightarrow$  Chemical  $\rightarrow$  Light  $\rightarrow$  Heat

D. Electrical  $\rightarrow$  Heat  $\rightarrow$  Chemical  $\rightarrow$  Light

19. Which one of the following materials is **not** required when investigating pressure in liquids?

- A. Nail
- B. Cotton wool
- C. Water
- D. Plasticine

20. The following are signs and symptoms of a certain deficiency disease.

- (i) Wasted muscles
- (ii) Baby cries a lot
- (iii) Bow-legged
- (iv) Wrinkled face
- (v) Brown hair

Which of the above symptoms are for Marasmus?

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

21. The diagram below shows a bird's beak.

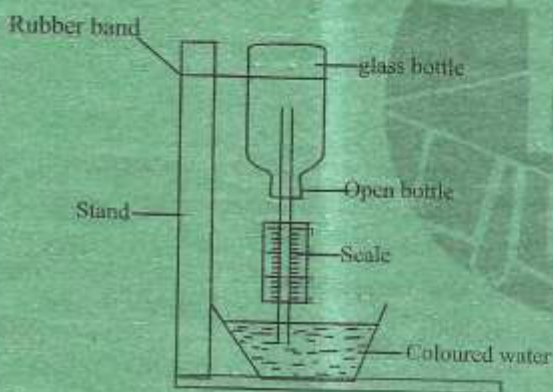


The bird is likely to feed on

- A. nectar  
B. grains  
C. flesh  
D. fish
22. Which one of the following pairs consists of storage pests?  
A. White ants and mice  
B. Cutworms and termites  
C. Weevils and aphids  
D. Stalk borers and rats
23. Which one of the following is **not** a water pollutant?  
A. Aerosol sprays  
B. Untreated sewage  
C. Floods  
D. Acid rain
24. Clouds that are found low in the sky are also likely to be  
A. white in colour  
B. sign of fine weather  
C. like bundles of cotton wool  
D. dark grey in colour
25. Which one of the following materials will **not** form a shadow when light is shone on it?  
A. Glass of a lamp  
B. A stone  
C. Mirror  
D. Coloured polythene paper
26. Which of the following pairs of diseases is **not** immunized against at the sixth week and tenth week?  
A. Measles  
B. Whooping cough  
C. Diphtheria  
D. Tetanus
27. The temperature at which a substance freezes is the same temperature at which the substance  
A. evaporates  
B. boils  
C. condenses  
D. melts
28. Plants with strong scent, sticky stigma and firmly attached anthers are also likely to have  
A. heavy pollen grains  
B. hairy stigma  
C. small petals  
D. stigma hanging outside
29. What is the function of carnassial teeth in carnivores?  
A. Holding flesh  
B. Biting preys  
C. Crushing bones  
D. Rolling food

30. Which one of the following is **not** an effect of HIV and AIDS on an individual?
- A. Lack of parental love and care
  - B. Poor health.
  - C. Low self esteem
  - D. Stigmatization

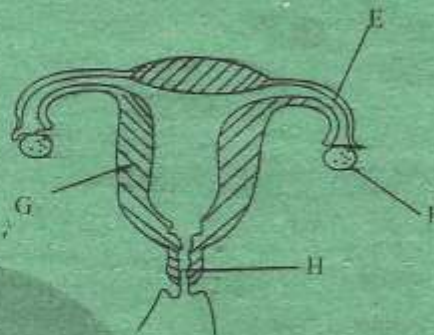
31. The diagram below shows an air thermometer constructed by standard 5 pupils.



The instrument did **not** measure the temperature accurately because

- A. the scale reads from top to bottom
  - B. coloured water was used
  - C. glass bottle was placed upside down
  - D. glass bottle was open
32. Which one of the following is an adaptation of plants in wet areas?
- A. Thin cuticle
  - B. Succulent stem
  - C. Sunken stomata
  - D. Thick waxy cuticle

33. The diagram below shows parts of a female reproductive system



Implantation takes place in the part marked

- A. E
  - B. F
  - C. G
  - D. H
34. Which one of the planets given below is the hottest?
- A. Mercury
  - B. Mars
  - C. Venus
  - D. Earth
35. The function of the C-shaped rings found in trachea is to
- A. enable exchange of gases
  - B. hold the trachea in the place
  - C. filter air passing through the trachea
  - D. keep the trachea open

36. Which one of the following is **not** an effect of livestock parasites?
- A. Smooth coat
  - B. Anaemia
  - C. Poor health
  - D. Irritation

37. Which one of the following pairs of sources of electricity produces electricity the same way?
- Bicycle dynamo and dry cells
  - Car battery and diesel generator
  - Wind driven generator and dry cell
  - Diesel generator and bicycle dynamo
38. Which one is **not** excreted by the skin?
- Urea
  - Carbon dioxide
  - Excess water
  - Mineral salts
39. The following are characteristics of soil erosion.
- V-shaped trenches in the ground*
  - Small holes in the ground*
  - Shallow channels in the ground*
  - Thin holes in the ground*
- Which effects are as a result of splash and rill types of erosion respectively?
- (i) and (ii)
  - (ii) and (iv)
  - (ii) and (iii)
  - (iv) and (iii)
40. Which one of the following groups of foodstuffs consists of only those that protect the body against diseases?
- Groundnuts, fish, beans
  - Meat, orange, spinach
  - Rice, maize, sweet potatoes
  - Lemon, carrot, cabbage
41. Digestion of food does **not** take place in the
- colon
  - ileum
  - stomach
  - mouth
42. Which of the following is **not** a way of conserving energy?
- Using biogas for cooking
  - Planting more trees
  - Using kerosene stoves for cooking
  - Using solar panel to produce electricity
43. Samson was walking towards Sothom direction past an airstrip. He saw a windvane with arrowhead pointing to his right. In which direction was the wind blowing from?
- East
  - West
  - North
  - South
44. How does excessive use of herbicides and pesticides affect soil? By reducing
- nutrients in the soil
  - humus content in the soil
  - water retention in the soil
  - the number of animals in the soil

45. Which one of the following groups consists of non-green plants only?

- A. Pine, banana, mushroom
- B. Moss, cabbage, algae
- C. Moulds, mushroom, toadstools
- D. Mucus, liverwort, fern

46. A single fixed pulley makes work easier by

- A. changing the direction of force
- B. reducing friction
- C. reducing the effort applied
- D. making the slope gentle

47. The following are effects of a certain drug

- (i) *Poor reasoning*
- (ii) *Breathing problems*
- (iii) *Memory loss*
- (iv) *Causes drowsiness*
- (v) *Staggering*

Which of the following drug is described above?

- A. Alcohol
- B. Cocaine
- C. Mandrax
- D. Bhang

48. Which one of the following crops is not a fodder crop?

- A. Napier grass
- B. Sweet potato vines
- C. Oats
- D. Star grass

49. Which one of the following is not an adaptation of animals adapted to flying?

- A. Wings
- B. Hollow bones
- C. Streamlined bodies
- D. Webbed feet

50. The diagram below shows a human tooth.



The following are functions of the above tooth **except**

- A. grinding
- B. chewing
- C. holding
- D. crushing