

GRADE 8 | 2024

Grade 8 Natural Sciences Practice Exam

Natural Sciences

CAPS ALIGNED

GRADE 8 NATURAL SCIENCES PRACTICE EXAMINATION

Time: 2 hours

Marks: 100

INSTRUCTIONS:

- Answer ALL questions in the spaces provided.
- Show ALL working for full marks.
- Write neatly and clearly.
- This paper consists of multiple sections.

SECTION 1: CELLS AND LIVING ORGANISMS**Question 1.1 (6 marks)**

Name THREE differences between a plant cell and an animal cell.

Question 1.2 (6 marks)

State the function of EACH of the following cell organelles: (a) Mitochondria (b) Ribosomes (c) Vacuole

Question 1.3 (6 marks)

What is the Cell Theory? State THREE points.

SECTION 2: MATTER AND MATERIALS**Question 2.1 (4 marks)**

Define the following: (a) Homogeneous mixture (b) Heterogeneous mixture

Question 2.2 (6 marks)

Name the separation technique you would use to: (a) Separate sand from water (b) Separate salt from salt water (c) Separate iron filings from sand

Question 2.3 (4 marks)

Explain what happens to the particles of water as it changes from a liquid to a gas.

SECTION 3: ENERGY AND FORCES**Question 3.1 (2 marks)**

State the Law of Conservation of Energy.

Question 3.2 (3 marks)

Calculate the weight of a 15 kg object on Earth. ($g = 10 \text{ m/s}^2$)

Question 3.3 (4 marks)

Give TWO ways friction can be reduced between surfaces.

Question 3.4 (4 marks)

A ball is held 5 m above the ground. As it falls, what happens to its: (a) Gravitational potential energy (b) Kinetic energy

SECTION 4: EARTH AND UNIVERSE**Question 4.1 (4 marks)**

Explain why we have seasons on Earth.

Question 4.2 (4 marks)

What is the difference between a lunar eclipse and a solar eclipse?

Question 4.3 (3 marks)

Arrange the following in order from smallest to largest: Star, Solar System, Planet, Galaxy, Universe

TOTAL: 56 marks