



TARGETER WINGS

Wings
001

KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT

GRADE 9- 2026

TIME: 1Hour 40 Minutes

Candidate's Name		Assessment Number	
School Name		School Code	
Candidate's Signature		Date	

INTEGRATED SCIENCE (Theory)

KJSEA

905/1

PAPER 1

INSTRUCTIONS TO CANDIDATES

1. Write your name and assessment number in the spaces provided above.
2. Write the name and code of your school in the spaces provided above.
3. Sign and write the date of the assessment in the spaces provided above.
4. This paper consists of two sections: A and B.
5. Section A comprises Multiple Choice Questions numbered 1 to 30.
6. Section B comprises short, structured questions number 31 to 42.
7. Answer ALL the questions in section A on the separate ANSWER SHEET provided.
8. Answer ALL the questions in section B in the spaces provided in this QUESTION PAPER.
9. Do NOT remove any page from this question paper.
10. Answer ALL the questions in English.

For official use only SECTION B

Question	31	32	33	34	35	36	37	38
Maximum score	5	5	5	8	5	4	5	3
Candidate's Score per question.								

SECTION A

Read all the instructions carefully

1. You have been given this question paper and a separate answer sheet. This section consists of 30 multiple choice questions
2. Answer ALL questions on the ANSWER SHEET provided, NOT on the question paper.
3. Do all the necessary rough work on the question paper.

HOW TO USE THE ANSWER SHEET

4. Use an ordinary HB pencil.
5. Confirm that the answer sheet you have been provided with has the following:
YOUR ASSESSMENT NUMBER
YOUR NAME
NAME OF YOUR SCHOOL
NAME OF THE SUBJECT
6. Keep the answer sheet clean and dry. DO NOT fold it.
7. For each of the questions 1 - 30, four options are given. The options are lettered A, B, C and D. In each case, only ONE of the four options is correct. Choose the correct option.
8. 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 Paper: Choose the correct answer.

16. The following are uses of oxygen gas. Which one is not?

- A. It is used in agriculture
C. It is used in manufacturing of steel

- B. Photosynthesis
D. Respiration

16. [A] [B] [C] [D]

The correct answer is B.

On the answer sheet, in the set of boxes given for number 16, draw a DARK LINE inside the box with the letter B printed in it as marked below.

9. Your dark line MUST be within the box. DO NOT make any marks outside the boxes.
10. For each question, ONLY ONE box is to be marked.

This paper consists of 7 printed pages.

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

INTEGRATED SCIENCE GRADE 9

TW-001

The paper below contains two sections; Section A and section B. Answer all the questions in the two sections.

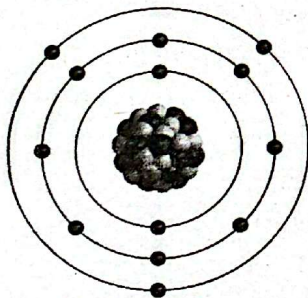
SECTION A: 30 MARKS

- Grade 9 learners of Kalulini school were discussing the structure of an atom. Which of the following did they **not** discuss as a subatomic particle?

A. Protons	B. Electrons
C. Neurons	D. Neutrons
- During a lesson, a teacher informed her learners that the number of protons in an atom is represented by the symbol **Z**. This represents the?

A. Mass number
B. Atomic number
C. Neutrons
D. Relative mass
- _____ is the sum of protons and neutrons in the nucleus of an atom.

A. Atomic number
B. Mass number
C. Energy level
D. Number of protons
- Teacher Monica showed her grade 9 learners the diagram shown below.



She informed her class that the atom is of a metal. Identify the element.

- | | |
|--------------|------------|
| A. Magnesium | B. Calcium |
| C. Aluminum | D. Lithium |
- Mark identified a certain element with 18 neutrons and mass number of 35. Which of the following representation shows the electron configuration of the atom?

A. 2.8.8	B. 2.8.7
C. 2.8.8.8.1	D. 2.8.8.2

- Elements with four or more electrons in their outermost energy level are non-metals. Which of the following is an exception?

A. Neon
B. Fluorine
C. Sulphur
D. Silicon
- Alloys are mixtures of two or more elements. Which of the following is not an importance of alloys?

A. Improves appearance.
B. Increases resistance to wear.
C. Lowers the melting point.
D. Weakens the metals.
- During a class discussion on metals and non-metals, learners were asked to classify the following elements.

(i) Calcium
(ii) Sulphur
(iii) Phosphorus
(iv) Sodium

 Which **one** of the following pairs of elements consists of metals only ?

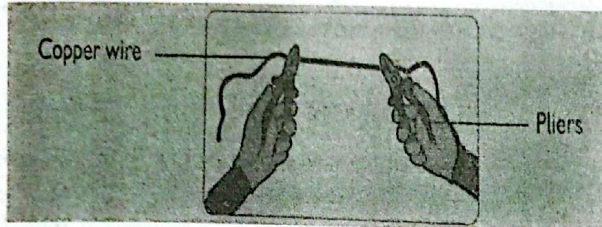
A. (i) and (iv)
B. (i) and (ii)
C. (iii) and (ii)
D. (ii) and (iv)
- Learners were controlling fire which was burning a bush. Which one of the following actions could not control the fire.

A. Turning on the fire alarm.
B. Cutting off oxygen supply.
C. Cutting off the source of heat.
D. Moving fuels away from the fire
- Substances in nature exist either as elements or compounds. During a lesson, learners classified substances into elements and compounds. Which one of the following pairs of substances consists of only compounds?

A. Copper and iron.
B. Iron and water.
C. Water and carbon dioxide.
D. Copper and carbon dioxide.

11. At Junior School, learners study Integrated science. A learner in Pema school chose mathematics, physics, chemistry and biology to study at senior school. Which of the subjects chosen by the learner are components of integrated science?
- Mathematics, physics and Biology.
 - Physics, chemistry and Biology.
 - Mathematics and physics.
 - Chemistry and Biology.
12. In a class activity to classify mixtures, learners were given the following mixtures:
- Salt and sand
 - Sugar and water.
 - Kerosene and water.
 - Milk and water.
- Which of the mixtures are homogeneous?
- (i) and (ii)
 - (ii) and (iv)
 - (i) and (iii)
 - (iii) and (iv)
13. The International System of Units has basic quantities and derived quantities. Grade 7 learners listed the quantities below.
- Temperature and Length
 - Time and electric current
 - Volume and mass.
 - Density and luminous intensity.
- Identify the basic quantities.
- (i) and (ii)
 - (i) and (iii)
 - (ii) and (iv)
 - (iii) and (iv)
14. A learner observed that water obtained from a nearby stream was not lathering easily with soap. They suggested the following as methods of making the water to lather easily:
- Boiling the water
 - Filtering the water
 - Adding washing soda.
- Which of the methods suggested by the learners could be used to make the water lather easily?
- (i) and (ii)
 - (ii) Only
 - (i) and (iii)
 - (iii) Only.
15. During class discussion on functions of the parts of the male reproductive system, learners identified functions of various parts of the system. The function of testis is to
- Produce hormones and sperms.
 - Transport sperms only.
 - Produce sperms only.
 - Transport sperms and produce hormones.
16. During a lesson, learners discussed applications of acids and bases. They listed the following applications: Manufacture of:
- Car batteries.
 - Soft drinks
 - Toothpaste
 - Baking powder
- Which one of the following pairs of the applications listed are for bases only.
- (i) and (ii)
 - (ii) and (iii)
 - (iii) and (iv)
 - (i) and (iv)
17. The following are some changes that take place in day-to-day life:
- Water becoming ice.
 - Fermenting of milk
 - Rusting of iron nails.
 - Drying of wet clothes.
- Which one of the following pairs consist only of physical changes.
- (i) and (ii)
 - (ii) and (iii)
 - (iii) and (iv)
 - (i) and (iv)
18. The movement of particles in a liquid is best described as
- fast and fixed
 - fast and random
 - slow and fixed
 - slow and irregular
19. Which one of the following is a factor that affects the rate of diffusion?
- Osmoregulation
 - Humidity
 - Temperature
 - Connection gradient

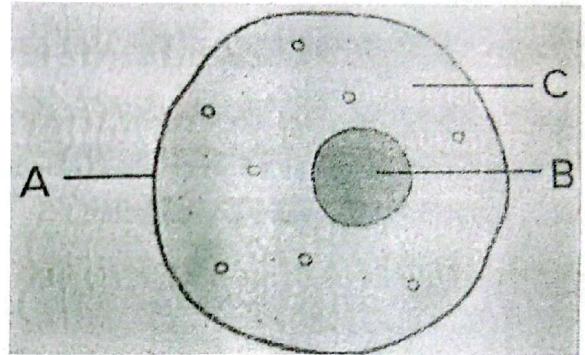
28. In which part of the human reproductive system does fertilization take place?
- A. Oviduct B. Sperm duct
C. Uterus D. Vagina
29. Grade 9 learners used pliers to stretch a piece of copper wire as shown below.



Which property of copper makes it stretch without breaking?

- A. Malleability
B. Ductility
C. Electrical conductivity
D. Thermal conductivity

30. The diagram below represents the animal cell. What is the function of the part labeled C.



- A. It's a site for metabolic processes to take place
B. It carries cell information from one generation to another
C. It gives a cell definite shape
D. It controls the movement of substances in and out of the cell

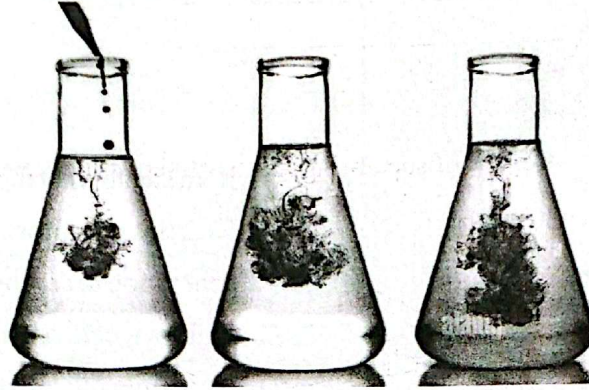
SECTION B (40 MARKS)

31. When substances undergo a chemical reaction, they form a new substance with different properties.
- a. Define a chemical change. _____ (1 mark)
- b. Give two examples of chemical changes in day-to-day life. (2 marks)
- i. _____
- ii. _____
- c. Explain why lighting a firewood is considered as a chemical change. (2 marks)
- _____
32. Each chemical element has a unique symbol used to represent it in chemical formula and equations. Write the chemical symbols for the following elements. (5 marks)
- i. Lead - _____
- ii. Gold - _____
- iii. Aluminium - _____
- iv. Carbon - _____
- v. Chlorine - _____
33. Which of the subatomic particles has
- a. A positive charge? _____ (1 mark)
- b. No charge? _____ (1 mark)
- c. A negative charge? _____ (1 mark)

d. What is the maximum number of electrons that the following energy levels can accommodate? (2 marks)

- i. 1st energy level - _____
- ii. 2nd energy level - _____

34. Musyoka, a grade 8 learner added two drops of ink in a beaker with clean water as shown below. After some time, the water was coloured.



a. Identify the process by which the ink molecules spread out through the water. (1 mark)

b. Define the process you mentioned above in 34 (a) (1 mark)

c. List three factors that affect the process above. (3 marks)

- i. _____
- ii. _____
- iii. _____

d. Mention three roles of the process you defined in 34. (b) in living things. (3 marks)

- i. _____
- ii. _____
- iii. _____

35. In their field study, a grade 8 learner was stung by a bee on his arm. His teacher advised him to apply wood ash on the stung area. He applied the ash and the pain disappeared.

a. Explain why the wood ash relieved the pain. (2 marks)

b. A group of learners intended to determine the strength of acid in a sample of soil using a universal indicator. State one other item they required to use together with the indicator to determine the strength of the acid. (1 mark)

c) List two examples of mineral acids. (2 marks)

i. _____

ii. _____

36. a) Define the term basic quantity. (1 mark)

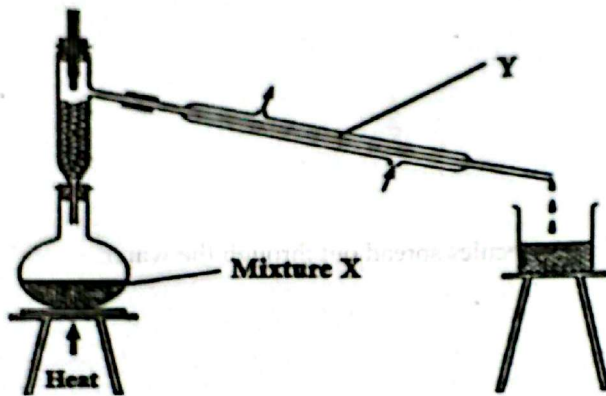
b) Identify three examples of basic quantities. (3 marks)

i. _____

ii. _____

iii. _____

37. Grade 9 learners were discussing the method of separating mixtures shown below during their revision.



a. Identify the method shown above. (1 mark)

b. What is the name of part labeled Y? (1 mark)

c. Explain why water flows in through the bottom inlet and out through the top outlet. (2 marks)

d. What physical property must the components of mixture Y have to make this method effective? (1mk)

38. List three properties of gases. (3 marks)

i. _____

ii. _____

iii. _____