



THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Primary School Education Assessment
INTEGRATED SCIENCE

1 hour 40 minutes

INSTRUCTIONS TO CANDIDATES (Please 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 an ordinary pencil.
5. Confirm that the answer sheet that you have been provided with the following:
YOUR ASSESSMENT NUMBER
YOUR NAME
NAME OF YOUR SCHOOL
NAME OF SUBJECT
6. Do not make any marks outside the boxes.
7. Keep the sheet as clean as possible and do not fold it.
8. For each of the questions 1 – 50, four choices are given. The choices are lettered A, B, C and D. In each case, only **ONE** of the four choices is correct. Choose the **correct** answer from the choices.
9. 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:

11. John and Peter observed a mango fruit falling from a mango tree. John told Peter that the mango fell because of
- A. high temperature
 - B. force of gravity
 - C. its small mass
 - D. its high motion

The correct answer is B.

On the Answer Sheet:

In the set of boxes numbered 11, draw a **dark line** inside the box with the letter **B** printed in it as indicated below.

11 [A] [B] [C] [D]

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.

This question paper consists of 10 printed pages

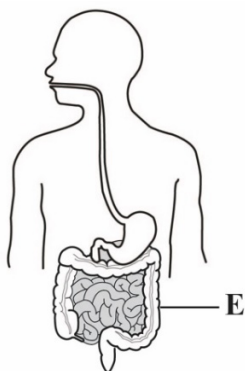
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1. During a nature walk learners observed some maize plants in the school garden having weak stems and yellowing leaves. They decided to apply some manure around the roots. After a week, the stems became strong and leaves turned green. This demonstrates that maize as living things

- A. reproduce
- B. breathe
- C. feed
- D. grow

2. The diagram represents some parts of the human digestive system.



Which **one** of the following is the main function of the part labeled **E** in digestion?

- A. Absorption of water
- B. Storage of undigested food
- C. Absorption of digested food
- D. Production of digestive juices

3. Learners visited a hospital and observed a patient whose backbone was broken following a road accident. The patient was not able to walk. Which **two** functions of the backbone were impaired?

- A. support and production of red blood cells.
- B. balance and storage of fat.
- C. balance and protection of inner parts.
- D. support and protection of inner parts.

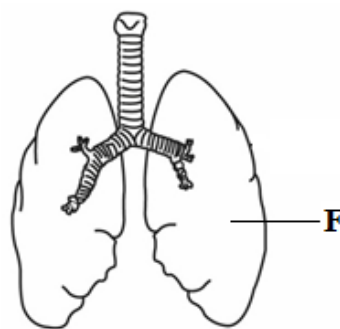
4. During a class discussion learners stated the following as functions of sense organs in human beings:

- i) Heat reception
- ii) Light reception
- iii) Touch
- iv) Taste

Which **two** are functions of the skin?

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

5. The diagram represents some parts of the human breathing system.



Which **two** are functions of the part labelled **F**?

- A. cleaning and absorbing air
- B. receiving oxygen and cleaning it up
- C. receiving oxygen and releasing carbon dioxide
- D. moistening and warming air.



6. While sweeping the classroom, Jane felt some irritation in her eyes. Which **one** of the following is most likely to have caused the irritation?

- A. light
- B. dust particles
- C. cold weather
- D. bad smell

7. John collected clear water from a river and stored it in a pot. This water can be made safe for drinking by

- A. boiling it
- B. cooling it
- C. covering the pot
- D. sieving it

8. Juma intended to clean a pit latrine. What safety precautions should he take while cleaning the pit latrine? Wear

- A. rubber gloves, shoes and goggles
- B. overcoat, shoes and face mask
- C. goggles, face mask and rubber gloves
- D. face mask, rubber gloves and shoes.

9. The diagram shows a word puzzle in which words can be formed vertically, horizontally or diagonally.

I	M	A	G	E
C	P	U	S	L
A	C	U	P	B
C	O	D	E	A
M	E	A	N	C

Which of the following words can be formed from the puzzle?

- A. MONITOR
- B. DRIVE
- C. MOUSE
- D. KEYS

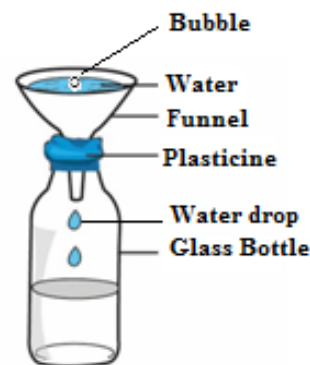
10. During a Science and Technology lesson, learners stated the following as functions of parts of a computer:

- i) Displaying information
- ii) Processing information
- iii) Controlling the working of all parts of a computer
- iv) Entering data

Which **two** are functions of a Central Processing Unit (CPU) as part of a computer?

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

11. The diagram represents a set-up that was used by learners to investigate a characteristic of gases.



Learners observed bubbles as water entered the bottle. The characteristic being investigated is that gases

- A. occupy space
- B. have indefinite shape
- C. have mass
- D. increase in size



12. Learners placed a bottle top in water and it floated. When they crushed it and placed it in the same water it sunk. Which **one** of the following factors affected the floating or sinking of the bottle top?

- A. Size of the bottle top.
- B. Type of material of the bottle top.
- C. Mass of the bottle top.
- D. Shape of the bottle top.

13. The picture shows a learner demonstrating a certain effect of force on an object.



The demonstration shows that force

- A. changes direction of an object
- B. makes an object to start moving
- C. changes shape of an object
- D. makes an object to stop moving

14. The diagram below shows a learner using a lit candle to demonstrate that light travels in a straight line.



Which one of the following materials would be suitable for the demonstration?

- A. a flexible tube
- B. a clear glass
- C. an oiled paper
- D. water in a glass.

15. The diagram below represents a spade in use with parts labelled **G, H, J** and **K**.



The effort is at position

- A. G
- B. H
- C. J
- D. K

16. Grade Five learners toured the school compound and identified a place full of soil deposited by flowing rain water. How can the learners recover the deposited soil?

- A. Collect and use it for modelling.
- B. Collect and use it for growing crops.
- C. Collect and use it for constructing houses.
- D. Plant crops on the deposited soil.



17. Grade Four learners visited a neighbouring farm and observed different uses of water. Which one of the following is an agricultural use of water they observed?

- A. Washing clothes and shoes.
- B. Watering plants and animals.
- C. Cooking food.
- D. Cleaning the toilet.

18. During a heavy rainfall season, learners observed that beans planted in clay soil had turned yellow. This is because clay soil

- A. was holding a lot of water.
- B. had lost most of the water.
- C. had no water.
- D. had become sticky.

19. Grade Four learners placed the structure labelled E on the school maize farm.



This was to

- A. attract cattle to the farm
- B. make the farm attractive to children
- C. scare birds away from the farm
- D. control weeds on the farm.

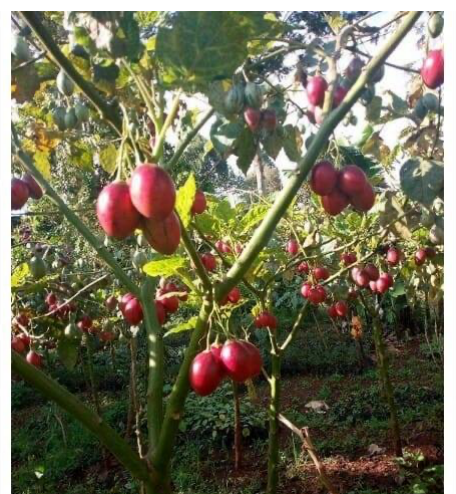
20. Learners planted fruit trees and were asked to take care of them. Which is the **most** appropriate method of watering they can use during the dry season?
Using

- A. drip bottles
- B. jerricans
- C. furrows
- D. buckets.

21. A farmer keeps cattle, sheep and goats. The animals provide the farmer with meat and

- A. manure
- B. security
- C. companionship
- D. beauty

Ali intends to establish a nursery bed for the tree tomato plants shown below using container gardens. Study the picture and use it to answer questions 22 to 25.



22. Which one of the following planting materials should Ali use to establish the nursery bed?

- A. Stem cuttings.
- B. Seeds.
- C. Splits.
- D. Suckers.

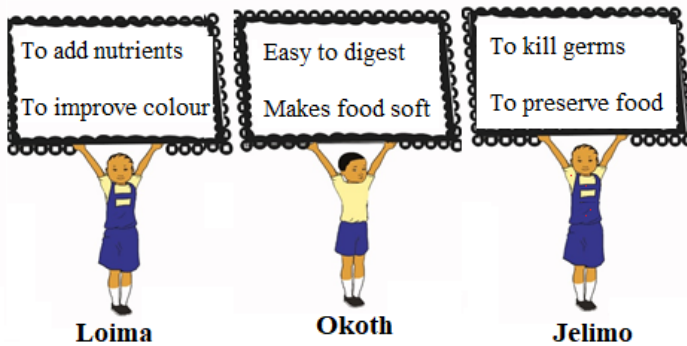


23. Which one of the following statements **correctly** describes how Ali should prepare the planting materials?
- A. Cut and clean the stem cuttings.
 - B. Pluck out the splits from the stem.
 - C. Extract seeds from the fruit and dry.
 - D. Dig out the suckers and clean.
24. After establishing the nursery bed, which tree tomato seedlings should Ali transplant?
- A. Seedlings with few pests.
 - B. Small seedlings.
 - C. Seedlings with 3 leaves.
 - D. Strong seedlings.
25. How **best** can Ali encourage the community members to grow the tree tomato crop?
- A. Advertise tree tomato fruits.
 - B. Give them free tree tomato fruits.
 - C. Sell them tree tomato fruits.
 - D. Sell them tree tomato seedlings.
26. Patel is preparing to attend a birthday party of his friend who is turning ten years old. He is ironing the clothes he will wear. Which of the following is the **best** reason why he is ironing his clothes?
- A. To look smart
 - B. To feel warm
 - C. To dry the clothes
 - D. To remove bad smell

27. Mbira wants to buy shoes for his pre-teen son Renja. Which one of the following is a factor Mbira should consider when buying the shoes?
- A. Age of Mbira
 - B. Time of the day
 - C. Size of the shop
 - D. The occasion
28. Schools were finally opening after the long Covid-19 break. Mr. Kamau asked each of his children to write a shopping list of the items they needed for school. Read what each one of them wrote:
- Marygoretty:** 3 bar soap, 20 masks, 4 pens.
- Rose:** bar soap, masks, pens.
- Paul:** 3 bar soap @ 80, 20 masks @10, 3 pens @ 20.
- Who among the children wrote a complete shopping list?
- A. Rose
 - B. Paul
 - C. Marygoretty
 - D. Paul and Rose



29. Loima, Okoth and Jelimo made the posters below.



Which learners made posters showing reasons why we boil food?

- A. Loima, Okoth, Jelimo
 - B. Loima and Okoth
 - C. Loima and Jelimo
 - D. Okoth and Jelimo
30. Grade Four learners were given various foods to classify. They classified them as follows:

Group 1: mangoes, oranges, kales, Spinach

Group 2: potatoes, maize, rice, yams

Group 3: meat, chicken, fish, beans

Group 4: meat, rice, *ugali*, milk

Which group consists of protective foods?

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

31. Khadija's mother always preserves the excess milk she gets from her dairy cow for other uses. Which of the following is a reason why she preserves the milk?

- A. To increase the amount of milk
- B. Make the milk easy to transport
- C. To avoid milking the cow again.
- D. To avoid feeding the cow always

32. Peter has finished taking water using a glass. He wants to clean the glass using a soft cloth. Which of the following is a reason why he should use a soft cloth to clean the glass?

- A. To avoid breaking the glass.
- B. To make the glass shine.
- C. The soft cloth is easily available.
- D. To avoid scratching the glass.

Read the story below and use it to answer questions 33 and 34

When hanging his shirt on the clothes line to dry, Musa realized that the shirt had two missing buttons. He decided to go and buy the buttons to fix on his shirt later.

33. Which group of needlework tools will Musa need to fix the missing buttons?

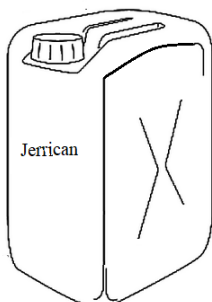
- A. Pins, pin cushion, thread, ruler
- B. Scissors, needle, thimble, pins
- C. Needle, thread, thimble, scissors
- D. Thread, thimble, pins, ruler



34. Which of the following would be the first step Musa will **do** when threading the needle to fix the buttons?

- A. Put the thread through the eye of the needle.
- B. Cut a piece of thread using an appropriate tool.
- C. Pull the thread through the eye of the needle.
- D. Hold the needle between the thumb and the index finger.

35. The diagram below shows a jerrican that Lucy wants to use to improvise washing equipment.



Which washing equipment listed below can Lucy improvise using the *Jerrican*?

- A. Pegs, water tank, drying rack.
- B. Basin, bucket, laundry basket.
- C. Scrubbing brush, clothesline.
- D. Drying rack, water tank, pegs.

36. Learners matched various equipment with the games and sports they are used to play as follows:

- i) Ball for netball
- ii) Bat for soccer
- iii) Rope for tug of war
- iv) Relay button for volley ball

Which of the following represents a combination that was correctly matched?

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

37. Why should a soccer game for learners in Grade Six be made enjoyable?

- A. So that bystanders can keep watching the game.
- B. Make learners play more to acquire skills.
- C. Keep learners busy outside their class.
- D. To make learners avoid other games.

38. When playing ball Games, team mates pass the ball to each other using various types of passes. Look at the following images and identify an overarm pass.

A.



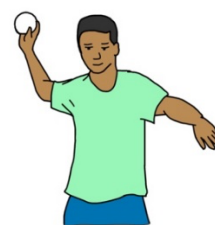
B.



C.



D.



39. You have been tasked by your team members to improvise a relay race baton. Which group of items would be appropriate for you to use?

- A. Manilla Papers, Nails, Glue
- B. Manilla Papers, Glue, Scissors
- C. Manilla Papers, Timber Glue
- D. Manilla Papers, Timber, Nails



40. What action is taken against a player who does **not** respect the rules of a soccer game?

- A. The player's position is changed.
- B. The player is made the goalkeeper
- C. The player is removed from the game
- D. The player is made to run around the field.

41. Identify the parts of the body that supports a gymnast when performing a headstand.

- A. Head and shoulders
- B. Head and toes
- C. Hands and knees
- D. Hands and forehead

42. Why should you wear gloves when handling a classmate who is nose bleeding?

- A. To make the hands look smart.
- B. To avoid infections
- C. To keep the hands warm
- D. Fear of seeing blood

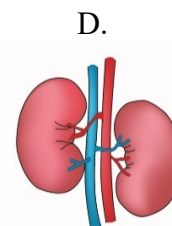
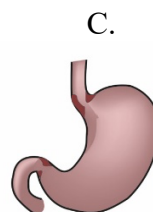
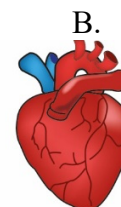
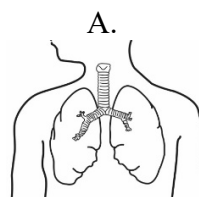
43. During the inter-school games one of the players hurt his knee and required first aid. Which of the following is not a reason for providing first aid to the injured player?

- A. To save lives of the injured player.
- B. To prevent the injury from getting worse.
- C. To receive payment for assisting the player.
- D. To help the injured player recover faster.

44. After two minutes of play, Anita complained of severe pain in her ankle. Which of the following could be the cause of the pain?

- A. She did not drink enough water before the game.
- B. She had eaten a lot of food before getting into the game.
- C. She did not have her shoes on during the game.
- D. She had not warmed up before getting into the game.

45. The images below show human body organs. Which one of the organs is used for pumping blood during a warm up activity?



46. A player was disqualified from the school team for being involved in drugs and substances abuse. Which group of substances below is the player likely to have used?

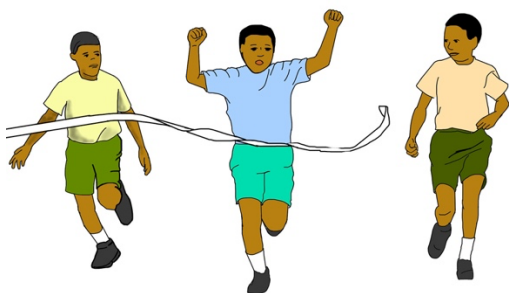
- A. Alcohol, glue, and milk
- B. Glue, water, and bhang
- C. Glue, alcohol, and bhang
- D. Bhang, milk, and alcohol

47. Grade Six teacher guided the class to perform the activity shown in the image below. Which component of physical fitness was developed in learners?



- A. Balance
- B. Reaction time
- C. Speed
- D. Strength

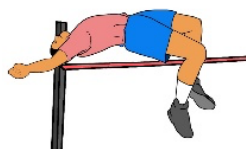
48. The picture below shows a _____ technique in athletics.



- A. Waist sprint finish
- B. Run through finish
- C. Drop finish
- D. Chest front finish

49. Identify the image that shows an athlete clearing a hurdle.

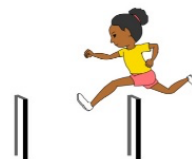
A.



B.



C.



D.



50. During an inter-class athletics competition, a teacher can use a _____ to start off athletes in a race.

- A. Sound ball
- B. Relay buttons
- C. Starting blocks
- D. Clappers