



**basic education**

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA

**GEC PILOT STUDY  
MARKING GUIDELINE 2023  
NATURAL SCIENCES  
GRADE 9**

**SECTION A**

- One mark per answer.
- There are no half marks.

No.	Expected answer (□)	
1.	B	✓
2.	B	✓
3.	D	✓
4.	C	✓
5.	C	✓
6.	B	✓
7.	D	✓
8.	A	✓
9.	D	✓
10.	B	✓
11.	C	✓
12.	B	✓
13.	D	✓
14.	B	✓
15.	A	✓
16.	C	✓
17.	A	✓
18.	B	✓
19.	C	✓
20.	D	✓
21.	C	✓
22.	A	✓
23.	B	✓
24.	A	✓
25.	B	✓
26.	C	✓
27.	A	✓
28.	C	✓
29.	D	✓
30.	B	✓
31.	D	✓

No.	Expected answer (□)	
32.	C	✓
33.	C	✓
34.	B	✓
35.	A	✓
36.	D	✓
37.	D	✓
38.	A	✓
39.	A	✓
40.	D	✓
41.	A	✓
42.	A	✓
43.	B	✓
44.	B	✓
45.	D	✓
46.	C	✓
47.	A	✓
48.	B	✓
49.	A	✓
50.	A	✓
51.	D	✓
52.	D	✓
53.	B	✓
54.	C	✓
55.	C	✓

## SECTION B

- Do not penalize the learner for the same mistake more than once.
- There are no half marks.

No.	Expected answer	Clarification	Mark
1.	<p>The <b>thicker</b> the wood (<b>greater</b> the distance)✓ between the magnet and the paper clips, the <b>weaker</b> the attraction force.✓</p> <p><b>OR</b></p> <p>The <b>thinner</b> the wood (<b>smaller</b> the distance)✓ between the magnet and the paper clips, the <b>stronger</b> the attraction force✓.</p> <p><b>OR</b></p> <p>The <b>closer</b> the magnet and the paper clips are to each other✓, the <b>stronger</b> the attraction force✓.</p> <p><b>OR</b></p> <p>The <b>further</b> the magnet and the paper clips are from each other✓, the <b>weaker</b> the attraction force✓.</p> <p><b>OR</b></p> <p>The <b>smaller/lesser</b> the distance between the magnet and the paper clips are from each other✓, the <b>stronger</b> the attraction force✓</p> <p><b>OR</b></p> <p>The <b>bigger/greater/larger</b> the distance between the magnet and the paper clips are from each other✓, the <b>weaker</b> the attraction force✓</p>	<p><b>Accept any correct and any other relevant responses.</b></p> <p><b>2 marks:</b> if any one fact is stated.</p> <p><b>0 mark:</b> if only part of the fact is provided and there is <b>no relationship between the thickness of the wood and the paper clips.</b></p> <p><b>NB: No mark for observation instead of conclusion. Observation is provided in the stem.</b></p>	2
2.	<p>2.1 Copper✓</p> <p>2.2 Nichrome✓</p>	<p><b>1 mark:</b> for each correct answer</p> <p><b>0 mark:</b> incorrect answer</p>	2

3.1	Parallel connection.✓	<b>1 mark</b> for the correct answer	1
3.2	As the number of cells increases, the potential difference remains the same.✓  <b>OR</b> As the number of cells increases, the current remains the same.✓	<b>1 mark</b> for the correct reason  <b>0 mark</b> for the correct reason with incorrect or no answer to the main question.	1
4.	Cost = power consumption in kW x time in hours x unit price✓ = 1 kW x 2 h x R2/kWh✓ = R4✓ <b>OR</b> Cost = power consumption in kW x time in hours x unit price✓ = 1 000 x 2 x 2✓ = $\frac{4\ 000}{1\ 000}$ (1 000 W = 1 kW) = R4✓	<b>3 marks:</b> correct calculation with correct formula and unit  <b>2 marks:</b> correct calculations with no formula or correct calculation  <b>1 Mark:</b> Correct formula/answer only	3

5.	<p><b>Water (hydrosphere)</b> evaporates✓ and the <b>water vapour rises</b> to the atmosphere to form clouds✓</p> <p><b>OR</b></p> <p><b>Water vapour (atmosphere)</b> condenses to form clouds.✓ When the droplets (hydrosphere) become too heavy to be suspended they <b>fall as rain (hydrosphere)</b>✓</p> <p><b>OR</b></p> <p>Clouds produce rain that flows to rivers, streams and oceans</p> <p><b>OR</b></p> <p>Oceans absorb CO<sub>2</sub> from the atmosphere.</p> <p><b>OR</b></p> <p>Wave action adds O<sub>2</sub> to the water.</p> <p><b>Any other relevant correct explanation.</b></p>	<p><b>2 mark</b> for the correct explanation which has evidence of interaction between correct spheres as questioned.</p> <p><b>2 marks:</b> any correct or relevant explanation</p> <p><b>‘1 mark’ will NOT be awarded for any explanation</b></p> <p><b>0 mark:</b> If the learner shows no relationship in the response, there will be no mark allocated</p> <p><b>The event or activity mentioned should only reflect the two spheres.</b></p>	2
6.	<p>6.1 Sedimentary rock✓</p> <p>6.2 Layers of sediments✓</p> <p><b>OR</b></p> <p>Sediments</p>	<p><b>1 mark:</b> each correct answer</p> <p><b>0 mark:</b> Layers of rocks <b>Layers</b></p>	2
7.	<p><b>Acidic water</b> is formed✓ - <b>living organisms (natural vegetation and animals) die</b>✓</p> <p><b>OR</b></p> <p><b>The acid</b>✓ formed <b>corrodes</b>✓ parts of the infrastructures such bridges.</p> <p><b>OR</b></p> <p>Depleted oxygen✓ aquatic organisms die✓</p>	<p><b>2 marks:</b> correct explanation</p> <p><b>1 mark:</b> incomplete explanation of the impact stated.</p> <p><b>0 mark:</b> Pollutes the environment</p>	2
<b>[15]</b>			