

## NATURAL SCIENCE: GRADE 8

### NOVEMBER 2023 MEMO

#### SECTION A:

1.1. B

1.2. D

1.3. C

1.4. B

1.5. A

(5)

2.1. Repel / Repulsion

2.2. Static electricity

2.3. Switch

2.4. Dispersion

2.5. Fuse

(5)

3.1. H

3.2. E

3.3. G

3.4. F

3.5. C

(5)

4.1. a) Electromagnet ✓

(1)

b) An electric current has to pass through the wire for the iron nail to become magnetised. ✓

(1)

4.2. open switch/ switch ✓

(1)

4.3. Iron, ✓ as it is a good conductor of electricity and becomes easily magnetised. ✓

(2)

4.4. – increase the number of cells ✓ or

(1)

- increase the number of coils around the nail.

(6)

- 5.1. a) Balloon A = positively charged ✓ (1)  
 b) Balloon B = negatively charged ✓ (1)

- 5.2. a) Balloon A and Balloon B will be attracted to each other / move towards each other. ✓ (1)  
 b) They carry opposite/ unlike charges. ✓ (1)

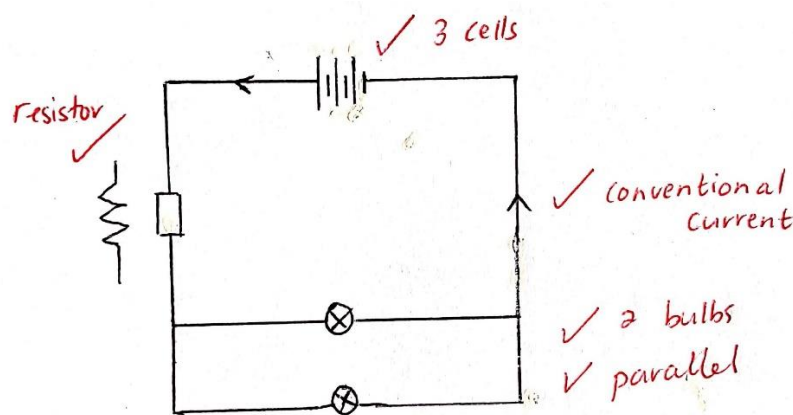
- 5.3. Electroscope ✓ (1)  
**(5)**

- 6.1. L1 ✓ and L4 ✓ (2)

- 6.2. L4 ✓ (1)

- 6.3. The circuit will be open/broken ✓ and no light bulbs will shine/ no current will flow. ✓ (2)

- 6.4. (5)



**(10)**

- 7.1. 1 = cornea ✓  
 4 = lens ✓ (2)

- 7.2. 7 ✓ (1)

- 7.3. In dim light the pupil becomes bigger/larger. ✓ (1)

(4)

8.1. a) reflected ray ✓

b) normal ✓

c) angle of reflection ✓

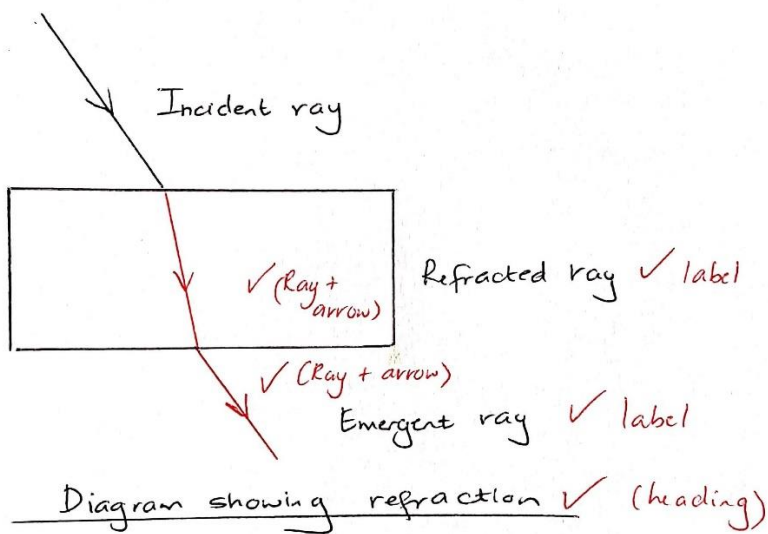
(3)

8.2.  $90^\circ - 30^\circ$  ✓ =  $60^\circ$  ✓

(2)

8.3.

(5)



(10)

## Section B: SPACE

9.1. B

9.2. C.

9.3. B

9.4. C

9.5. A

(5)

### QUESTION TEN – TERMINOLOGY:

10.1. Solar flares

10.2. Meteorite

10.3. Orbit

10.4. Craters

10.5. Moon

(5)

### QUESTION ELEVEN- MATCH THE COLUMN:

11.1. E

11.2. J

11.3. B

11.4. D

11.5. F

(5)

### QUESTION TWELVE

12.1 Jupiter OR Uranus. ✓

(1)

12.2 108 million ✓ KM ✓ (number + units)

(2)

12.3 Mercury – Venus – Mars – Jupiter – Uranus ✓ ✓

(2)

12.4 Mars ✓ and Jupiter ✓.

(2)

12.5. a) a ring of icy and rocky objects / exploded planet ✓

(1)

b) Beyond/past Neptune ✓

(1)

12.6. 687 days ✓ ÷ 365 days ✓ = 1.88 ✓ earth years.

(3)

(12)

## QUESTION THIRTEEN

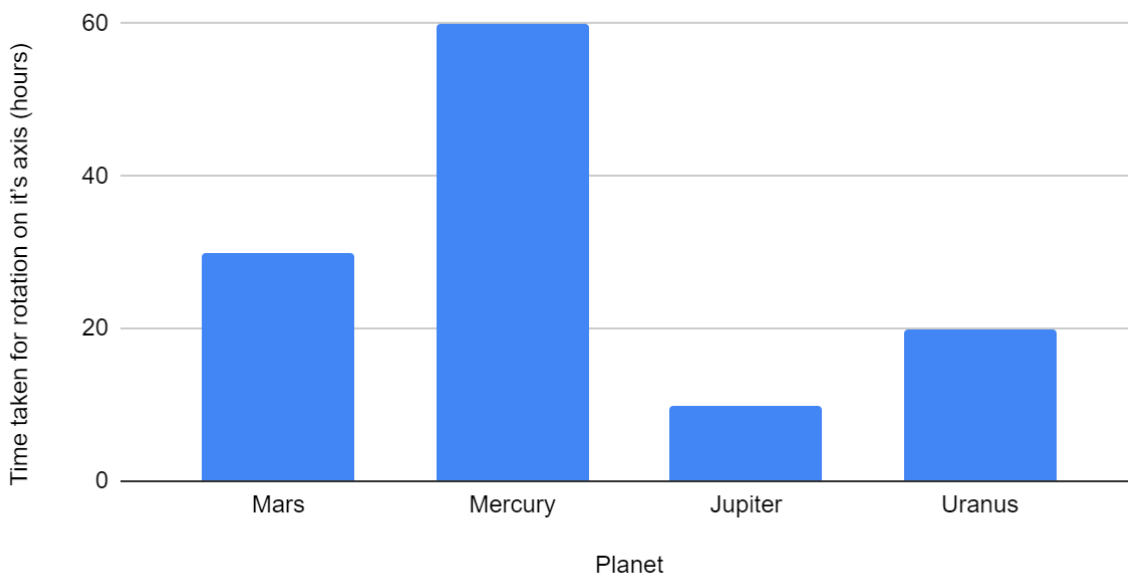
The table below gives information on the movements of some planets. Study the table and answer the questions that follow.

13.1. Planet/s ✓

(1)

13.2.

Bar graph showing time taken for rotation on it's axis (hours) for four planets



Type of graph (bars separate) (1)

Title of graph including both variables (1)

X and Y axis scale and headings (1)

Plot accuracy (1)

4 MARKS

13.3. Gravity - an object's (natural) force that pulls other objects towards itself/ its centre ✓.  
(1)

13.3. ANY 3 COMPLETE FACTORS ✓ ✓ ✓

- Temperature range suited to life
- High oxygen levels
- Water is liquid/solid/gas in Earth's temp range
- Earth close enough to sun so that sunlight reaches earth to help plants grow

(3)

(9)

## **QUESTION FOURTEEN**

- 14.1. spiral ✓ (1)
- 14.2. a black hole ✓ (1)
- 14.3. stars, clouds of dust, magnetic fields, planets ✓ ✓ ✓ any 2 (2)
- Comets, asteroids, gravitational fields (4)

## **QUESTION FIFTEEN**

- 15.1. a) Optical ✓ (1)
- b) Radio ✓ (1)
- 15.2. Southern African Large Telescope ✓ (1)
- 15.3. - Dark skies or lack of light pollution
- clear skies
  - good weather conditions
  - low humidity ✓ ✓ any 2 (2)
- 15.4. Carina ✓, Centaurus, Southern Cross (1)
- Orion/ Orion's belt, Taurus
- 15.5. Receives radio waves from outer space ✓
- Converted into visible images ✓ (2)
- 15.6. a) Person who studies bodies in space. ✓ (1)
- b) Galaxies, Comets, Birth/death of stars, Nebula's ✓ (1)
- (10)**