

Candidate's Name		Assessment No.	
School Name		School Code	
Candidate's Sign		Date	



003-2025

# JUNIOR SCHOOL ASSESSMENT

## GRADE 8

**JESMA**  
**003**

### - INTEGRATED SCIENCE (THEORY)-

TIME: 1 hour 40

#### 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 **40**.
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**

Task	Task 1	Task 2			Task 3				Task 4		
Question	31	32	33	34	35	36	37	38	39	40	
Score per question											
Maximum score	12	06	03	02	04	03	03	02	02	03	
Candidates score per task											

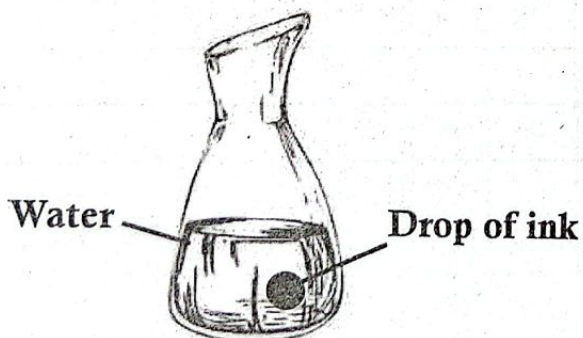
This paper consists of 8 printed pages.  
Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

**SECTION A: 30MARKS**

- Which one of the following states of matter has the **least** kinetic energy?
  - Solids
  - Liquids
  - Solids and gases
  - Gases
- Grade Eight learners were asked to prepare a chart of elements with their chemical symbols. Which of the following element was **correctly** represented?

	Element	Symbol
A.	Lead	pb
B.	Copper	cu
C.	Potassium	p
D.	Fluorine	F

- Maria placed a drop of ink in a beaker that had distilled water as shown below.



Which of the following does **not** affect the above process?

- Mass of the particle
- Type of semi-permeable membrane
- Temperature
- Concentration gradient

- Three of the following elements are found in vitamins which are used to protect the body from diseases. Which one is **not**?
  - Sodium
  - Carbon
  - Hydrogen
  - Nitrogen
- Grade 8 learners were asked to use an avocado fruit to illustrate parts of an atom. Which of the following statement is **not** true about the structure of an atom?
  - Protons and electrons are found in the nuclear
  - Protons are negatively charged
  - Neutrons have no charge
  - Electrons are positively charged
- A Grade Seven learner bought the food item drawn below.



Which of the following is the **least** important information that should be provided on the packaging label?

- Types of ingredients used
- Date of production
- Storage instruction
- Date of expiry

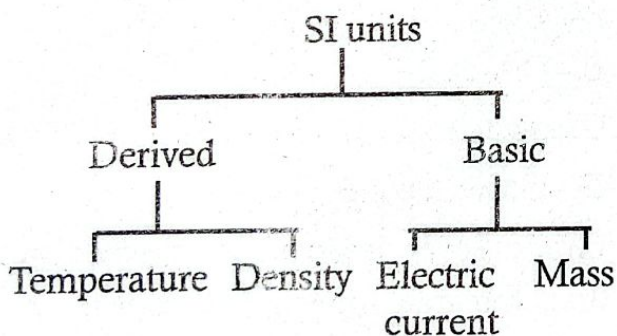
7. Which of the following part of a plant cell is **correctly** matched with its function?

- A. Cytoplasm - absorbs light
- B. Nucleus - carries genetical functions
- C. Cell wall - allow movement of substance in and out of the cell
- D. Vacuole - it facilitates chemical reactions

8. Which of the following elements when combined together they give us salt that we use to add flavour to our food?

- A. Sodium and oxygen
- B. Sulphur and chloride
- C. Sodium and chloride
- D. Zinc and chloride

9. After learning about the international system of units, Group Lion members prepared the chart shown below.



Which units were **wrongly** classified?

- A. Mass
- B. Electric current
- C. Density
- D. Temperature

10. Which of the following scientific basic skills enables one to:

- i) Use and handle scientific apparatus
- ii) Mixing substances

A. Measuring skills

B. Inferring skills

C. Manipulation skills

D. Predictive skills

11. Baraka wanted to separate sand from maize seeds. Which one of the following method was the **most** appropriate for him to use?

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

12. Three of the following are functions of a substance that turns red litmus paper blue. Which one is **not**?

- A. Used to make antacids
- B. Used to manufacture bleaching powder
- C. Used to manufacture soap and paper
- D. Used to manufacture fertilizer

13. Which of the following hazards is related to cancer?

- A. Radioactive
- B. Corrosive
- C. Toxic
- D. Carcinogenic

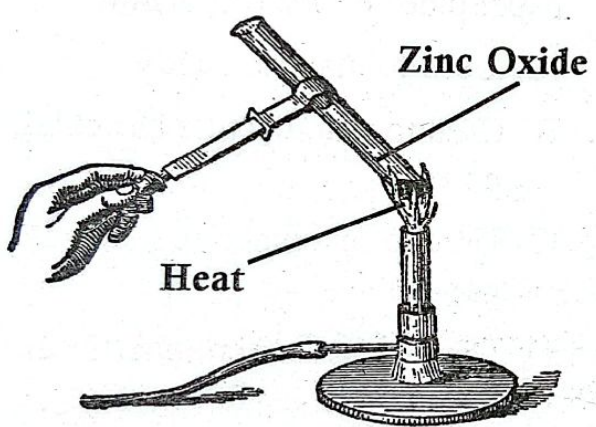
14. Three of the following emotional changes are caused by hormones in girls during adolescence. Which one is **odd** one out?

- A. Ovulation
- B. Attraction to opposite sex
- C. Identity crisis
- D. Mood swing

15. Grade Seven learners were asked by their teacher to model the urinary system as part of the *KNEC* project. Which one of the following is **not** part of the system?

- A. Ureter
- B. Urethra
- C. Urinary bladder
- D. Uterus

16. The experiment shown below was carried out by the Grade 8 learners to demonstrate temporary physical changes in substances.



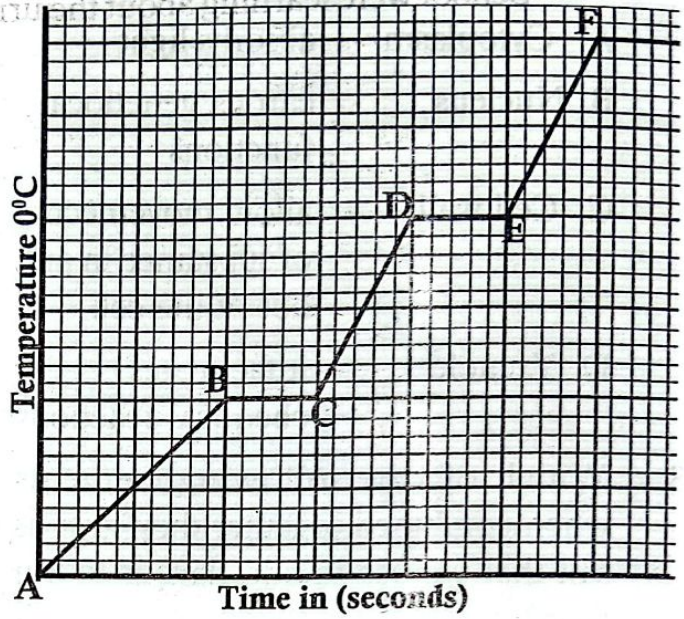
Which of the following colour was formed after heating?

- A. White
- B. Yellow
- C. Blue
- D. Red

17. Three of the following are characteristics of temporary physical changes. Which one is **not**?

- A. The change is irreversable
- B. No new substance is formed
- C. Change does not affect internal structure
- D. They are temporary in nature

18. Grade 8 learners prepared the heating curve shown below.



Which of the following phases represent melting process?

- A. AB
- B. BC
- C. CD
- D. DE

19. Three of the following are components of a simple electrical current. Which one is **not**?

- A. Fuse
- B. Dry cell
- C. Switch
- D. Current conductors

20. Grade Seven learners were asked by their Integrated Science teacher to list down examples of common hazards in the laboratory. Who gave **incorrect** answer?

- A. Rita - acids and bases
- B. Allan - corrosives
- C. Mark - insulated electrical cables
- D. Vascolyner - glass apparatus

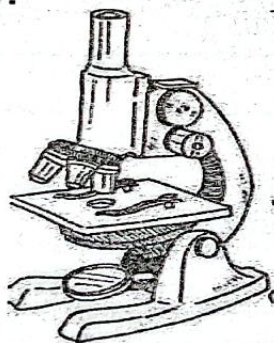
21. Grade 7 learners of Ainamoi Junior School were learning about the urinary system. They were asked by their Science teacher to identify the part of the urinary system that transports waste from the kidney to the urinary bladder. Which part did they identify?

- A. Ureter                      B. Urethra  
C. Epidermis                D. Dermis

22. Which one of the following is **not** a cause of fire?

- A. Volcanic eruption  
B. Heaters  
C. Inflammables  
D. Lightning strikes

23. Learners of Hekima Junior School were happy when the government supplied their school with lab equipment. Which of the following is **not** a way of caring for the instrument drawn below?



- A. Ensure lenses are clean before use  
B. Cover it after use  
C. Keep it from dust and wetness  
D. Always handle it with care

24. After learning about the application of physical and chemical changes, Madam Nancy tasked her learners to use their digital devices to research the application of physical changes in day to day life. Who gave the **correct** answer?

- A. Nathan - chemical reaction  
B. Jude - cleaning  
C. Levi - evaporation  
D. Ryan - combustion

25. Three of the following are challenges related to human menstrual cycle. Which one is **not**?

- A. Mood swings    B. Irregular periods  
C. Over bleeding    D. Painful periods

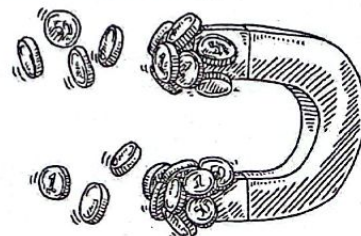
26. Grade 7 learners carried out the experiment to separate mixture of common acid and ammonium Chloride. Which experiment did they carry out?

- A. Filtration  
B. Distillation  
C. Crystallization  
D. Paper chromatography

27. Tr. Fud was discussing about fire with the learners. Which of the following classes of fire was **correctly** matched with its cause?

	Class of fire	Cause
A.	Class A	Electrical wire
B.	Class B	Ordinary
C.	Class C	Cooking oil
D.	Class D	Metallic

28. Annette uses a magnet to lift metal clips as shown below.



The above activity demonstrates which property of a magnet?

- A. Directional    B. Pole  
C. Attractive    D. Repulsive

29. Grade Seven learners were learning about the skin and its compounds. Which among these is **not** a component of the skin?
- A. Hair follicle    B. Sweat glands  
C. Epidermis    D. Urethra

30. Which of the following substances are acidic in nature?
- A. baking soda, soap  
B. Lemon juice, vinegar  
C. Water, blood  
D. Ammonia, bleach

**SECTION B:**

31. a) Give the definition of the following terms used in Integrated Science. (6mks)

i) Molecules

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ii) Atom

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iii) Elements

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b) Fill in the table with the correct information.

(6mks)

	Compound	Elements	Chemical
i)	Salt		
ii)		Hydrogen and oxygen	
iii)			CO <sub>2</sub>

32. a) Write down **three** excretory organs.

(3mks)

- i) \_\_\_\_\_  
ii) \_\_\_\_\_  
iii) \_\_\_\_\_

b) State **three** healthy lifestyle that promote skin health.

(3mks)

- i) \_\_\_\_\_  
ii) \_\_\_\_\_  
iii) \_\_\_\_\_

33. Mr. Omari bought a first-aid kit box. Write down **three** things that are found in it. (3mks)

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_

34. What is the difference between temporary change and permanent change? (2mks)

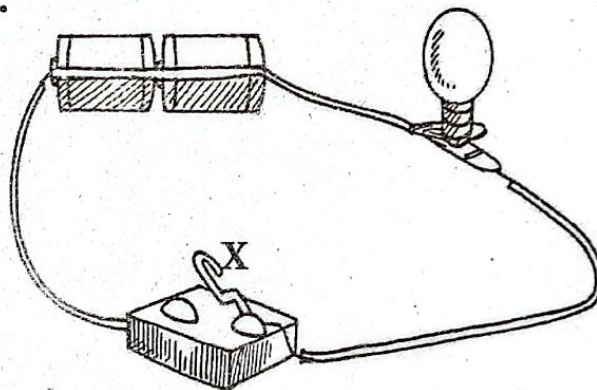
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35. Ann was sent by her mother to buy 1kg of salt. Accidentally, it dropped and mixed with sand. Write down steps she should follow to get her salt back. (4mks)

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_

36. List down **three** good conductors of electricity that can be used to complete the flow of current at point X. (3mks)



- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_

37. Write down **three** application of magnet in our day to day life. (3mks)

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_

38. Outline **two** forms of energy. (2mks)

- a) \_\_\_\_\_
- b) \_\_\_\_\_

39. Grade Eight learners were asked to prepare posters on the roles to be followed while in the laboratory. Write down **two** correct answers. **(2mks)**

a) \_\_\_\_\_

b) \_\_\_\_\_

40. Write down **three** methods that can be used to separate homogenous mixtures in our today life. **(3mks)**

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_