



GAUTENG PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

**GAUTENG DEPARTMENT OF EDUCATION
PROVINCIAL EXAMINATION
NOVEMBER 2019
GRADE 6**

**NATURAL SCIENCES AND
TECHNOLOGY**

MARKING GUIDELINES

4 pages

SECTION A (COMPULSORY)**QUESTION 1**

- 1.1 1.1.1 B✓
- 1.1.2 D✓
- 1.1.3 C✓
- 1.1.4 A✓
- 1.1.5 C✓

(5 x 1) (5)

QUESTION 2

- 2.1 coal✓
- 2.2 radio telescopes✓
- 2.3 watts✓
- 2.4 metal spoon✓
- 2.5 planets✓

(5 x 1) (5)

QUESTION 3

- 3.1 C✓
- 3.2 A✓
- 3.3 E✓
- 3.4 B✓
- 3.5 D✓

(5 x 1) (5)

QUESTION 4

- 4.1 asteroids✓
- 4.2 rotation✓
- 4.3 new moon✓
- 4.4 conductors✓
- 4.5 water✓

(5 x 1) (5)

TOTAL SECTION A: 20

SECTION B

QUESTION 5

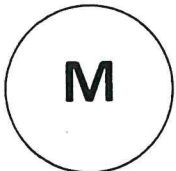
- 5.1 5.1.1 A bulb✓ (1)
- B open switch✓ (1)
- C battery✓ (1)

5.1.2 not produce light✓ (1)

5.1.3 The switch is open / circuit is not complete✓ (1)

- 5.2 conductor – pin ✓ (2)
- insulator – eraser✓

- 5.3 5.3.1 Input: electrical energy from mains✓
Process: electric charges move through circuit and changes to heat✓
Output: heat that warms the water in the kettle✓ (3)

5.3.2  ✓

(1)
[11]

QUESTION 6

6.1 Illegal connections ✓ (1)

6.2 People can get hurt or even die ✓ (1)

6.3 Switch off lights / appliances not in use / make use of solar geysers / use energy saving bulbs / make use of natural light / wear warm clothes / do not use stove plates on highest settings/boil only enough water ✓
Any relevant answer (1)

6.4 maintenance of coal mines / transport / power stations / cables / substations / wiring✓
Any relevant answer (1)
[4]

QUESTION 7

- 7.1 7.1.1 ellipse ✓ (1)
- 7.1.2 Mars and Jupiter ✓ (both names correct for 1 mark) (1)
- 7.1.3 there are large quantities of iron oxide (rust) present on the surface ✓ (1)
- 7.1.4 Neptune ✓, it is the furthest planet from the sun ✓ (2)
- 7.1.5 the sun ✓ (1)
- 7.2 7.2.1 revolution ✓ (1)
- 7.2.2 night and day ✓ (1)
- 7.2.3 $365\frac{1}{4}$ days ✓ (1)
- 7.2.4 full moon ✓ (1)
- 7.2.5 a year that has 366 days ✓ (1)
- [11]**

QUESTION 8

- 8.1 8.1.1 South Africa Large Telescope ✓ (1)
- 8.1.2 Square Kilometre Array ✓ (1)
- 8.2 Sutherland ✓ (1)
- 8.3 to help humans to explore other objects in space more closely ✓ (1)
- [4]**

TOTAL SECTION B: 30**GRAND TOTAL: 50**