

KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT**2026****INTEGRATED SCIENCE****Paper 1 - Prediction 4****905/1 Time: 1 hour 40 minutes 70 marks**

Name

Assessment number

School

INSTRUCTIONS TO CANDIDATES

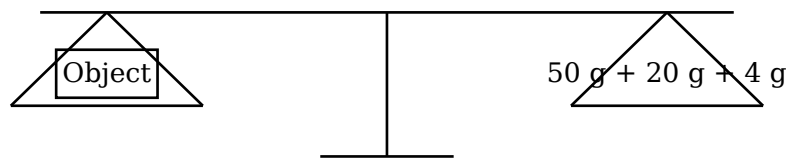
1. Answer all questions in Sections A and B.
2. Section A has 30 multiple-choice questions, each carrying 1 mark.
3. Choose ONE answer from A, B, C and D. Shade the corresponding circle on the answer sheet using an HB pencil.
4. Section B carries 40 marks. Write your answers in the spaces provided.
5. Show your working and give appropriate units where required.
6. Diagrams are not drawn to scale unless stated otherwise.

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

1. A glass beaker cracks during an experiment. What should the learners do first?

- A. Continue working across the broken glass.
- B. Inform the teacher and keep others away from the broken glass.
- C. Pick up the pieces with bare hands.
- D. Hide the pieces in a desk.



2. The balance shown is level. What is the mass of the object?

- A. 740 g
 - B. 74 g
 - C. 7.4 g
 - D. 70 g
3. Copper is used for electrical wiring mainly because it
- A. is an electrical insulator.
 - B. allows electric current to pass through it easily.
 - C. has no mass.
 - D. dissolves readily in water.

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

4. Which subatomic particle carries a negative charge?

- A. Nucleus
- B. Electron
- C. Neutron
- D. Proton

5. A solution turns blue litmus red. Which description is correct?

- A. It must be a metal.
- B. It is alkaline.
- C. It is acidic.
- D. It must be pure water.

6. Which sample is a compound?

- A. Iron filings mixed with sulfur powder
- B. Copper wire
- C. Pure carbon dioxide
- D. Clean dry air

7. A sealed bottle contains water and an insoluble powder. After shaking, solid particles settle at the bottom. The contents are

- A. a heterogeneous mixture.
- B. a single element.
- C. a homogeneous solution.
- D. a pure compound.

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

- 8.** Which observation provides the best evidence that a new substance has formed?
- A. Water spreads when poured onto a tray.
 - B. A rubber band becomes longer when stretched.
 - C. A piece of wax becomes smaller when cut.
 - D. A fresh iron surface develops a reddish-brown rust coating.
- 9.** A fire blanket covers a small burning object completely. Which requirement for combustion is mainly removed?
- A. Fuel mass
 - B. All surrounding light
 - C. Gravity
 - D. Oxygen supply
- 10.** Which method best separates iron filings from dry sawdust?
- A. Filtering the dry mixture through paper
 - B. Evaporating
 - C. Condensing
 - D. Using a magnet
- 11.** A neutral atom has 11 electrons and 12 neutrons. What is its atomic number?
- A. 12
 - B. 1
 - C. 23
 - D. 11

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

Sample	K	L	M	N
Soap for lasting lather / cm ³	8	15	5	11

12. Equal volumes of four water samples are shaken with soap. Which needs the greatest volume of soap to form lasting lather?

- A. Sample L
- B. Sample K
- C. Sample M
- D. Sample N

13. Brass is made by mixing copper and zinc. Brass is classified as

- A. an alloy.
- B. a pure compound.
- C. a single element.
- D. a non-metal.

14. In humans, fertilisation normally takes place in the

- A. ovary.
- B. uterus.
- C. vagina.
- D. oviduct.

15. Which skin structure produces sweat?

- A. Nail plate
- B. Sweat gland
- C. Sensory nerve ending
- D. Hair shaft

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

16. Which structure controls most activities of a typical living cell?

- A. Intercellular space
- B. Vacuole sap
- C. Nucleus
- D. Cell wall

17. A peeled potato strip gains mass when placed in distilled water. What is the best explanation?

- A. Water enters its cells by osmosis.
- B. Water is converted into mineral salts.
- C. Starch leaves its cells through the cell wall.
- D. Air enters its cells by photosynthesis.

18. Which action helps control mosquito breeding around a school?

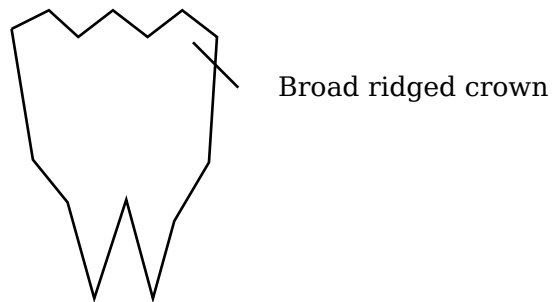
- A. Covering stored water in tanks properly.
- B. Removing all insect-eating birds.
- C. Keeping roof gutters blocked with leaves.
- D. Leaving discarded tins to collect rainwater.

19. A green plant is kept in darkness for two days before a photosynthesis experiment. Why?

- A. To increase the oxygen content of its soil.
- B. To make its roots produce light.
- C. To make new chlorophyll without light.
- D. To use up starch previously stored in its leaves.

SECTION A (30 marks)

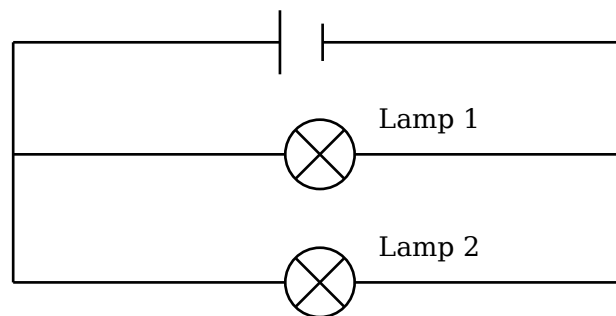
Answer all questions. Each question carries 1 mark.



- 20.** The broad, ridged tooth shown is mainly adapted for
- A. cutting food with a sharp chisel edge.
 - B. crushing and grinding food.
 - C. piercing skin to inject venom.
 - D. absorbing digested food.
- 21.** Which flower feature attracts insect pollinators?
- A. Long exposed anthers outside small dull petals
 - B. A large feathery stigma
 - C. Nectar produced in the flower
 - D. Pollen released in very large quantities into wind
- 22.** A lion kills and eats an antelope. This relationship is
- A. parasitism.
 - B. competition.
 - C. saprophytism.
 - D. predation.
- 23.** Which part of the human digestive tract absorbs most digested nutrients?
- A. Rectum
 - B. Small intestine
 - C. Mouth
 - D. Oesophagus

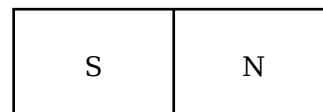
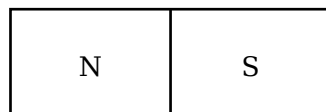
SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.



24. In the circuit shown, one lamp is removed from its holder. What happens to the other lamp? Assume the cell remains connected.

- A. It remains lit because its branch is complete.
- B. It becomes a cell.
- C. It goes out because the two lamps share one series path.
- D. It stops conducting because all wires disappear.



25. What happens when the facing poles shown are brought close together?

- A. The magnets lose all their mass.
- B. The magnets attract.
- C. The magnets repel.
- D. Both magnets become wood.

26. Which material is most suitable for the core of a temporary electromagnet?

- A. Wood
- B. Rubber
- C. Soft iron
- D. Glass

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

27. A battery-powered fan is operating. Which useful energy change takes place in its motor?

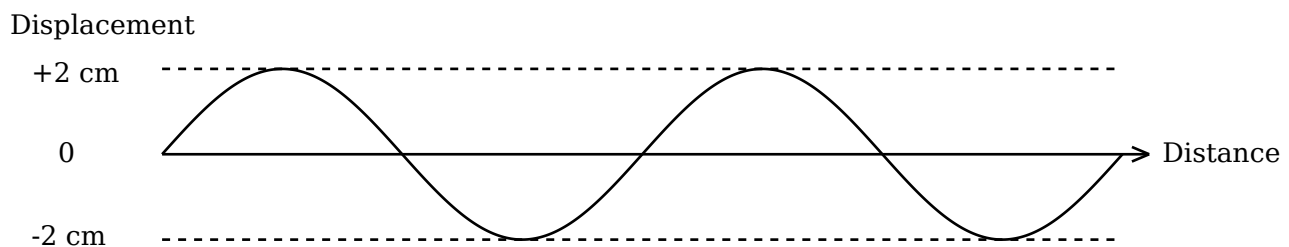
- A. Electrical energy to kinetic energy
- B. Light energy to electrical energy
- C. Kinetic energy to chemical energy
- D. Heat energy to nuclear energy

28. The same force is applied to a blunt pin and a sharp pin. Why does the sharp pin enter a board more easily?

- A. Its smaller contact area reduces pressure.
- B. Its smaller contact area produces greater pressure.
- C. It has no contact with the board.
- D. The applied force becomes zero.

29. A ray strikes a plane mirror at an angle of 35 degrees to the normal. What is the angle of reflection?

- A. 35 degrees
- B. 55 degrees
- C. 90 degrees
- D. 70 degrees



30. In the wave diagram, what is the amplitude?

- A. 8 cm
- B. 4 cm
- C. 2 cm
- D. 6 cm

SECTION B (40 marks)

Answer all questions in the spaces provided.

31. Learners investigate how the temperature of warm water changes as it cools.

(a) State two scientific skills used when taking and writing down thermometer readings. (2 marks)

(b) Give the SI unit for each physical quantity. (2 marks)

Quantity	SI unit
Electric current	
Amount of substance	

32. The following samples are available: salt solution, sand mixed with flour, vinegar, and kerosene mixed with water.

(a) Classify all four samples. (2 marks)

Type of mixture	Samples
Homogeneous	
Heterogeneous	

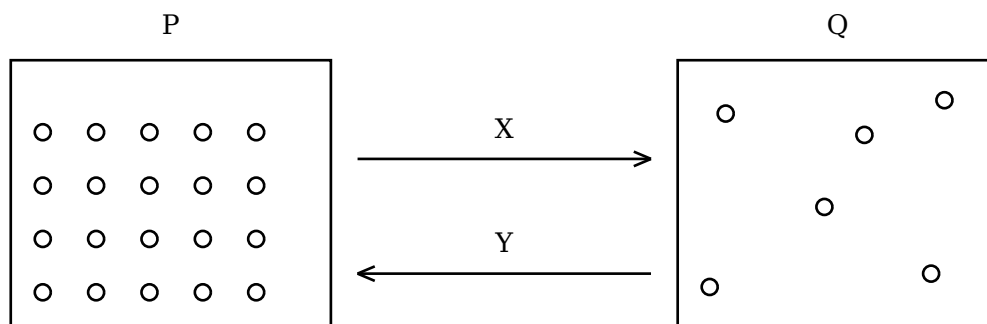
(b) Describe two steps used to obtain dry sand from a mixture of sand and salt. Water and filter apparatus are available. (2 marks)

33. Learners label containers holding samples of elements.

(a) Complete the table with the correct chemical symbols. (3 marks)

Element	Symbol
Calcium	
Copper	
Chlorine	

(b) State one use of copper in the home. (1 mark)

34. The diagrams show particles of the same substance in two states. Arrows X and Y show changes of state.

(a) Name state P and state Q. (2 marks)

(b) Name change X and change Y. (2 marks)

35. Two similar destarched potted plants are placed in transparent airtight containers. Both receive the same light and water. In container A, carbon dioxide is removed from the air. Container B has normal air. After several hours, a leaf from each plant is tested for starch.

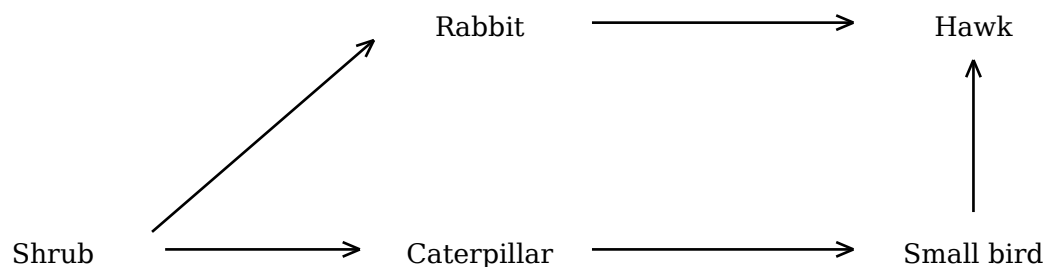
(a) State the factor being investigated. (1 mark)

(b) State the expected iodine-test colour for a leaf from each container. (2 marks)

(c) Explain the result expected in container A. (1 mark)

(d) Why must both plants receive the same amount of light? (1 mark)

36. Study the food web. Arrows show the direction of energy transfer.

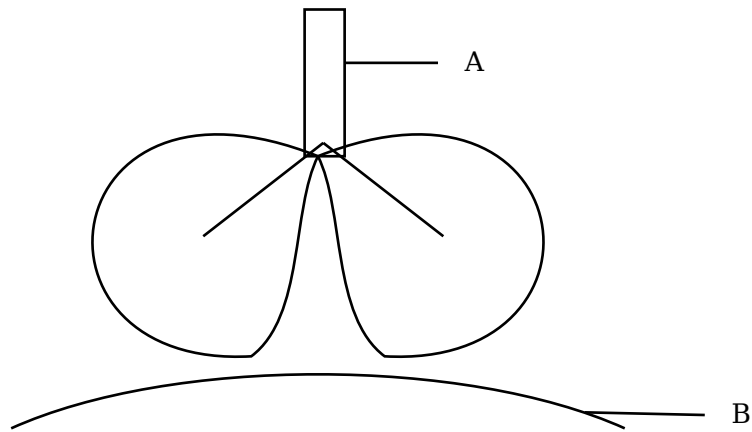


(a) Write a food chain in this web with four organisms. (1 mark)

(b) Name a secondary consumer in the web. (1 mark)

(c) Explain the likely initial effect on the caterpillars if the number of small birds decreases. (2 marks)

37. The diagram shows parts of the human breathing system.

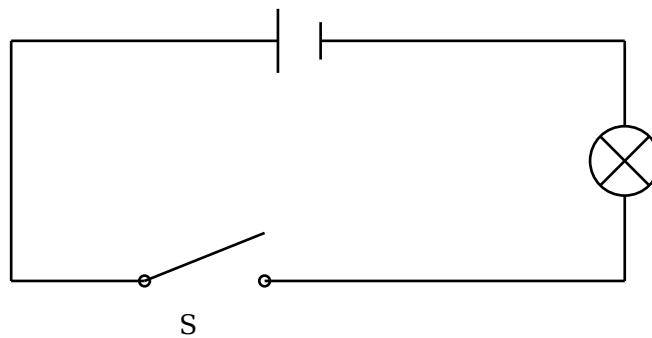


(a) Name parts A and B. (2 marks)

(b) State how part B moves during inhalation and explain how this movement helps air enter the lungs. (2 marks)

(c) Name two substances removed from the body in exhaled air. (2 marks)

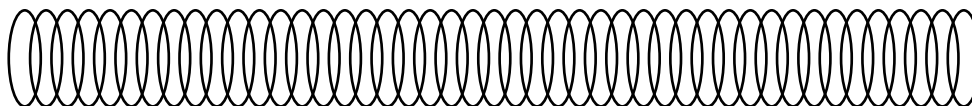
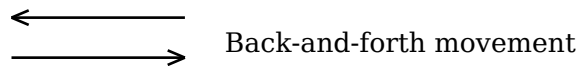
38. The cell, lamp and wires in the circuit are working.



(a) State the observation when switch S is open. (1 mark)

(b) Explain your answer in (a). (1 mark)

39. A learner stretches a spring along a smooth floor. One end is held still while the other is moved repeatedly backwards and forwards along the length of the spring.

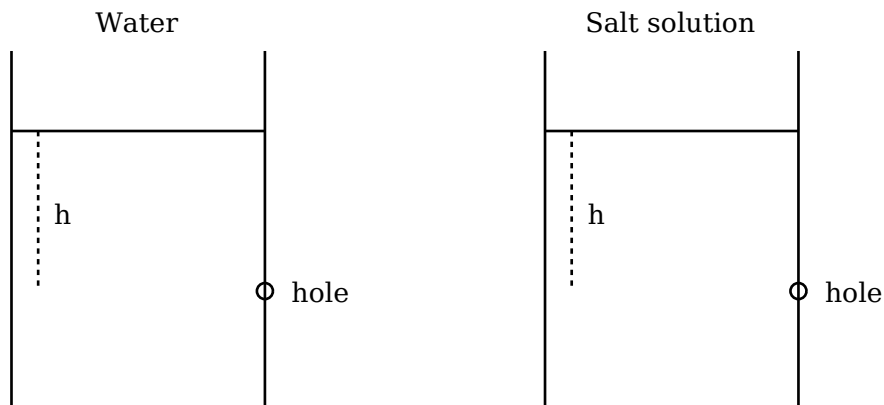


(a) Name the type of wave produced. (1 mark)

(b) Describe the motion of the spring coils relative to the direction in which the disturbance travels. (1 mark)

(c) Name the regions where coils are close together and where they are far apart. (2 marks)

40. Two identical open containers have equal-sized holes at the same depth h below their liquid surfaces. One contains water and the other a denser salt solution. The liquid levels are kept constant.



(a) Name the factor affecting liquid pressure being investigated. (1 mark)

(b) Which liquid exerts greater pressure at its hole? Give a reason. (2 marks)

END OF EXAMINATION PAPER

INTEGRATED SCIENCE PAPER 1 - Prediction 4
MULTIPLE-CHOICE ANSWER SHEET

Name

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Use an HB pencil. Shade one circle for each question.

1	☐ A	☐ B	☐ C	☐ D	16	☐ A	☐ B	☐ C	☐ D
2	☐ A	☐ B	☐ C	☐ D	17	☐ A	☐ B	☐ C	☐ D
3	☐ A	☐ B	☐ C	☐ D	18	☐ A	☐ B	☐ C	☐ D
4	☐ A	☐ B	☐ C	☐ D	19	☐ A	☐ B	☐ C	☐ D
5	☐ A	☐ B	☐ C	☐ D	20	☐ A	☐ B	☐ C	☐ D
6	☐ A	☐ B	☐ C	☐ D	21	☐ A	☐ B	☐ C	☐ D
7	☐ A	☐ B	☐ C	☐ D	22	☐ A	☐ B	☐ C	☐ D
8	☐ A	☐ B	☐ C	☐ D	23	☐ A	☐ B	☐ C	☐ D
9	☐ A	☐ B	☐ C	☐ D	24	☐ A	☐ B	☐ C	☐ D
10	☐ A	☐ B	☐ C	☐ D	25	☐ A	☐ B	☐ C	☐ D
11	☐ A	☐ B	☐ C	☐ D	26	☐ A	☐ B	☐ C	☐ D
12	☐ A	☐ B	☐ C	☐ D	27	☐ A	☐ B	☐ C	☐ D
13	☐ A	☐ B	☐ C	☐ D	28	☐ A	☐ B	☐ C	☐ D
14	☐ A	☐ B	☐ C	☐ D	29	☐ A	☐ B	☐ C	☐ D
15	☐ A	☐ B	☐ C	☐ D	30	☐ A	☐ B	☐ C	☐ D