education

Department of Education
FREE STATE PROVINCE

GRADE 5

NATURAL SCIENCES AND TECHNOLOGY

NOVEMBER 2024

TIME: 1½ hours

MARKS: 50

NAME AND SURNAME	
CLASS	
SCHOOL	
MARKS OBTAINED	**/50**

INSTRUCTIONS AND INFORMATION:

1. The question paper consists of 9 pages, 2 sections and 7 questions.
    - **SECTION A: 15**
    - **SECTION B: 35**
2. Read all the instructions before answering the questions.
3. **ALL** questions must be answered on this question paper on the spaces provided.
4. Write neatly and legibly.
5. Write your name, surname and class on the space provided on the cover page.

SECTION A

QUESTION 1: MULTIPLE-CHOICE-QUESTIONS

Four options are provided as possible answers to the following questions. Each question has only ONE correct answer. Circle the letter that best answers the question.

1.1 Sandy soil is mainly composed of:

A Humus
B Fine grains of broken rocks
C Mixture of loam and clay
D Coarse grains from broken rocks

(1)

1.2 Body fuels are …

A Preserved sign of animals such as footprints.
B Fossils of plants.
C Hard parts of the body that forms fossils.
D Fossils of human bodies.

(1)

1.3 The input energy of an electrical light bulb is _____

A Electricity.
B Light.
C Heat.
D Sound. (1)

1.4. What are the essential elements that are needed for burning fuels?

A Matchstick and heat.
B wood and matchstick.
C Heat and Air(oxygen).
D Heat and wood. (1)

1.5 What happens to a rubber band when it is stretched?

A It becomes shorter.
B It becomes longer.
C It stays the same size.
D It becomes twisted. (1)

[5]

QUESTION 2:

Use the following words to complete the sentences below:

stretched		movement
quickly	compressed	elastic

2.1 _____ bands and springs can be used to move things. Before they can move things, they need to be either twisted or **2.2** _____. Energy is stored in a spring when it is **2.3** _____. When an elastic band or spring is released, **2.4** _____ energy is produced. An elastic material **2.5** _____ returns to its original shape.

[5]

QUESTION 3:

Give ONE word/term for each of the following descriptions. Write only the correct word/term under the description at 3.1 – 3.5.

3.1. The remains of ancient living things preserved in a rock.

_____ (1)

3.2. Protect from harm or destruction.

_____ (1)

3.3. Two or more parts working together to create a function.

_____ (1)

3.4. A system that transfers electrical energy to where it is needed.

_____ (1)

3.5. A sedimentary rock used in buildings.

_____ (1)

[5]

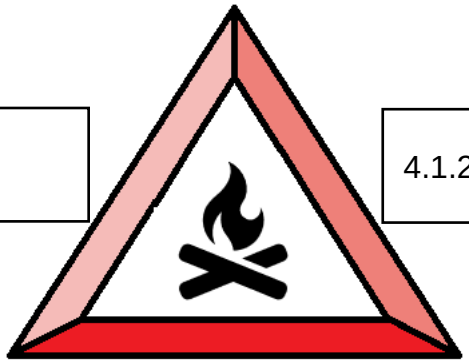
TOTAL SECTION A: _____[15]

SECTION B:

QUESTION 4:

4.1. Look at the combustion triangle below and label the three components on the provided space. (3)

4.1.1



4.1.2

4.1.3

4.2 Your friend is cooking with hot oil on the stove. The oil catches fire. Suggest a way to put out the fire and give reasons why it will work. (3)

_____

_____

_____

4.3. How can we safely burn fuels? (2)

_____

_____

_____

[8]

QUESTION 5:

The following picture shows different appliances that use electricity.



5.1. What do you think is the source of the energy for the appliances in the above picture? Explain your answer. (2)

_____

_____

5.2. Describe an electrical circuit. (1)

_____

_____

5.3. What type of energy is possessed by batteries? (1)

_____

5.4. How does electricity get from a power station to where it is needed in your home? (4)

_____

_____

_____

_____ **[8]**

QUESTION 6:

The picture of a garage door below is an example that uses compressed springs.

6.1 Explain how the garage door uses the compressed spring to move. (4)



_____

_____

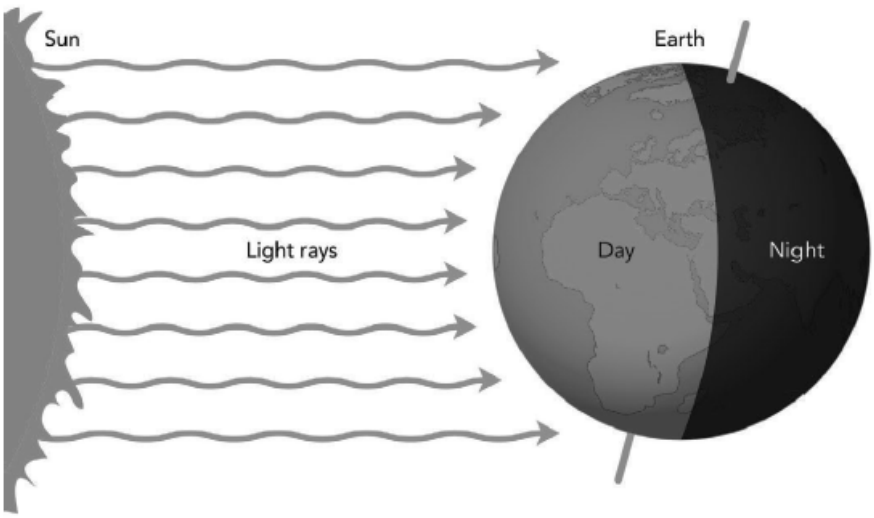
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_____

[4]

QUESTION 7:

7.1. Study the sketch of the Earth, its axis and the Sun and answer the questions on the next page:



7.1.1 How long does it take the Earth to complete a full rotation? (1)

_____

7.1.2 What is the result that we experience on Earth because of this rotation? (1)

_____

7.1.3 Except for the rotation of the Earth around its own axle, it also moves around the Sun. How long does it take the Earth to complete one circuit around the Sun? (1)

_____

7.2. The grade 5 learners carried out an investigation to find out which soil holds more water.

They set up the soil as seen in the picture below: In funnel A, the soil will hold some of the water poured in. In funnel B, the other soil will also hold some of the water poured in. But will they hold the same amount of water?



7.2.1 What will you do to make sure that this is a fair investigation? (2)

_____

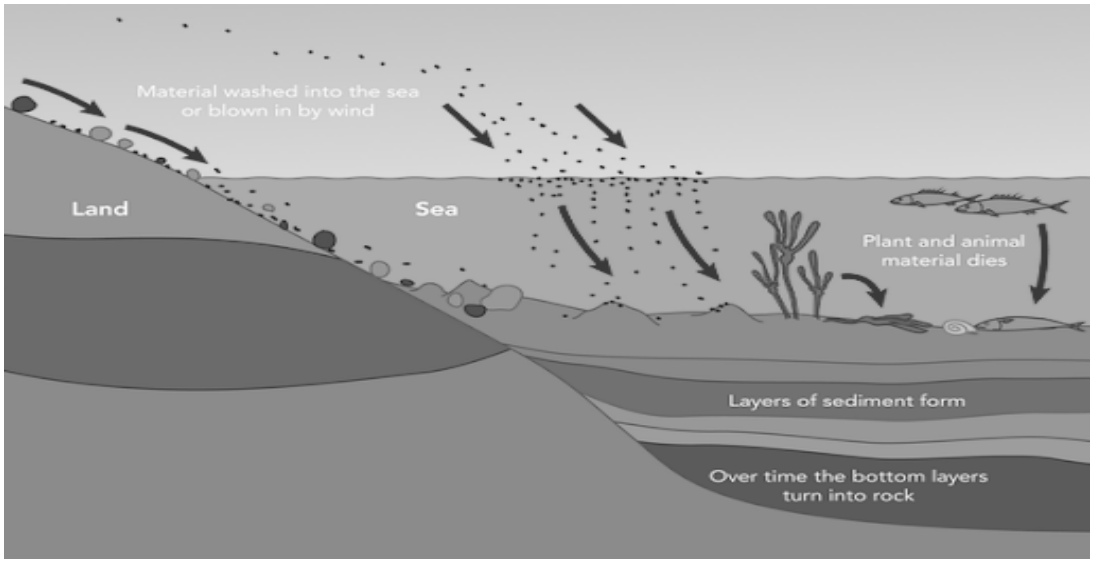
_____

7.2.2 What could be a possible outcome for the investigation (result) based on your knowledge of soil types? (2)

_____

_____

7.3. The diagram below shows the formation of sedimentary rock.



7.3.1. From the above diagram, which one is the oldest sediment? (1)

_____

7.3.2. Explain how sedimentary rocks are formed? (3)

_____

_____

_____

7.4. Answer the following questions:

7.4.1. Fossil wood does not burn. What is the reason? (1)

_____

_____

7.4.2. Name two main types of fossils. (2)

_____

_____

7.4.3. Why are fossils so important? (1)

_____

_____

[15]

TOTAL SECTION B: [35]

GRAND TOTAL: [50]