GRADE 8

Natural Sciences

November 2021

MARKS: 60

TIME: 1hour

QUESTION 1: Multiple-choice questions

1.1 D✓
1.2 D✓
1.3 B✓
1.4 A✓
1.5 C✓

QUESTION 2: ENERGY TRANSFER IN ELECTRICAL SYSTEMS

2.1 To investigate the effect of electric current on a conductor. ✓✓

2.2 The coil generates heat which warms up the water. ✓✓

2.3 The magnetic effect✓✓

2.3.2 To prevent the short circuiting of electric current or to ensure that electric current does not move through the nail. ✓✓

2.3.3 The electro magnet✓ ✓

2.4 It is a circuit in which the electric current has more than one paths to follow. ✓✓

2.5 They increase the resistance ✓✓

[14]

QUESTION 3: VISIBLE LIGHT

4.1 Visible light is light that is visible to the human eye✓✓

4.2

- Red✓
- Orange✓
- Yellow
- Green`
- Blue
- Indigo
- Violet (**Ay two**)

4.3 Use the diagram to answer the questions that follow:

4.3.1 incidence or angle of incidence✓

4.3.2 reflection or angle of reflection✓

4.4 The pencil seems to bend because light is bending as it enters a new medium (water) ✓✓ [9]

QUESTION 5: The Solar System

5.1 The Sun is the closest star or it is a star ✓

5.2 About 5 billion years ✓

5.3 The Sun is at the centre of the solar system ✓✓

5.4 At the edge of the solar system✓✓

5.5

5.5.1 88 days✓

5.5.2 Mercury✓

5.5.3 He would be 7 years or 7.4 years✓✓

5.5.4 The temperature is below the freezing point of water so water would freeze✓✓

5.5.5

- Mercury✓
- Venus
- Earth
- Mars (Anyone)
- Jupiter ✓
- Saturn
- Uranus
- Neptune (Anyone)

[14]

QUESTION 6: Beyond the Solar System

Answer the following questions:

6.1 The Milky Way Galaxy ✓✓

6.2 It is a flat disk like spilled milk

6.3 Everything around the star would burn✓✓

6.4 A light year is the distance covered by light in a year ✓✓and a light minute is a distance covered by light in a minute✓✓.

[10]

QUESTION 7: Looking into space

7.1 During the night✓

7.2 An instrument used to study objects that are far away ✓✓

7.3 A star twinkles and a planet does not✓✓

7.4 Hans Lippershey invented a telescope✓

7.5 cloudless skies with limited light and less air pollution. ✓✓

7.6 The James Webb telescope ✓ [9]