



YESMARK TUITION SERVICES

CLASS: FORM TWO

SUBJECT: CHEMISTRY

TIME: 1 ¼ HRS

DATE: 2016

INSTRUCTIONS: ANSWER ALL THE QUESTIONS

1. Write balance chemical equation for the following reactions. (5mks)
 - a) Copper (II) Oxide with nitric acid.
 - b) Lithium with water
 - c) Burning carbon in limited amount of air.
 - d) Zinc and dilute Sulphuric acid
 - e) Calcium Carbonate with dilute hydrochloric acid.

2. Explain the following physical trends. (5mks)
 - i) Reactivity of alkaline earth metals increases down the group.
 - ii) The melting point at of group (VII) elements increases down the group
 - iii) The melting point of alluminium is higher than melting point of magnesium element.
 - iv) The electron affinity of Group (VII) decreasing down the group.

- v) Sodium Chloride conducts electricity in the molten state but not in the solid state.

3. Using diagram illustrations show the difference in structure and bonding of two allotropes of Carbon; graphite and diamond. (3mks)

4. State the type of structures found in the following substances (5mks)

- i) Iron bar
- ii) Magnesium Chloride
- iii) Calcium Oxide
- iv) Hydrogen gas
- v) Sulphur

5. Study the table below and answer the question that follows

Element	Na	Mg	Al	Si	P	S	Cl ₇
Formula of Oxide	Na ₂ O	MgO	Al ₃ O ₃	SiO ₂	P ₂ O ₅	SO ₂	Cl ₂ O ₇
Atomic radius (mm)	1.57	1.36	1.25	1.70	1.10	1.00	0.8

i) Explain trends in the atomic radius of the element given. (1mk)

ii) Which Oxide(s) is

a) Amphotenic (1mk)

b) Acidic in nature (1mk)

iii) Give another possible Oxide of element P (1mk)

iv) Write equation for the reaction between Oxide of Magnesium with water.(1mk)

b) Dilute nitric acid (1mk)

v) Give oxide with the following structures (3mks)

a) Giant covalent structures

b) Simple molecular structures

c) Giant atomic structures

6. Draw cross (X) and (●) diagram to show bond formed in the following compound. (5mks)

i) Silicon (IV) Oxide

ii) Ammonium radical

iii) Magnesium

iv) water molecule

v) Oxygen gas

7. The grid below represents a section of the periodic table. Study it and answer the questions that follows:

A							E
B		C			D		
	G		H			F	

- i) Identify the element that does not form ions easily. (1mk)
- ii) Identify elements which form stable ions with: (3mks)
- +1 charge
 - 2 charge
 - +3 charge
- iii) Write formulae of compound formed when G react with atoms of element F. (1mk)
- iii) Identify the chemical bond formed when
- D and F react (1mk)
 - B and B atom bond (1mk)