

CHEMISTRY GRADE 10

END TERM 1 EXAMINATION 2026

Time: 2½ Hours

NAME.....ADM NO.....

DATE.....SIGN.....

INSTRUCTIONS TO CANDIDATES

1. Answer ALL questions in the spaces provided.
2. Show all working clearly where calculations are required.

1.a) Define the following terms:

i) Chemistry (2 marks)

ii) Matter (2 marks)

iii) Pure substance (2 marks)

b) State four laboratory safety precautions observed during experiments. (4 marks)

c) Name three laboratory apparatus and state one use for each. (6 marks)

1.a) Differentiate between the following terms.

i) Element and compound (4 marks)

ii) Mixture and compound (4 marks)

b) Classify the following as elements, compounds, or mixtures:

- i) Air
- ii) Sodium chloride
- iii) Iron
- iv) Soil
- v) Carbon dioxide (5 marks)

c) Describe two methods used to separate mixtures and give one example for each. (2 marks)

3.a) State the three subatomic particles and give their charges. (6 marks)

b) An atom has atomic number of 15 and mass number of 31.

- i) State the number of protons. (2 marks)
- ii) State the number of electrons. (2 marks)
- iii) Calculate the number of neutrons. (2 marks)

c) Define the term isotopes. (2 marks)

d) Write the electronic configuration of:

i) Sodium (Atomic number 11) (3 marks)

ii) Oxygen (Atomic number 8) (3 marks)

4.a) Define the following terms,.

i) Atomic number (2 marks)

ii) Mass number (2 marks)

b) State the group and period of:

i) Magnesium (Atomic number 12) (3 marks)

ii) Chlorine (Atomic number 17) (3 marks)

c) State three properties of metals. (3 marks)

d) State two properties of non-metals. (2 marks)

5.a) What is meant by the following terminologies as used in Chemistry.

i) Ionic bonding (2 marks)

ii) Covalent bonding (2 marks)

b) Explain how sodium and chlorine form sodium chloride. (5 marks)

c) State three differences between ionic and covalent compounds. (6 marks)

6.a) Define a chemical reaction. (2 marks)

b) State four indicators that show a chemical reaction has occurred. (4 marks)

c) Balance the following equations:

i) $\text{___ H}_2 + \text{___ O}_2 \rightarrow \text{___ H}_2\text{O}$ (3 marks)

ii) $\text{___ Na} + \text{___ Cl}_2 \rightarrow \text{___ NaCl}$ (3 marks)

d) Classify the following reactions (combination, decomposition, displacement):

i) $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$

ii) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$

iii) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$ (6 marks)

e) State the law of conservation of mass. (2 marks)

END