

KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT**2026****INTEGRATED SCIENCE****Paper 1 Prediction 3****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 contains 30 multiple-choice questions. Each carries 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. Answer in the spaces provided.
5. Show working and include appropriate units where required.

Diagrams are not drawn to scale unless otherwise stated.

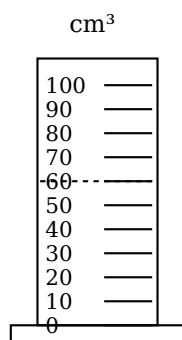
SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

1. Which item in a first-aid box is used as a clean wound dressing?

- A. A used handkerchief
- B. Sterile gauze
- C. A laboratory brush
- D. A wooden splint

2. Which quantity is measured using the instrument shown?



- A. Mass
 - B. Temperature
 - C. Volume
 - D. Electric current
3. A cooking pot has a wooden handle mainly because wood
- A. is a poor conductor of heat.
 - B. melts quickly when heated.
 - C. conducts electric current well.
 - D. dissolves in hot water.
4. An atom has 6 protons and 7 neutrons. What is its mass number?
- A. 1
 - B. 6
 - C. 7
 - D. 13

SECTION A (30 marks)

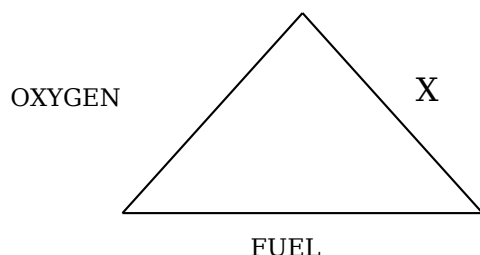
Answer all questions. Each question carries 1 mark.

5. A cleaning solution changes red litmus paper to blue. The solution is
- A. acidic.
 - B. neutral.
 - C. alkaline.
 - D. an element.
6. Which activity produces a compound by chemical combination?
- A. Mixing copper filings with sand
 - B. Burning magnesium in oxygen
 - C. Dissolving sugar in water
 - D. Mixing rice with beans
7. A sample contains gravel and salt. After water is added and the mixture is stirred, salt dissolves but gravel remains visible. The original sample was
- A. a heterogeneous mixture.
 - B. a pure compound.
 - C. a homogeneous mixture.
 - D. a single element.
8. Which change is chemical?
- A. Ice melting
 - B. A glass rod breaking
 - C. Water freezing
 - D. A steel gate rusting

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

9. The fire triangle shown has one requirement labelled X. What is X?



- A. Water
- B. Heat
- C. Smoke
- D. A fire extinguisher

10. A learner needs to recover liquid water from a salt solution. Which method collects water after evaporation and condensation?

- A. Sieving
- B. Filtration
- C. Simple distillation
- D. Use of a magnet

11. A neutral atom has 8 protons and 10 neutrons. How many electrons does it have?

- A. 2
- B. 10
- C. 18
- D. 8

Use the table to answer Question 12. Equal volumes of four water samples were tested using the same soap solution.

Sample	W	X	Y	Z
Soap needed for lather / cm ³	6	12	3	9

12. Which water sample is softest?

- A. Y
- B. X
- C. W
- D. Z

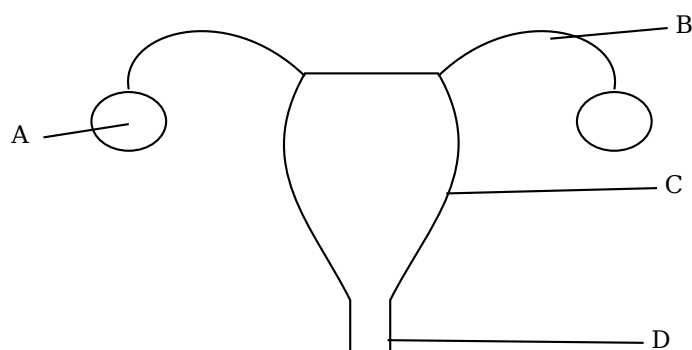
13. A metal component contains iron mixed with carbon and other elements. The material is best classified as

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

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

14. In the female reproductive system shown, which labelled part produces ova?



- A. A
- B. B
- C. C
- D. D

15. Which activity of the skin helps to cool the body?

- A. Formation of blood cells
- B. Production of digestive juice
- C. Evaporation of sweat
- D. Absorption of digested food

16. Which structure enables a green plant cell to manufacture food using light?

- A. Nucleus
- B. Cell membrane
- C. Mitochondrion
- D. Chloroplast

17. A plant cell placed in concentrated sugar solution becomes smaller. Which movement causes this change?

- A. Sugar enters by osmosis.
- B. Water leaves through the partially permeable membrane.
- C. Water enters from the concentrated solution.
- D. The cell wall leaves the cell.

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

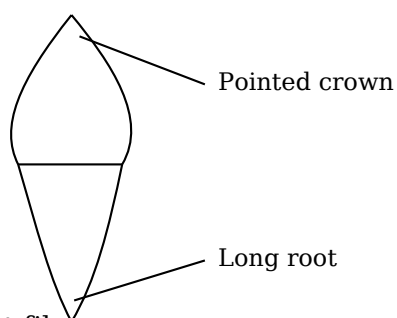
18. Which action reduces mosquito breeding with the least disruption to a natural wetland?

- A. Spraying all wetland insects
- B. Pouring oil over an entire pond
- C. Emptying unused water containers near homes
- D. Draining the whole wetland

19. Which pigment traps light energy for photosynthesis?

- A. Chlorophyll
- B. Haemoglobin
- C. Starch
- D. Urea

20. The tooth shown has a pointed crown and a long root. It is mainly adapted for



- A. grinding plant fibres.
- B. cutting grass close to the ground.
- C. absorbing dissolved food.
- D. tearing flesh.

21. Which pair of flower features is typical of wind pollination?

- A. Strong scent and nectar
- B. Feathery stigma and exposed anthers
- C. Bright petals and sticky pollen
- D. Nectar and large coloured petals

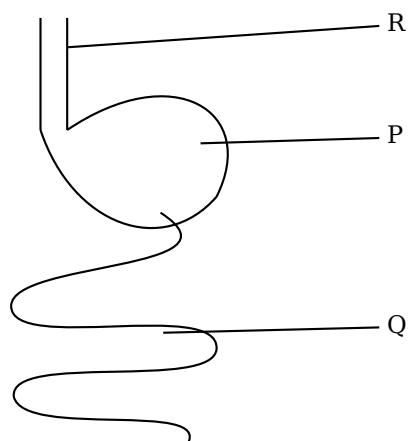
SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

22. A tick obtains blood from a cow and harms the cow. This relationship is

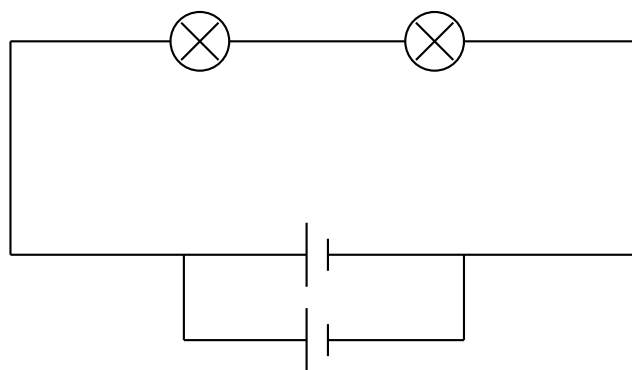
- A. mutualism.
- B. competition.
- C. parasitism.
- D. predation.

23. Which row correctly matches the labelled parts in the digestive system to their main functions?



- A. P: digestion; Q: absorption of digested food
- B. P: egestion; Q: ingestion
- C. P: absorption of oxygen; Q: pumping blood
- D. P: passage of urine; Q: digestion

24. How are the cells and the lamps arranged in the circuit?

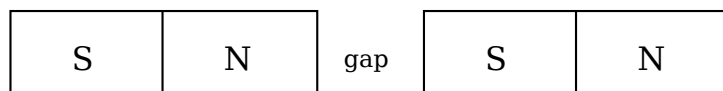


- A. Cells in series; lamps in parallel
- B. Both cells and lamps in series
- C. Both cells and lamps in parallel
- D. Cells in parallel; lamps in series

SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

25. The bar magnets shown are free to move. What happens as they are brought closer?

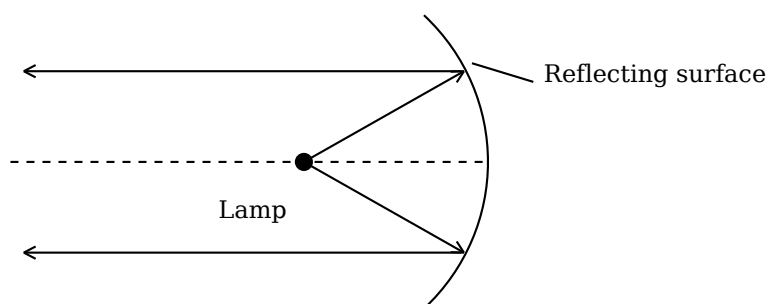


- A. They repel because like poles face.
 - B. They attract because unlike poles face.
 - C. Their poles disappear.
 - D. Both turn into non-magnetic materials.
- 26.** Which pair of materials is attracted by a magnet?
- A. Copper and glass
 - B. Aluminium and plastic
 - C. Iron and steel
 - D. Wood and rubber
- 27.** An electric generator is turned by a wind turbine. In the generator, energy changes from
- A. mechanical to electrical.
 - B. electrical to mechanical.
 - C. chemical to light.
 - D. light to chemical.
- 28.** A person wears broad snowshoes on soft snow. For the same body weight, the snowshoes
- A. increase pressure by reducing contact area.
 - B. increase pressure by increasing contact area.
 - C. remove the person's weight.
 - D. reduce pressure by increasing contact area.

SECTION A (30 marks)

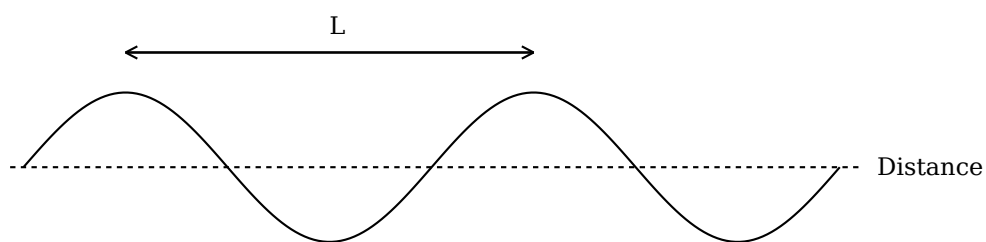
Answer all questions. Each question carries 1 mark.

29. The diagram shows a lamp producing a parallel reflected beam. Which type of mirror is used?



- A. Plane
- B. Concave
- C. Convex
- D. A transparent glass sheet

30. What does distance L represent in the wave diagram?



- A. Amplitude
- B. Frequency
- C. Wavelength
- D. Period

SECTION B (40 marks)

Answer all questions in the spaces provided.

31. Learners use a measuring cylinder to compare volumes of liquid.

(a) State two scientific skills used in this activity. **(2 marks)**

(b) Give the SI unit of each quantity. **(2 marks)**

Quantity	SI unit
Mass	
Temperature	

32. A group lists four mixtures: sugar solution, muddy water, clean dry air, and cooking oil mixed with water.

(a) Classify each mixture in the table. **(2 marks)**

Type	Mixtures
Homogeneous	
Heterogeneous	

(b) Describe how cooking oil can be separated from water using a separating funnel. **(2 marks)**

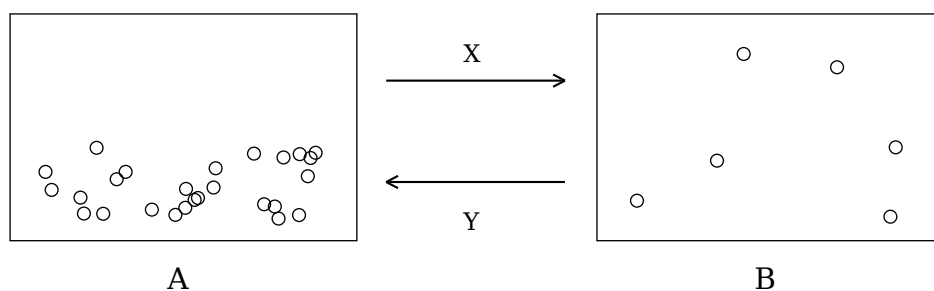
33. A learner prepares labels for samples of three elements.

(a) Write the correct chemical symbol for each element. **(3 marks)**

Element	Symbol
Magnesium	
Iron	
Potassium	

(b) State one everyday use of iron. **(1 mark)**

34. The diagrams represent particles in two states of matter. Arrows X and Y show changes of state.



(a) Name the states represented by A and B. **(2 marks)**

(b) Name the processes represented by X and Y. **(2 marks)**

35. Green plants manufacture food by photosynthesis.

(a) Complete the word equation by naming the two raw materials.

_____ + _____ → glucose + oxygen **(2 marks)**

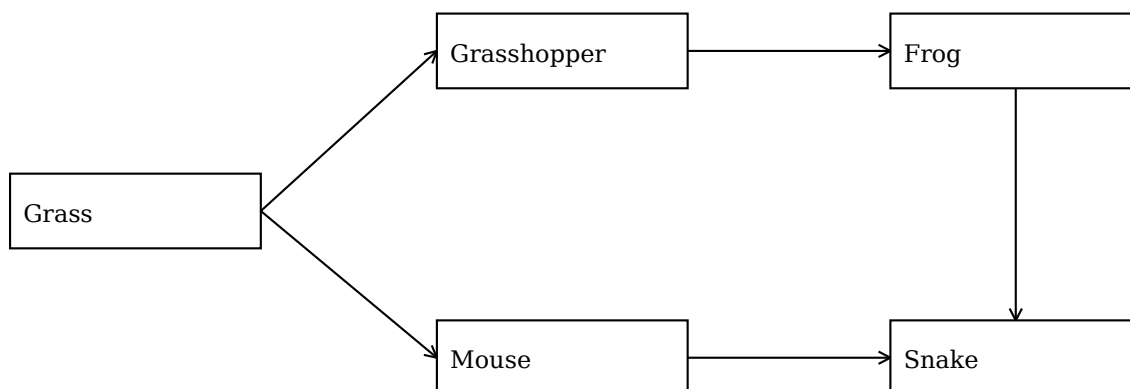
(b) Name the cell organelle in which photosynthesis occurs. **(1 mark)**

(c) Explain how each feature supports photosynthesis:

(i) a thin leaf blade; **(1 mark)**

(ii) stomata in the leaf epidermis. **(1 mark)**

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

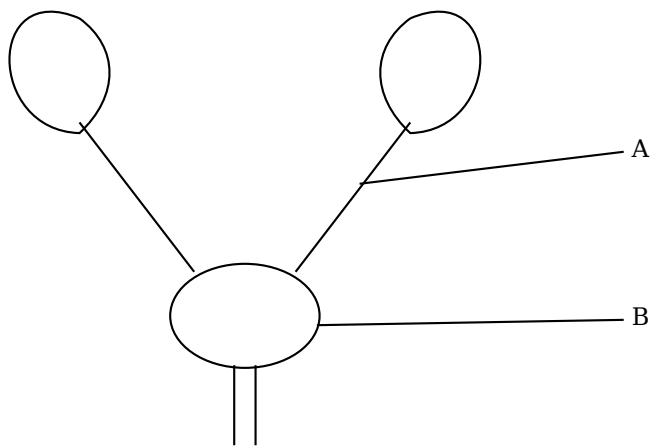


(a) Write a food chain in the web that ends with a tertiary consumer. **(1 mark)**

(b) Identify the producer. **(1 mark)**

(c) Explain one likely effect of prolonged drought on the consumers in this web. **(2 marks)**

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

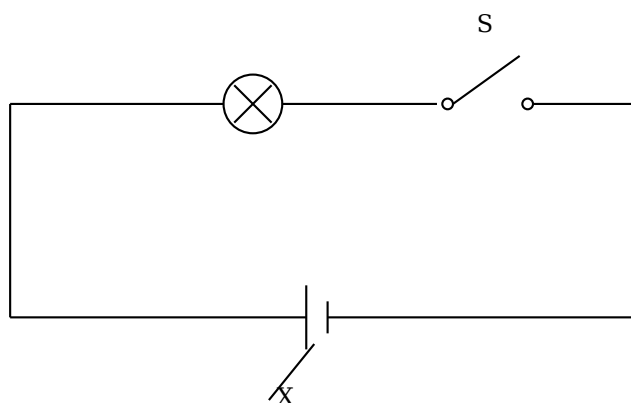


(a) Name the parts labelled A and B. **(2 marks)**

(b) State the function of A and the function of B. **(2 marks)**

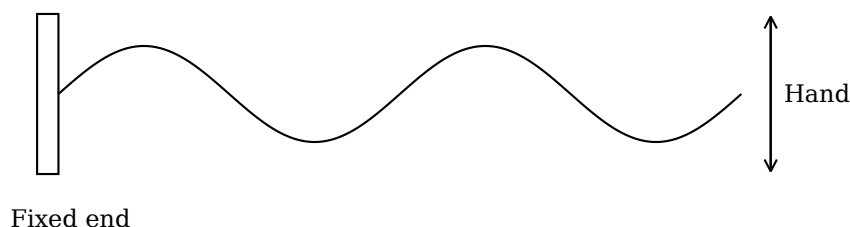
(c) Name two substances removed from the body in urine. **(2 marks)**

38. Study the circuit. The lamp and cell are working and the wires are connected correctly.



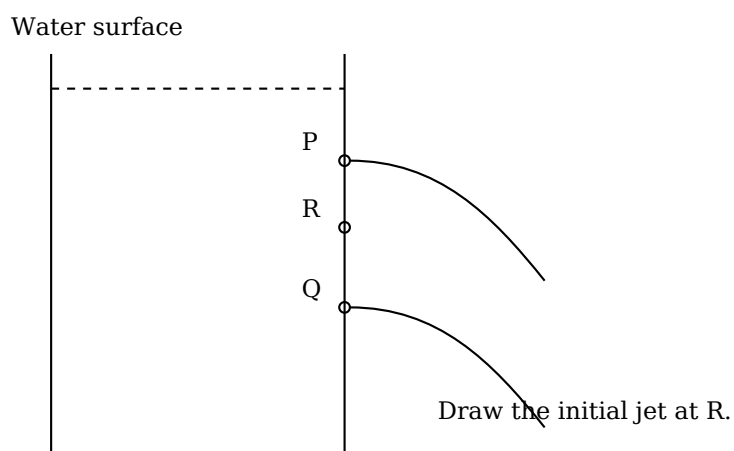
- (a) Identify the component labelled X. **(1 mark)**
- (b) State what happens to the lamp when switch S is closed. **(1 mark)**

39. A learner uses a rope fixed to a support to produce a wave.



- (a) Describe how the learner can produce a continuous wave along the rope. **(2 marks)**
- (b) Name the type of wave produced when the hand moves up and down. **(1 mark)**
- (c) Give one example of an electromagnetic wave of the same wave type as in (b). **(1 mark)**

40. The diagram shows water escaping through equal-sized holes in a container. The water level is kept constant.



(a) Which factor affecting liquid pressure is investigated by comparing holes P and Q? **(1 mark)**

(b) On the diagram, draw the initial direction of the water jet if a hole is opened at R. **(1 mark)**

(c) Apart from the factor in (a), name one property of the liquid that affects pressure. **(1 mark)**

END OF EXAMINATION PAPER

INTEGRATED SCIENCE PAPER 1 Prediction 3
MULTIPLE-CHOICE ANSWER SHEET

Name Assessment number

School

Shade one circle for each question.

1. ☐A ☐B ☐C ☐D
2. ☐A ☐B ☐C ☐D
3. ☐A ☐B ☐C ☐D
4. ☐A ☐B ☐C ☐D
5. ☐A ☐B ☐C ☐D
6. ☐A ☐B ☐C ☐D
7. ☐A ☐B ☐C ☐D
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10. ☐A ☐B ☐C ☐D
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13. ☐A ☐B ☐C ☐D
14. ☐A ☐B ☐C ☐D
15. ☐A ☐B ☐C ☐D

16. ☐A ☐B ☐C ☐D
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25. ☐A ☐B ☐C ☐D
26. ☐A ☐B ☐C ☐D
27. ☐A ☐B ☐C ☐D
28. ☐A ☐B ☐C ☐D
29. ☐A ☐B ☐C ☐D
30. ☐A ☐B ☐C ☐D