

SARALA BIRLA ACADEMY BANGALORE

FINAL EXAMINATIONS 2008 – 2009

Chemistry
(One and Half Hours)

Grade VIII

Saturday, 28/03/2009

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.

No further queries will be entertained after this period

This Paper is divided into **two** parts, Section I and Section II.

Section I (40 marks) contains short answer questions set from the entire syllabus.

You are required to answer **ALL** questions.

Section II (40 marks) six questions

You are required to answer four Questions from Section II.

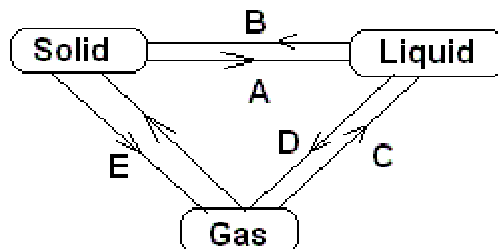
The intended marks for questions or parts of questions are given in brackets []

SECTION I

Question 1:

a) Answer the following question:

- Define matter [1]
- Give two differences between solid, liquid and gaseous states of matter. [4]
- Identify the process labelled A, B, C, D and E involved in converting the 3 states of matter from the diagram below [5]



- Name a solid which directly changes from a solid to a gas [1]

b) Define the terms: [4]

- Compound
- Mixture
- Atom
- Molecule

c) Name the following: [5]

- A diatomic gas
- A metalloid
- A metallic liquid
- A lustrous non-metal
- A non-metal that is a good conductor of electricity

This Paper consists of 3 printed pages

d) Write down the chemical formulae of the following compounds [5]

- i) Calcium hydroxide
- ii) Iron (III) oxide
- iii) Lead (II) chloride
- iv) Sodium bicarbonate
- v) potassium nitrate

e) Name the following compounds [5]

- i) LiOH
- ii) K_2SO_3
- iii) $Al(NO_3)_3$
- iv) NH_4Cl
- v) H_2SO_4

f) State which of the following is chemical or physical change: [5]

- i) Rusting of iron
- ii) Curdling of milk
- iii) Melting of wax
- iv) Burning of a candle
- v) Magnetising of iron

g) Rewrite and complete the following table: [5]

Name of the element	Symbol	Valence
Zinc		
	OH	
Ferrous		
	Hg	2
	Ba	2
	SO_4	

SECTION II

(Attempt any **FOUR** questions from this section)

Question 2:

- a) Balance the equation: $Pb(NO_3)_2 \longrightarrow PbO + NO_2 + O_2$ [2]
- b) Why is water called universal solvent? [2]
- c) Give an equation for the following [2]
 - i) A metallic oxide dissolves in water
 - ii) A non-metallic oxide dissolves in water
- d) Using anhydrous copper sulphate state a chemical test that can be performed to prove that a given liquid is water. [2]
- e) Name two metals that react with cold water [2]

Question 3:

In the laboratory preparation of hydrogen, the preparation is carried out from zinc granules and a dilute acid-answer the following questions:

- a) Draw a neat and labelled diagram for the method used in the above preparation [4]
- b) Name the dilute acid used for the preparation [1]
- c) Write a word equation or chemical equation for the reaction involving the above preparation [2]
- d) State the method of collection of hydrogen gas you have just prepared. [1]
- e) Give a reason why hydrogen is not collected over air [2]

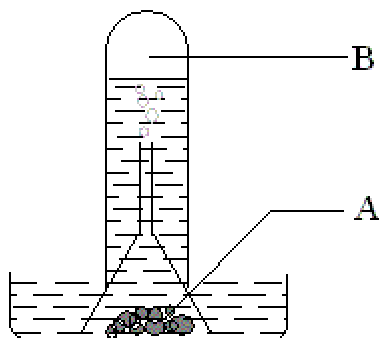
Question 4:

- a) Balance the equation: $\text{CaCO}_3 + \text{HCl} \longrightarrow \text{CaCl}_2 + \text{H}_2\text{O}$ [2]
- b) State two observations you will make when a piece of sodium is dropped into cold water [2]
- c) Name two metals that react with steam [2]
- d) Give two difference between a compound and mixture [2]
- e) Name two gases formed when a candle burns. Give the action of heat on potassium chlorate [2]

Question 5:

Oxygen is prepared in the laboratory from hydrogen peroxide. The following questions are related to preparation of oxygen in the laboratory.

- a) Draw a neat labelled diagram for the method used in the above preparation [4]
- b) Name the catalyst used and state its functions [2]
- c) Write the word equation or chemical equation for the reaction involving the preparation of oxygen [2]
- d) State the method of collection of oxygen gas and give a reason why it is collected by the above method [2]

Question 6:

- a) The above experiment involves a metal with cold water. Observe the experiment carefully and answer the question given below:
- i) Name the metal A [1]
- ii) Name the gas produced B [1]
- b) Write an equation for the reaction involved [2]
- c) Name the products formed from the above reaction [2]
- d) Give a test for each of the products formed [2]
- e) What is the colour of the solution formed? [2]

Question 7:

- a) Balance the equation: $[\text{C} + \text{H}_2\text{SO}_4 \longrightarrow \text{CO}_2 + \text{SO}_2 + \text{H}_2\text{O}]$ [2]
- b) What do you observe when
- i) Magnesium ribbon is introduced into a gas jar of oxygen, O_2 . [1]
- ii) Copper sulphate crystals are heated [1]
- iii) Also write an equation for each of the above observations [2]
- c) Define deliquescence [2]
- d) Calculate the molecular weight of oxalic acid, $\text{H}_2\text{C}_2\text{O}_4$, given that $[\text{H}=1, \text{C}=12, \text{O}=16]$ [2]