Natural Sciences and Technology · Grade 5

Memorandum · Term 3–4

TOTAL
68
MARKS

Marking guidelines

1. Award the full mark for a correct answer, even if the learner words it differently.
2. Accept any scientifically correct answer, including one not given in the memorandum.
3. Where a question asks for two or more items, award one mark per correct item.
4. For diagrams, award the mark if the label points at the correct part, even with a spelling error.
5. Do not deduct marks for spelling unless the word takes on a different scientific meaning.

Question	Answer	Marks	Marking note
QUESTION 1 · Multiple choice questions · 5 marks			
1.1	a. The cell	**1**	
1.2	b. Get out quickly and stay low, under the smoke	**1**	
1.3	c. Coal	**1**	
1.4	a. Shale	**1**	
1.5	b. The Cradle of Humankind	**1**	
QUESTION 2 · Short questions · 10 marks			
2.1	cell; mains; cell; mains. 1 mark each.	**4**	*1 mark each.*
2.2	a. year; b. axis; c. sunlight	**3**	*1 mark each. Spelling must be reasonable. For c, also accept the Sun.*
2.3	Any three: do not touch plugs or switches with wet hands; never push objects into a wall socket; do not overload a plug; stay away from fallen power lines; never climb pylons; do not use damaged cords.	**3**	*Any three. 1 mark each.*
QUESTION 3 · Stored energy in fuels · 10 marks			
3.1	solid; liquid; solid; gas. 1 mark each.	**4**	*1 mark each.*

Question	Answer	Marks	Marking note
3.2	Any three: never leave a burning candle, paraffin stove or lamp alone; keep candles and stoves away from curtains and on a steady surface; keep matches and lighters away from small children; do not overload plugs and sockets; never leave food cooking on the stove; switch off heaters when you go out; do not burn rubbish close to the house.	**3**	*Any three. 1 mark each.*
3.3	a. The oxygen (air) in the jar was used up (1). b. The large jar holds more air (oxygen) (1), so there was oxygen for longer to keep the candle burning (1).	**3**	
QUESTION 4 · Electric circuits · 8 marks			
4.1	A = cell (battery); B = bulb; C = switch	**3**	*1 mark each.*
4.2	Any three: the switch is open; the cell is flat; the bulb is blown; a wire is loose or not connected; the circuit is not complete.	**3**	*Any three. 1 mark each.*
4.3	Pylons and power lines, then the substation, then the electricity box, then the wall socket and plug.	**2**	*All four in the correct order = 2 marks; two or three in the correct position = 1 mark.*
QUESTION 5 · The surface of the Earth, rocks and fossils · 10 marks			
5.1	sandy; clay; loam. 1 mark each.	**3**	
5.2	It forms very slowly (1); once it is lost it cannot be replaced, and plants need it to grow (1).	**2**	
5.3	Rocks break into small grains (1); wind and water carry the sand and mud and deposit it in layers (1); over a very long time the layers are pressed together and harden into rock (1).	**3**	
5.4	A body fossil forms from hard parts such as bones, teeth or shells (1); a trace fossil forms from signs such as footprints, nests or dung (1).	**2**	
QUESTION 6 · Rocks and fossils · 7 marks			
6.1	Limestone = to make cement (also accept: building blocks, lime); sandstone = building stone for walls and buildings, paving; shale = for buildings (to make bricks or tiles).	**3**	*1 mark each.*

Question	Answer	Marks	Marking note
6.2	a. Layers. b. The bottom, because it was deposited first and new layers settle on top.	**2**	
6.3	Some fossils look like (resemble) plants and animals that are alive today (1); some kinds of living things have lived on Earth for millions of years, so fossils show us the history of life (1).	**2**	
QUESTION 7 · Energy and movement · 9 marks			
7.1	The stored energy changes into movement energy (1), so the rubber band or the object it pushes moves (1).	**2**	
7.2	Any two: jack-in-the-box; pogo stick; click pen; stapler; car shock absorber.	**2**	*Do not accept trampoline (its springs are stretched) or mousetrap (twisted spring).*
7.3	Any three: bicycle; wheelbarrow; car; trolley; pram; skateboard; wagon.	**3**	
7.4	The wheel turns on its axle and rolls (1), so there is much less rubbing against the ground than when you drag the load (1).	**2**	
QUESTION 8 · Technology: wheels and axles · 9 marks			
8.1	Wheels: bottle tops or cardboard circles (1). Axles: kebab sticks (1); also accept kebab sticks inside straws.	**2**	
8.2	Any three: it must carry 10 marbles; it must roll easily and straight; the wheels must turn freely and not fall off; it may use only the listed materials; it must be strong enough not to bend or break.	**3**	*Any three. 1 mark each.*
8.3	1 mark for a clear sketch with wheels joined by axles under the box. 2 marks for labels: three correct = 2; one or two correct = 1.	**3**	
8.4	Push the cart gently (or let it roll down a slope) and see whether it rolls far and straight, with the wheels turning freely and not wobbling.	**1**	

Total **68 marks**



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