

B.O.T TERM II
S.2 CHEMISTRY
TIME: 1 HOUR

INSTRUCTIONS

- Attempt **all** questions in both sections

ANSWER GRID FOR SECTION A

1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

SECTION A

- Which one of the following elements reacts with chlorine to form a covalent compound?
A. Zinc B. Hydrogen C. Aluminium D. Helium
- A solid salt when exposed to air turns into a solution, the salt is said to be;
A. Efflorescent B. hygroscopic C. deliquescent D. Amorphous
- Which one of the following is true about bases? All bases
A. are soluble in water B. are hydroxides
C. neutralize acids D. are oxides
- Which one of the following substances can conduct electricity in solid state?
A. Sodium chloride B. Diamond
C. Graphite D. Sugar
- Dry air was passed through sodium hydroxide solution and then over heated copper metal. The residual gas consists of;
A. Oxygen B. Carbon dioxide
C. Water vapour D. Nitrogen
- Which one of the following oxides is amphoteric?
A. Calcium oxide B. Aluminium oxide
C. Sodium oxide D. Copper oxide

7. Which one of the following substances is a deliquescent substance?
- A. Calcium chloride
C. Cobalt (II) chloride
- B. Sodium carbonate
D. Iron (II) sulphate
8. Which one of the following is not an acidic oxide?
- A. Carbon dioxide
C. Sulphur dioxide
- B. Carbon monoxide
D. Phosphrous (V) oxide
9. Which one of the following colours is observed when sodium is burn in air?
- A. Blue
B. Yellow
C. Green
D. Purple
10. Which one of the following catalyst is used in the preparation of oxygen?
- A. Magnesium dioxide
C. Platinum
- B. Manganese dioxide
D. Vanadium (V) oxide

SECTION B

11. State how the following mixtures of substances can be separated.

Mixture	Method of separation
Ink	
Sulphur and iron	
Oxygen and Nitrogen	
Iodine and potassium sulphate	
Sodium chloride and sodium carbonate.	

12. The electronic configuration of X and Y ions are 2:8:2 and 2:8 respectively.

(a) Write the electronic configuration of the;

- (i) Ions of X.....
- (ii) Atom of Y.....

(b) Write the formula of the compound formed between X and Y.

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(c) The compound in (b) above conducts electricity in molten state.

(i) State any other two properties of this compound.

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13. Oxygen can be prepared in the laboratory by adding water to solid X.

(a) Name the solid X.

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(b) Write an equation for the reaction.

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(c) A piece of burning yellow phosphorus was lowered into a gas jar of oxygen.

(i) State what was observed.

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(ii) Write an equation for the reaction.

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14. (a) Name **two** major components of air.

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(b) Write down **one** equation for the reaction when magnesium is burnt in one of the components of air named above.

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(c) Give one use of the component of air reacted in (b) above.

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END

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