

GREENLAWNS SCHOOL, WORLI  
FINAL EXAMINATION - 2016  
CHEMISTRY

Std: VIII

Date: 18/02/2016

Marks: 80

Time: 2 hrs

Answers to this paper must be written on the paper provided separately. You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the Question paper. The time given at the head of this paper is the time allowed for writing the answers.

Section I is compulsory. Attempt any four questions from Section II. The intended marks for questions or parts of questions are given in brackets [ ].

SECTION I (40 Marks)

Attempt all questions from this Section.

Question 1

(a) Name the following:

- i. An alloy of aluminium and magnesium.
- ii. The family of periodic table with 32 elements.
- iii. Electrode connected to positive terminal of the battery.
- iv. A universal indicator.
- v. The substitution product obtained when ethane reacts with chlorine.

[5]

(b) Distinguish between:

- i. Monobasic acid and monoacidic base
- ii. Groups and periods
- iii. Alkene and alkyne
- iv. Froth floatation and gravity separation process
- v. Electrorefining and electroplating

[5]

(c) Define:

- |                   |                       |
|-------------------|-----------------------|
| i. Electrolysis   | iv. Transition metals |
| ii. Hydrated salt | v. Galvanizing        |
| iii. Catenation   |                       |

[5]

(d) Give a balanced equation for each of the following:

- i. Reaction of iron with steam
- ii. Oxidation of methane
- iii. Laboratory preparation of chlorine
- iv. Action of acid on magnesium carbonate
- v. Addition reaction of ethene with chlorine

[5]

- (e) An atom of an element X has 2 electrons in its N shell. [5]
- State its electronic configuration.
  - Is it a metal or non-metal? Justify.
  - State the number of protons in X.
  - Write formula of its chloride.
  - Where is the element placed in the periodic table?
- (f) Draw the structures of the following: [5]
- Acetaldehyde
  - Pentane
  - Propene
  - Formic acid
  - Butyne
- (g) Ammonia is a gas lighter than air. [5]
- What is the nature of ammonia gas?
  - What can you say about its solubility?
  - Give an equation for its laboratory preparation.
  - How is the gas collected?
  - What is the odour of ammonia gas?
- (h) In the study of electrolysis of copper sulphate solution, answer the following questions:
- Name the electrolyte and electrodes used. [1]
  - Give dissociation of the electrolyte used. [1]
  - Give cathode and anode reactions. [2]
  - What is the result at the end of electrolysis? [1]

## SECTION II (40 Marks)

*Attempt any four questions from this section*

### Question 2

- (a) State Dobereiner's law of triads with a suitable example. [2]
- (b) Draw a neat diagram to represent electroplating of an article with nickel. [3]
- (c) The term 'acid' is derived from the latin word meaning 'sour'. [5]
- Define acid.
  - Give an equation for preparation of acid by direct combination?
  - What is the colour change observed in case of methyl orange in acid medium?
  - Give an equation to represent the action of acid on a metallic sulphite.
  - Mention the use of oxalic acid.

### Question 3

- (a) Draw a pH scale representing a range of colours. [2]
- (b) Classify the following into strong or weak, acid or base: [2]
- i. pH = 6                      iii. pH = 9
- ii. pH = 12                    iv. pH = 4
- (c) With reference to ethyne, answer the following questions:
- i. Give the structural formula of ethyne. [1]
- ii. Give a reason why ethyne is said to be an unsaturated hydrocarbon. [1]
- iii. What kind of reaction does ethyne undergo? [1]
- iv. Give balanced equation to prove the above statement. [2]
- v. State one use of this hydrocarbon. [1]

### Question 4

- (a) Answer the following questions with respect to activity series of metals:
- i. Name the most and least active metal of the series. [1]
- ii. How does the most active metal react with acid and oxygen? [2]
- iii. What valencies do metals possess? [1]
- iv. Why are metals said to be good reducing agents? [1]
- (b) Copy and complete the table given below: [5]

Group / Period	Type of element	Any two members of the group
Gp 1		
	Halogens	
		He and Ne
Gp 2		
	Transition metals	Cu and Ag
Pd 6		La and W

### Question 5

- (a) Name two acidic gases and mention their solubility in water. [2]
- (b) What are isomers? Give the structural formula of the isomers of butane. [3]
- (c) With reference to salts, answer the following questions:
- i. Compare normal and acid salt [1]
- ii. Name two sulphate salts which are insoluble in water. [1]
- iii. Give equations for preparation of salts by – direct combination and precipitation. [2]
- iv. Complete and balance the equation: [1]
- $\text{CuO} + \text{H}_2\text{SO}_4 \rightarrow \text{_____} + \text{_____}$

**Question 6**

- (a) Compare minerals and ore. [1]
- (b) Mention one use of the following metal with reason why the metal is used for the specific application: [2]
- Pig iron
  - Steel
- (c) Give the cathode and anode reactions for electrolysis of sodium chloride. [2]
- (d) Classify the following into strong and weak electrolyte – [2]  
Acetic acid,  $\text{Na}_2\text{CO}_3$ ,  $\text{PbBr}_2$  molten,  $\text{Ca}(\text{OH})_2$
- (e) State the property trends of elements on moving down in a group with respect to: [3]
- Character
  - Electro negativity
  - Electron shells

\*\*\*\*\*