



507

KCPE FIRST TRIAL STANDARD EIGHT - 2022

Time: 1hr. 40 Mins.

SCIENCE

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. When you have chosen your answer mark it on the **ANSWER SHEET**, not in the question paper.
HOW TO USE THE ANSWER SHEET.
3. Use an ordinary pencil only.
4. Make sure that you have written on the answer sheet:-
YOUR INDEX NUMBER
YOUR NAME
NAME OF YOUR SCHOOL
5. 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.
6. Do not make any marks outside the boxes.
7. Keep your answer sheet as clean as possible and **DO NOT FOLD IT**.
8. 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.
9. 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

17. Which of the following mixture cannot be separated using a magnet?

- A. Iron and steel
- B. Aluminium and iron
- C. Zinc and steel
- D. Silver and steel

The correct answer is A

On the answer sheet:

17. [A] [B] [C] [D] 18. [A] [B] [C] [D] 19. [A] [B] [C] [D] 20. [A] [B] [C]

[D]

In the set of boxes number 17, the box with letter A printed in it is marked.

10. Your **dark line** **MUST BE** within the box.

11. 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

1. Which one of the following is the main function of the rectum in the human digestive system? To
- absorb water and mineral salts
 - produce digestive juice
 - absorb digested foods
 - store undigested food

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

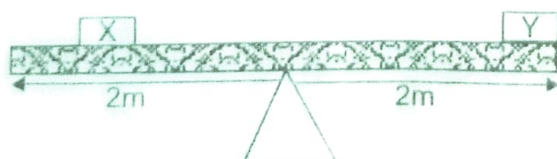
- Rapid heart beats
- Wrinkled face
- Thin and weak
- Swollen body parts
- Wasted muscles
- Dizziness

Which of the above signs and symptoms can be prevented by taking minerals?

- i, vi
 - ii, iii
 - iv, v
 - iii, vi
3. Which of the following diseases is correctly matched with its time of immunization?

	Disease	Age of immunization
A.	Measles	Nine months
B.	Tuberculosis	Six weeks
C.	Tetanus	Birth
D.	Whooping cough	Nine months

4. The diagram below represents a see-saw. Which of the following statements is true?



- X is lighter than Y
- Y is heavier than X
- The pivot was moved towards X to balance
- For Y to balance with X, Y was moved closer

5. The following are steps followed when modelling the solar system.

- Placing the name tags
- Fix the models
- Drawing the circles
- Model the planets
- Place the manilla paper
- Place the sun

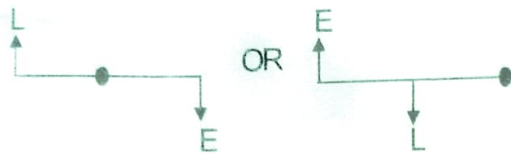
The correct order of modelling the solar system is

- iv, ii, v, iii, vi, i
 - iv, v, ii, iii, vi, i
 - vi, iii, ii, v, iv
 - iv, v, ii, vi, iii, i
6. Which of the following shows the correct stages of foetal development?
- Baby → Foetus → Embryo → Zygote
 - Embryo → Zygote → Foetus → Baby
 - Zygote → Embryo → Foetus → Baby
 - Zygote → Embryo → Baby → Foetus

7. Which of the following liquids cannot be separated by decanting?

- Kerosene and oil
- Milk and turpentine
- Water and petrol
- Paraffin and spirit

8. A certain lever can be represented as follows when in use

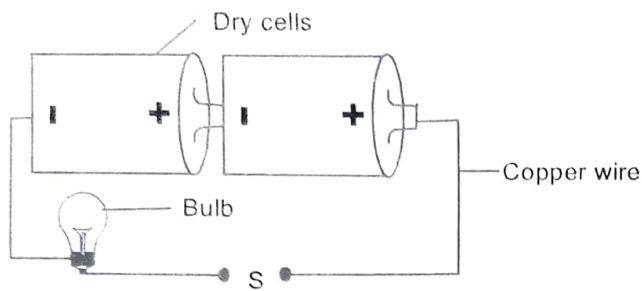


Which of the following tools can be represented using these illustrations?

- A. Wheelbarrow
B. Crowbar
C. Claw hammer
D. Spade
9. Which of the following is **not** a function of placenta?
A. Facilitate exchange of oxygen from the foetus to the mother
B. Prevent entry of harmful germs from the mother
C. Stores waste from the foetus
D. Produces hormones that helps to stop menstruation
10. During the construction of a certain weather instrument, the following materials were used:
i) A plastic large bottle
ii) A small bottle
iii) A manilla paper
iv) A cellotape
Which of the following weather instrument were they likely to construct?
A. Liquid thermometer
B. Air thermometer
C. A windsock
D. Rain gauge

11. Which of the following parasites is correctly matched to the part of the livestock it attacks?
A. Tapeworm - liver and lung
B. Roundworm - intestines and stomach
C. Lungworms - brain and stomach
D. Liverfluke - liver and brain
12. Which of the following is the next step when separating a mixture of maize, salt and sand after picking?
A. Winnowing
B. Dissolving
C. Evaporation
D. Filtering
13. The main component of urine is
A. salt and water
B. salt and urea
C. toxic substances and salts
D. water and urea
14. Which of the following food crops consist of stem tubers only?
A. Sweet potato, carrot, cassava
B. Yam, irish potato, ginger
C. Sugarcane, cactus, irish potato
D. Cassava, arrowroot, yam

15. The diagram below was used to investigate good and poor conductors of electricity.

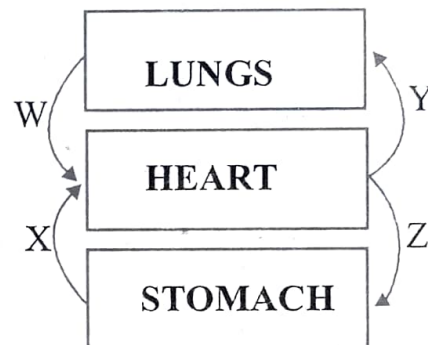


Which material can be placed at S for the bulb to light?

- A. Graphite
 C. Plastic
 C. Chalk
 D. Shiny glass
16. Which one of the following groups shows the natural sources of light only?
- A. Lamp, torch, electricity
 B. Sun, moon, stars
 C. Glowworm, firefly, stars
 D. Candle, moon, fire
17. Which of the following is **not** true about the force used to stop a moving object?
- A. It should be equal to that of the moving object
 B. Should be applied to the opposite direction
 C. It may not stop the object if it is less than that of the object
 D. It should be greater than that of the moving object

18. Mulching is a method of conserving water. It mainly conserves by
- A. preventing the growth of weeds
 B. reducing evaporations
 C. preventing soil erosion
 D. adding humus when it decays

19. The diagram below represents a simplified blood circulatory system.



Which pair of blood vessels carry oxygenated blood?

- A. W and X
 B. Z and Y
 C. W and Z
 D. Y and X
20. Below is an illustration of a food chain in a certain habitat.

Maize → Mice → Snake → Hawks

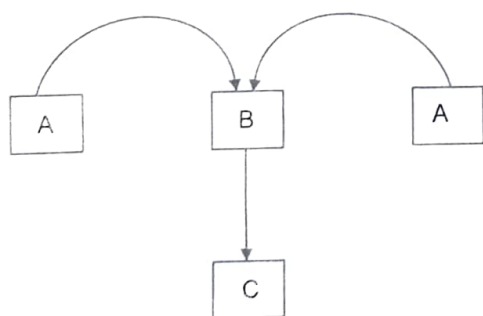
Which of the following animals is in the same level with mice?

- A. Bacteria
 B. Lion
 C. Goat
 D. Vulture

21. All the following is true about pressure in liquids **except**
- pressure in liquids decreases with increase in depths
 - pressure in liquids is equal at the same level
 - pressure in liquids is exerted in all directions
 - pressure in liquids decreases with increase in height

22. Which of the following list consist of social effects of drug abuse only?
- Poor concentration, rape, truancy
 - Fits, rape, withdrawals
 - Loss of income, fighting, truancy
 - Accidents, memory loss, coma

23. The diagram below represents a method of compost preparation.

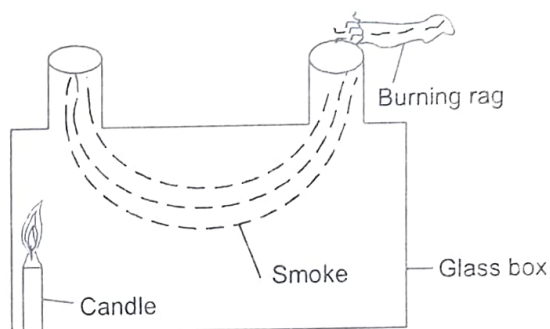


Which of the following is true about the method above? Manure

- improves the soil structure
- contains specific plant nutrients
- pollutes the soil if used excessively
- does not remain in the soil for a long time

24. Which pairs consist of sources of electricity produced in the same way?
- Petrol and car battery
 - Solar panel and dry cells
 - Solar panel and geothermal
 - Dynamo and wind turbine

25. The diagram below represents an experiment that was used to investigate a certain aspect.



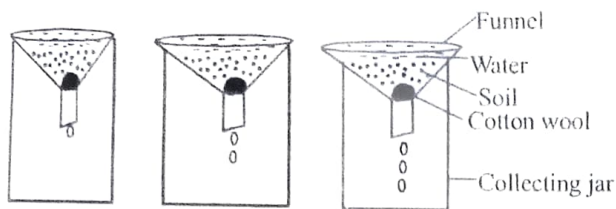
The main purpose of using the candle is to

- produce smoke for visibility
- warm the air
- attract the smoke
- provide light in the box to help in visibility

26. Which of the following consist of non-living components of the environment?
- Animals, plants, air
 - Plants, air, soil
 - Water, soil, air
 - Animals, air, water

27. Which of the following materials will **not** sink even if their shape is changed?
- Wax, wood, plastic
 - Aluminium foil, bottle top, wax
 - Nail, stone, needle
 - Pin, ice cube, stone

28. The diagram below represents drainage in different types of soil.



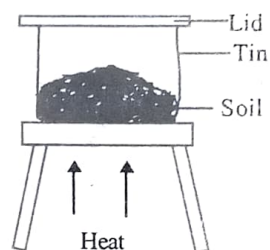
Which of the following need not to be the same during the experiment?

- A. Amount of soil
 B. Amount of cotton wool
 C. Amount of water
 D. Types of soil
29. A flower that produces less pollen grains does not have the following characteristics **except**
- A. light pollen grains
 B. sticky stigma
 C. stigma hanging outside
 D. small in size
30. A certain cloud has the following characteristics:
- Dark grey in colour*
 - Mountainous in shape*
 - Found low in the sky*
 - Round tops*
- The cloud is also likely to
- A. cover the whole sky
 B. have flat bottom
 C. look like bundles of cotton wool
 D. indicate fine weather
31. Which one of the following groups consists of magnetic materials only?
- A. Steel wool, aluminium foil, pins
 B. Plastic, wood, glass
 C. Razor blade, office pins, needle
 D. Tin, copper, zinc

32. In which of the following methods of rotational grazing is the land divided using permanent fences?

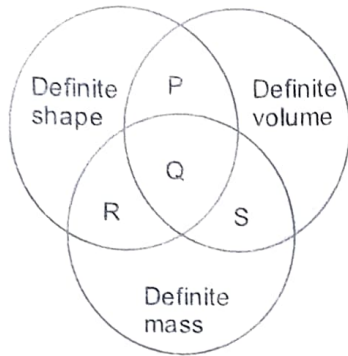
- A. Tethering
 B. Stall feeding
 C. Strip grazing
 D. Paddockging

33. Which of the following soil components was investigated using the activity below?



- A. Air in soil
 B. Moisture
 C. Organic matter
 D. Living organisms
34. All the following are safety measures when handling electricity **except**
- A. avoid leaning on walls when it is raining
 B. avoid going near equipment with danger signs
 C. do not overload sockets
 D. do not touch electricity switches with wet hands
35. Which of the following forms of energy must require a medium of transfer?
- A. Heat and light
 B. Light and sound
 C. Sound and electricity
 D. Heat and electricity

36. The diagram below shows properties of states of matter.



Which materials can be represented by letter S?

- A. Water and methylated spirit
 B. Smoke and water vapour
 C. Nitrogen and dust
 D. Sawdust and steam
37. All the following crop pests are correctly matched to the damage it causes **except**
- A. weevils - bore holes in grains
 B. aphids - sucks plant sap
 C. stalkborer - make large holes on leaves
 D. birds - eat seedlings

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

- i) *Violent diarrhoea with mucus*
 ii) *Vomiting*
 iii) *Dehydration*
 iv) *Abdominal pains*

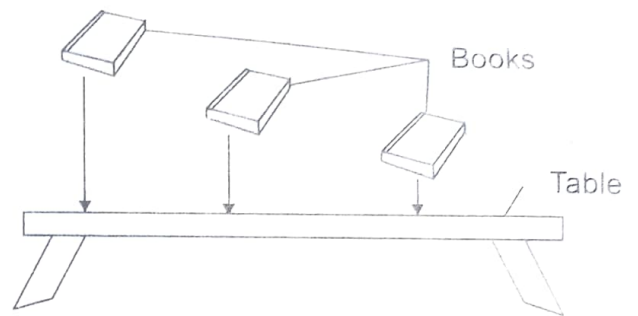
The disease described is likely to be

- A. typhoid
 B. malaria
 C. cholera
 D. bilharzia

39. Which of the following is an effect of HIV/AIDS to the nation?
- A. Low self esteem
 B. Increased orphans
 C. Increased school drop out
 D. Stigmatization
40. Which of the following sources of food provide proteins?
- A. Beans, peas, maize
 B. Coconuts, termites, locusts
 C. Avocado, honey, meat
 D. Green banana, porridge, chapati
41. A person who warms himself beside a burning fire, the heat reaches his legs through the process of
- A. radiation
 B. convection
 C. conduction
 D. reflection
42. Which of the following is the main importance of using commercial feeds?
- A. To supplement other feeds given to the livestock
 B. To increase production of livestock products
 C. To prevent animals from diseases that attack them.
 D. To provide energy to livestock when growing up

43. Which of the following is **not** an effect of parasites on livestock ?
- Irritation
 - Transmission of diseases to human beings
 - Anaemia
 - Quality products
44. The best method to prevent tuberculosis is by
- immunization at birth
 - living in a well ventilated room
 - avoid dusty places
 - boiling milk before drinking
45. Which of the following is **not** a proper use of medicine?
- Follow doctors prescription when buying medicine
 - Always check the expiry date before use
 - Always label all medicine bottles
 - Do not share medicines
46. Which of the following is **not** a use of water for recreational?
- Boat racing
 - Making fountains
 - Swimming
 - Fishing
47. Which of the following is **not** a use of carbon dioxide?
- Photosynthesis in green plants
 - Putting out accidental fires
 - Preservation of fizzy drinks
 - Formation of nutrients in plants

48. A teacher asked his learners to drop the following books from different heights as shown below.



What were they investigating?

- Production of noise
 - Production of gravity from different heights
 - Production of loud and soft sounds
 - The books reached the ground at the same time
49. Which of the following plants are green but non-flowering?
- Cedar, pine, grass
 - Ferns, algae, mosses
 - Millet, sorghum, nappier grass
 - Mushroom, puffball, toadstools
50. Which one of the following groups of small animals consist of those with ten legs?
- Prawns, lobsters, crabs, woodlouse
 - Spiders, mite, scorpions, ticks
 - Termites, moths, weevils, tsetsefly
 - Bees, ticks, millipede, centipedes