Marking Scheme

PaperSetter Sample School

Grade 8 Integrated Science

GRADE 8 — 2026

Q1.

A. Waft the gas gently towards the nose using the hand

Q2.

B. A blue non-luminous flame

Q3.

B. Dissolve in water, filter, then evaporate the filtrate

Q4.

A. Lime is a base that neutralises soil acidity.

Q5.

A. The placenta provides nutrients and oxygen to the developing baby.

Q6.

A. The ureter connects each kidney to the urinary bladder.

Q7.

C. Switch

Q8.

A. An iron nail is made of a magnetic material.

Q9.

D. Rusting, a chemical change

Q10.

D. Water

Q11.

D. Cell wall

Q12.

C. Osmosis

Q13.

A. Testes

Q14.

C. Light energy to electrical energy

Q15.

A. Atoms consist of protons, neutrons (in the nucleus) and electrons (orbiting).

Q16.

B. Resistance to corrosion

Q17.

A. Boiling decomposes calcium hydrogen carbonate, removing temporary hardness.

Q18.

A. Photosynthesis uses sunlight, water, and carbon dioxide to produce glucose.

Q19.

A. The ovary swells and develops into a fruit containing seeds.

Q20.

A. The frog eats the primary consumer (grasshopper), making it the secondary consumer.

Q21.

A. Convex mirrors give a wide field of view, useful for vehicle side mirrors.

Q22.

A. Sound travels fastest in solids because particles are closest together.

Q23.

C. Filtrate

Q24.

A. Agricultural lime

Q25.

D. They repel each other

Q26.

D. Magnification

Q27.

A. Without light, photosynthesis cannot occur.

Q28.

D. It gives a wide field of view

Q29.

B. Chromatography

Q30.

B. Stroking it in one direction with a magnet

Q31.

(a) Any three of: do not eat or drink in the laboratory; never taste chemicals; tie back long hair and wear protective clothing (apron/goggles); do not run or play in the laboratory; report all accidents and spills to the teacher; never carry out unauthorised experiments; wash hands after the practical; label all chemicals correctly. (1 mark each) (b) Food can become contaminated by chemicals or harmful substances in the laboratory, and these poisons can be swallowed, causing illness or death. (2 marks)

Q32.

Use a magnet to attract and remove the iron filings from the mixture (2). Add water to the remaining sand-salt mixture and stir so that the salt dissolves; filter the mixture so sand remains as residue on the filter paper and is dried (2). Heat/evaporate the filtrate (salt solution) to remove water and obtain solid salt crystals (2). Total 6 marks.

Q33.

1. Development of breasts.

2. Widening of hips.

Q34.

1. Do not operate electrical appliances with wet hands.

2. Do not insert foreign objects into electrical sockets.

3. Switch off appliances when not in use.

Q35.

Like poles repel each other and unlike poles attract each other.

Q36.

(a) Two differences (2 marks each = 4): Physical change - no new substance formed / usually reversible / only physical properties such as state, shape or size change; Chemical change - a new substance is formed / usually irreversible / new properties, may involve energy change, colour change, gas or precipitate. (b) One example of a physical change e.g. melting ice, dissolving salt (1); one example of a chemical change e.g. cooking food, burning charcoal, rusting (1).

Q37.

(a) Nucleus - controls all activities of the cell / contains genetic material (1 mark). (b) Cell membrane - controls movement of substances into and out of the cell (1 mark). (c) Vacuole - stores cell sap / water and

dissolved substances / keeps cell turgid (1 mark). (d) Cytoplasm - site where cell activities/chemical reactions take place / holds the organelles (1 mark).

Q38.

The law of conservation of energy states that energy cannot be created or destroyed, but can only be transformed from one form to another.

Example: When a ball is thrown upwards, kinetic energy is converted to potential energy. At the highest point, all kinetic energy becomes potential energy. As it falls, potential energy converts back to kinetic energy.

Q39.

(a) Hard water is water that does not readily form lather (foam) with soap, instead forming a scum. (b) Boiling removes temporary hardness: the dissolved hydrogen carbonate salts (such as calcium hydrogen carbonate) decompose on heating to form an insoluble carbonate (calcium carbonate) that settles out, removing the calcium/magnesium ions that caused the hardness, so the water can then form lather easily with soap.

Q40.

(a) Mouth then oesophagus then stomach then small intestine then large intestine (3 marks; deduct for wrong order). (b) The oesophagus carries/transports food from the mouth/throat to the stomach (1) by peristalsis/muscular contractions (1).