education
Department of Education
FREE STATE PROVINCE

GRADE 5 NATURAL SCIENCES AND TECHNOLOGY NOVEMBER 2024

TIME: 1½ HOURS MARKS: 50

MEMORANDUM

SECTION A

QUESTION 1

1.1 D✓

1.2 C✓

1.3 A✓

1.4 C✓

1.5 B✓

[5]

QUESTION 2

2.1 elastic✓
2.2 stretched✓
2.3 compressed✓
2.4 movement✓
2.5 quickly✓ **[5]**

QUESTION 3

3.1 Fossils✓
3.2 Conserve✓
3.3 System✓
3.4 Circuit✓
3.5 Sandstone/shale✓ **[5]**

TOTAL SECTION A: [15]

SECTION B

QUESTION 4

4.1.1 Oxygen✓ (1)

4.1.2 Heat ✓ (1)

4.1.3 Fuel✓ (1)

4.2 Put the lid on the pot. ✓This will cut off the oxygen needed to burn and the fire will go out. ✓Never use water or flour. ✓ (3)

4.3 Any **ONE** of the following with explanations: (Any cause with relevant precaution):

- Unattended candles: ✓ Keep candles away from curtains or bedding. Blow out candles before leaving a room or going to bed. ✓
- Unattended cooking ✓Never leave stove unattended while cooking. ✓
- Smoking Only smoke outside. ✓
- Flammable objects. ✓Keep flammables away from the heat ✓ (2)

[8]

QUESTION 5

5.1 (Any of the following for 2 marks) ✓✓**OR any other relevant answer**

- Electricity, ✓ because it is a clean and efficient source of energy that does not produce harmful emissions**.** ✓
- Electricity, ✓**because** it is very versatile and can be used for a variety of applications. ✓
- Electricity, ✓ because it has the speed of light, and it is transformable**.** ✓

(2)

5.2 An electric circuit is a system that transfers electrical energy to where it is needed. ✓ (1)

5.3 Chemical energy

5.4 (Any answer that shows logic summary)

- At the power station, sources of energy such as coal, falling water, wind, or natural gas, are used to generate electricity**.** The current is sent through transformers to increase the voltage to push the power long distances. ✓
- It reaches a substation, where the voltage is lowered so it can be sent on smaller power lines. ✓
- It travels through distribution lines to the neighborhood ✓
- Smaller transformers reduce the voltage again to make the power safe to use in the homes where it is connected to houses and passes through the meter. ✓

[8]

QUESTION 6

6.1 (Any relevant explanation that shows that the learner understands how springs work)
The door opened, stretching a spring within the door closer. ✓This action compresses another part of spring. ✓
This compressed state stores energy. ✓
When the door is released, the compressed spring exerts a force to return to original shape. √ (any relevant explanation to the process}

(4)
[4]

QUESTION 7

7.1.1 An Earth day / 24 hours ✓ (1)
7.1.2 Day and night ✓ (1)
7.1.3 An Earth year / 365¼ days ✓ (1)

7.2.1 The same amount of water must be poured into each funnel with soil. ✓ Each funnel must contain the same amount of soil. ✓ (2)
7.2.2 (Any two of the following for two marks OR any relevant explanation of the soil types and how the results could be interpreted.) ✓✓

- If one of the funnels contain sandy soil, the water will drain the quickest.
- If one of the funnels contain clay soil, the water will drain very slow, and a lot of the water will stay in the soil.
- If one of the funnels contain loamy soil, it will drain fast but more of the water will stay in the soil. (2)

7.3.1 The bottom sediment✓ (1)

7.3.2 (Any 3 of the following for 3 marks)
Rocks break down into smaller grains. ✓
Mud and sand are moved by wind and water. ✓

Mud and sand get deposited in low lying areas. These layers become compacted and hardened and form sedimentary✓
(Or any other relevent answers) (3)

7.4.1 Fossil wood does not burn because it has undergone a process of mineralization over millions of years. ✓ (1)

7.4.2 Body, ✓and
trace fossils. ✓ (2)
7.4.3 Fossils are protected because they are very important, they help explain the evolution. ✓ (1)

[15]

TOTAL SECTION B: 35

GRAND TOTAL: 50