

SCIENCE

Time: 1hr 40mins

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.
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 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:

14. Which one of the following is the **COMMONLY** abused drug in Kenya?

- A. Tobacco
- B. Miraa
- C. Alcohol
- D. Tea

The correct answer is C (Alcohol)

On the answer sheet:

4 | A | B | C | D | **14** | A | B | | D | **24** | A | B | C | D | **34** | A | B | C | D | **44** | A | B | C | D |

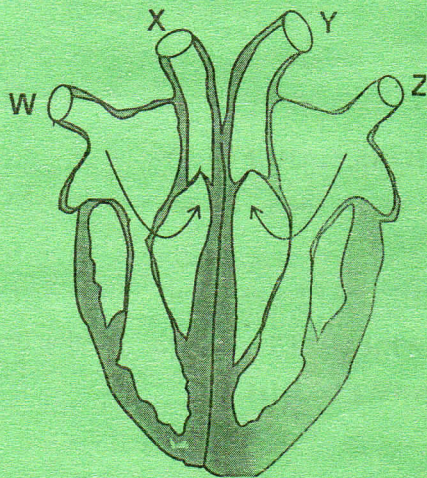
In the second set, the box with the letter C printed in it is marked.

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 7 printed pages

Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing

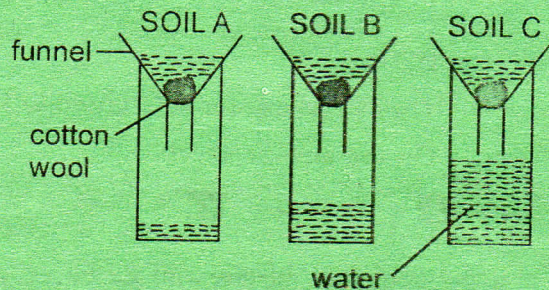
1. The diagram below represents a mammalian heart.



Which one of the following represents blood vessels **Z, Y, X** and **W** **RESPECTIVELY**?

- A. Pulmonary artery, aorta, pulmonary vein, venacava.
 B. Pulmonary vein, aorta, pulmonary artery, venacava.
 C. Aorta, venacava, pulmonary vein, pulmonary artery.
 D. Venacava, pulmonary artery, aorta, pulmonary vein.
2. A certain animal lay fertilized eggs, has scales and constant body temperature. The animal is **LIKELY** to be a
 A. snake
 B. frog
 C. duck
 D. platypus
3. The soil with moderate capillarity is also
 A. has best drainage.
 B. fine particle.
 C. large air spaces.
 D. best in farming.
4. Which one of the following pair of substances has no definite shape but definite volume and mass?
 A. Oxygen and water vapour
 B. Ice and chalk
 C. Milk and toothpaste
 D. Paper and water

5. A flower with long feathery stigma and small in size is also **LIKELY** to be
 A. scented
 B. dull
 C. coloured
 D. sticky
6. Which one of the following causes wearing of shoes and tyres?
 A. Gravitational pull
 B. Opposing force
 C. Speed of motion
 D. Braking of vehicles
7. Which one of the following parasites is controlled by **BOTH** deworming and draining of stagnant water in the farm?
 A. Ticks
 B. Tsetse flies
 C. Roundworms
 D. Liverflukes
8. The **BEST** reason for being advised **NOT** to buy medicines from unauthorised person when sick is because they may
 A. not diagnose the disease.
 B. give contaminated drugs.
 C. give incorrect doses.
 D. not have enough drugs.
9. The set up below shows drainage of soil done by pupils during a science lesson.



Which one of the following activities was done **LAST** during the experiment?

- A. Putting equal amount of water.
 B. Measuring the mass of cotton wool.
 C. Measuring collected water.
 D. Putting equal amount of soil.

10. Which one of the following crops is the **BEST** that a farmer can mix with maize to act as cover crop?

- A. Sweet potatoes
- B. Arrowroots
- C. Beans
- D. Cassava

11. Which one of the following health effects of drugs is caused by prolonged abuse of alcohol and khat?

- A. Impaired judgement
- B. Memory loss
- C. Hallucinations
- D. Addiction

12. It is necessary to control pigweeds when young because they

- A. are edible.
- B. reduce crop yields.
- C. produce many seeds.
- D. form ground cover on the soil.

13. During a science lesson, pupils had different containers with liquids.

- (i) Container M - Paraffin
- (ii) Container N - Ink
- (iii) Container O - Cooking oil
- (iv) Container P - Methylated spirit

They mixed all the liquids in one container. How many layers did they form in the container?

- A. 4
- B. 2
- C. 3
- D. 1

14. Which two component of air take up the **GREATEST** volume when put together?

- A. Carbon dioxide and rare gases
- B. Nitrogen and carbon dioxide
- C. Nitrogen and oxygen
- D. Inert and oxygen

15. Which one of the following part of digestive system is **NOT** correctly matched to its function?

Parts	Function
A. Mouth	-Produces digestive juice
B. Stomach	-Absorbs digested food.
C. Colon	-Absorb mineral salts.
D. Small intestine	-Digest some food.

16. At 14 weeks, an infant is given a vaccine against

- A. Measles and Yellow fever
- B. Diphtheria and Hepatitis B
- C. Tuberculosis and Polio
- D. Measles and Tetanus

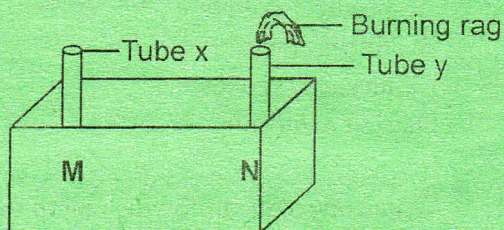
17. Which one of the following is the **BEST** procedure of separating a mixture of common salt and sand?

- A. Filter, dissolve and evaporate.
- B. Add water, sieve and filter.
- C. Decant, filter and evaporate.
- D. Add water, filter and evaporate.

18. Which one of the following materials will behave the same way as steel wool when brought near a magnet?

- A. Glass rod
- B. Silver coin
- C. Needle
- D. Aluminium spoon

19. The diagram below represents a set up that was used to demonstrate a certain aspect of matter?



The candle was used in the set up, it was **LIKELY** to be placed at

- A. N
- B. Tube X
- C. Tube Y
- D. M

20. Hard water that has been boiled is **MOST LIKELY** to

- save soap during laundry work.
- have no dissolved minerals.
- form scale on surfaces.
- be clear and clean

21. Which one of the following methods of grazing is a farmer **MOST LIKELY** to feed animals **mainly** on fodder and concentrates?

- Tethering
- Stall feeding
- Paddocking
- Herding

22. Practising proper disposal of industrial waste will **MAINLY** prevent the pollution of

- soil and water.
- water
- soil and air
- air

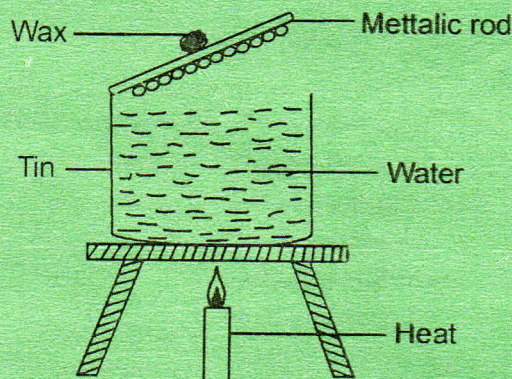
23. During a science lesson, pupils were told to sing different songs at the same time. Which one of the following aspects of sound were pupils investigating?

- Loud and soft sound
- Directions of sound
- Noise pollution
- Special sounds

24. When force is applied to the opposite direction of a moving object, it may

- change the weight of the object.
- increase the speed of the object.
- change the mass of the object.
- reduce the speed of the object.

25. In the set up below, which method of heat transfer enabled the wax to melt after sometime.



- conduction
- convection in liquids
- radiation
- condensation of gases

26. Which one of the following is **NOT** true about artificial fertilizers?

- They produce specific nutrients.
- They are applied in small amounts.
- They improve soil drainage.
- Excess use of them cause burning effects.

27. When constructing a beam balance the hole made to fix the arm should **NOT** be

- at the balancing point.
- too wide.
- allow free turning of the arm.
- tightly fixed with the nail.

28. Which one of the following animals moves by hopping?

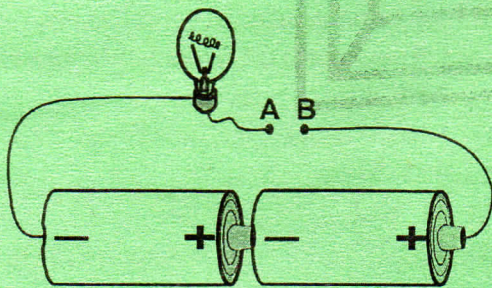
- Housefly
- Salamander
- Cricket
- Spider

29. Which one of the following is **NOT** a sign of bilharzia?
- Vomiting
 - Diarrhoea
 - Skin rash
 - Severe fever

30. Which one of the following blood component transport waste products?
- Red blood cells.
 - Plasma
 - Platelets
 - White blood cells.

31. Which one of the following forms of energy can be transmitted **ONLY** where there is medium?
- Heat and light
 - Sound and light
 - Sound and electricity
 - Heat and electricity

32. The following diagram show an incomplete electric circuit.



Which one of the following **CANNOT** be used to complete the circuits at **AB**?

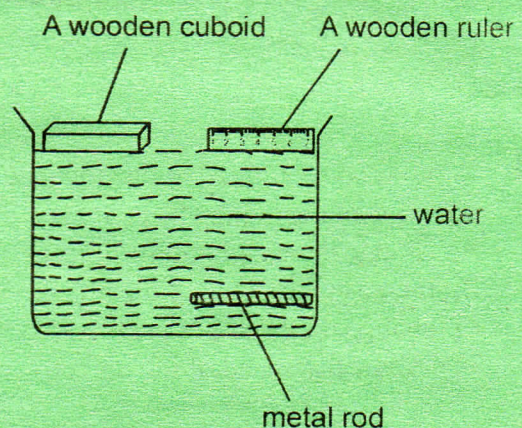
- Steel wool
 - A strand of hair
 - Iron rod
 - Fresh twig
33. Which one of the following pairs of food consists of body building foods?
- Groundnuts and maize
 - Milk and rice
 - Termites and potatoes
 - Coconut and eggs

34. Which one of the following is **NOT** a way in which plants growing in wet areas increase water loss?
- Presence of air sacs.
 - Broad flat leaves.
 - Hairy upper surface of leaves.
 - Thin cuticle.

35. Which one of the following is a way of using energy sparingly?
- Using petrol driven generators.
 - Using charcoal while cooking.
 - Improving road network.
 - Using improved jiko.

36. Which one of the following processes is **CORRECTLY** matched to where it takes place during reproduction in human beings?
- Conception - Uterus
 - Formation of embryo - womb
 - Implantation - Oviduct
 - Fertilization - Birth canal

37. The following experiment was carried out by class four learners.



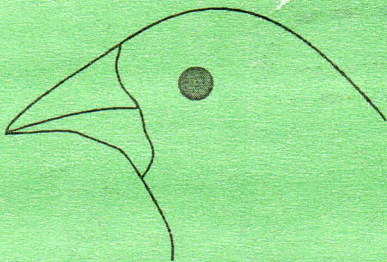
From the experiment the pupils concluded that

- shape affects sinking and floating.
- type of material affects sinking and floating.
- wood can float by changing its shape.
- size does not affect sinking and floating.

38. The following are uses of some forms of energy.
- (i) *Cooking*
 - (ii) *Warming the house.*
 - (iii) *Making food in plants.*
 - (iv) *Taking photographs.*
 - (v) *Seeing clearly.*

Which of the above are uses of light and heat energy **RESPECTIVELY**?

- A. (iii) and (ii)
 - B. (ii) and (iv)
 - C. (i) and (iii)
 - D. (iv) and (v)
39. The cloud which is mountaneous in shape and has grey colour is also **LIKELY** to
- A. appear high in the sky.
 - B. cover the whole sky.
 - C. bring fine weather.
 - D. look like bundles of cotton.
40. The diagram below represents a beak of a certain bird.



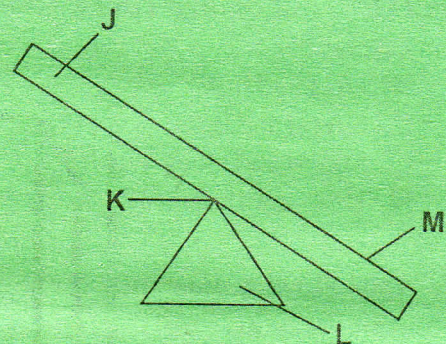
The bird represented is a

- A. turkey
 - B. pelican
 - C. goose
 - D. kingfisher
41. Which type of soil erosion can be demonstrated by pouring water with a container that has holes at the bottom on a flat ground?
- A. Splash erosion
 - B. Gulley erosion
 - C. Sheet erosion
 - D. Rill erosion

42. Which one of the following methods of preserving food is heating necessary?
- A. Canning
 - B. Salting
 - C. Use of honey
 - D. Use of ash

43. Food poisoning is **MAINLY** caused by
- A. animals and micro organisms
 - B. micro organism and chemicals
 - C. insects and bacterias
 - D. expiry date and chemicals

44. The diagram below shows a simple lever in use



Which letter used represents the position of load, fulcrum and effort **RESPECTIVELY**?

- A. M,L,J
 - B. L,K,M
 - C. J, L,M
 - D. M, K,J
45. Which one of the following consists of **ONLY** components of the environment that produce carbondioxide?
- A. Water and animals
 - B. Soil and plants
 - C. Plants and animal
 - D. Water and air
46. Which one of the following plants lack chlorophyll in processing food?
- A. Algae
 - B. Penicillium
 - C. Moss
 - D. Yeast

47. The component of soil that improves its water holding capacity is
- A. humus
 - B. air
 - C. living organisms
 - D. mineral salts
48. During breathing, what also happens when the ribs move upwards and outwards?
- A. Lungs become deflated.
 - B. Pressure in the chest cavity increases.
 - C. Volume in the chest cavity decreases.
 - D. Diaphragm moves downwards.
49. Which one of the following pairs consists **ONLY** of materials that work in the same way when light is shone on them?
- A. Mirror and frosted glass.
 - B. Waxed paper and skylight
 - C. Clear water and mirror.
 - D. Paraffin and fluorescent tube.
50. The following are activities carried out when constructing a liquid thermometer but **NOT** in their correct order.
- (i) Fill the bottle with coloured water.
 - (ii) Fix the biro tube into the bottle.
 - (iii) Make a hole through the cork.
 - (iv) Attach the scale to the biro tube.
 - (v) Fix the cork to the bottle.

Which one of the following is the **CORRECT** order of the activities?

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