

S.S.L.C. EXAMINATION, MARCH - 2014

CHEMISTRY

Time : 1½ Hours

Total Score : 40

Instructions :

- This question paper contains 13 questions.
- Score of each question is given against each question.
- Write the question numbers for main and subquestions correctly.
- Questions with choice are included. For such questions, answer only one question.

Score

1. The ore of aluminium is _____ . 1

(haematite, bauxite, dolomite)

2. Match each of the items given in column A by selecting suitable items from column B. 2

A	B
Antacid	to relieve pain
Analgesic	to lower body temperature
Antipyretic	to control germs
Antiseptic	to reduce acidity

3. 88 g of CO₂ gas at STP is kept in a gas jar. How many moles of CO₂ are present in the gas jar ? 2

(Hint : atomic mass of C = 12, O = 16)

P.T.O.

2

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Score

4. Details of some gases taken at 273° K temperature and 1 atm pressure are given in the table.

Gas	Volume (L)	Number of moles
Hydrogen	224	10
Helium	112	5
Oxygen	224	10
Ammonia	56	2.5

- (a) On the basis of which gas law the volume and number of moles are given in the table ? 1
- (b) Represent this gas law in mathematical form. 1
- (c) Among these, if the pressure of hydrogen gas is changed to 2 atm. Calculate the new volume. 2

5. (A) A gas is formed by the reaction between marble pieces and dilute HCl. _____

- (a) Which gas is formed as a result of this reaction ? 1

- (b) Write the balanced chemical equation of this reaction. 2

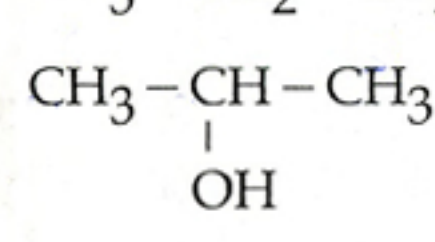
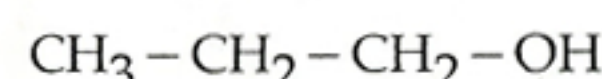
- (c) Suggest two ways of increasing the speed of this chemical reaction. 1

OR

- (B) Using the given materials design an experiment to illustrate the change in speed of chemical reaction with temperature. 4

Materials : Sodium thiosulphate, water, dilute HCl, boiling tubes, beaker, spirit lamp.

6. Two organic compounds are given :



- (a) What is the name of the functional group contained in these compounds ? 1

- (b) Write the common name of compounds containing this functional group. 1

- (c) These compounds are examples for _____ isomerism. 1

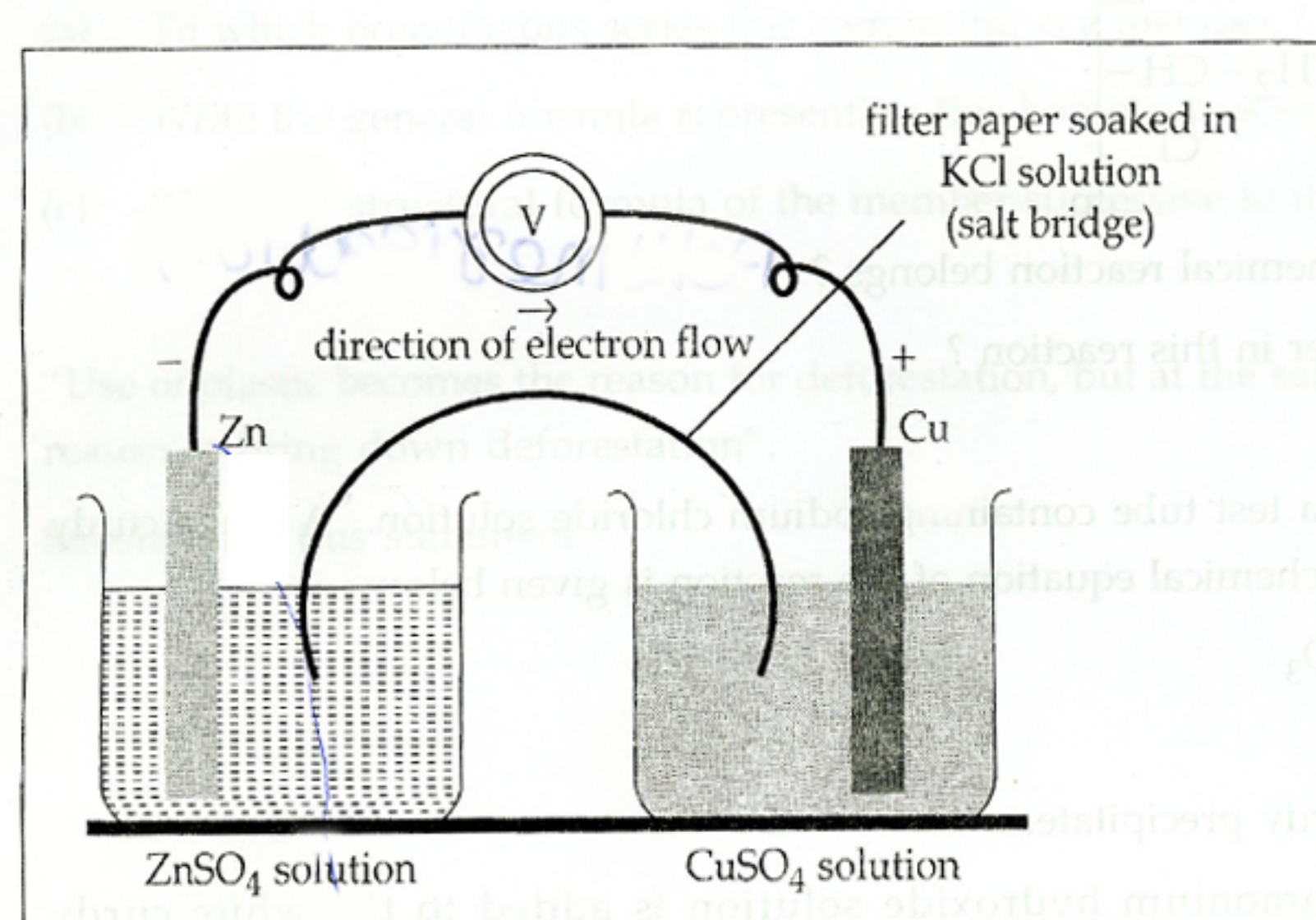
- (d) Write the IUPAC name of any one of these compounds. 1

3

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Score

7. The picture of an electro chemical cell is given :



- (a) Identify the anode and cathode of this cell. 1

- (b) Write the chemical reactions taking place in both the electrodes. 2

- (c) Write the redox reaction taking place in this cell. 1

8. Acetic acid is one carboxylic acid which is used in our daily life.

- (a) 100% acetic acid is known as _____. 1

- (b) What is vinegar ? 1

- (c) Write one use of vinegar in our daily life. 1

9. Copper forms two chlorides CuCl and CuCl₂.

- (a) Identify the copper ions in these compounds. 1

- (b) What is the valency of copper in each of these compounds ? 1

- (c) By writing the sub-shell electronic configuration of copper find out the sub-shells from which the electrons are lost to form these ions. 2

- (d) Write the period and group to which copper belongs. 1

(Hint : Atomic number of copper = 29)

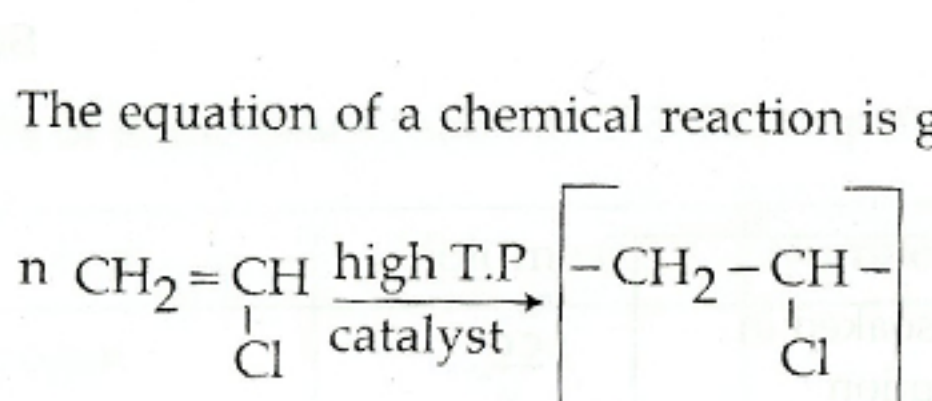
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4

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Score

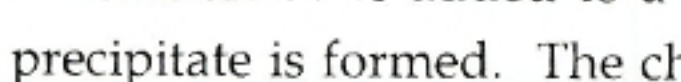
10. The equation of a chemical reaction is given below :



- (a) To which type this chemical reaction belongs ? 1

- (b) Which is the monomer in this reaction ? 1

11. A solution 'X' is added to a test tube containing sodium chloride solution. A white curdy precipitate is formed. The chemical equation of the reaction is given below :



- (a) What is 'X' ? 1

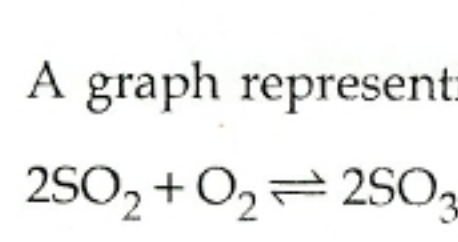
- (b) Identify the white curdy precipitate. 1

- (c) What happens if ammonium hydroxide solution is added to the white curdy precipitate ? 1

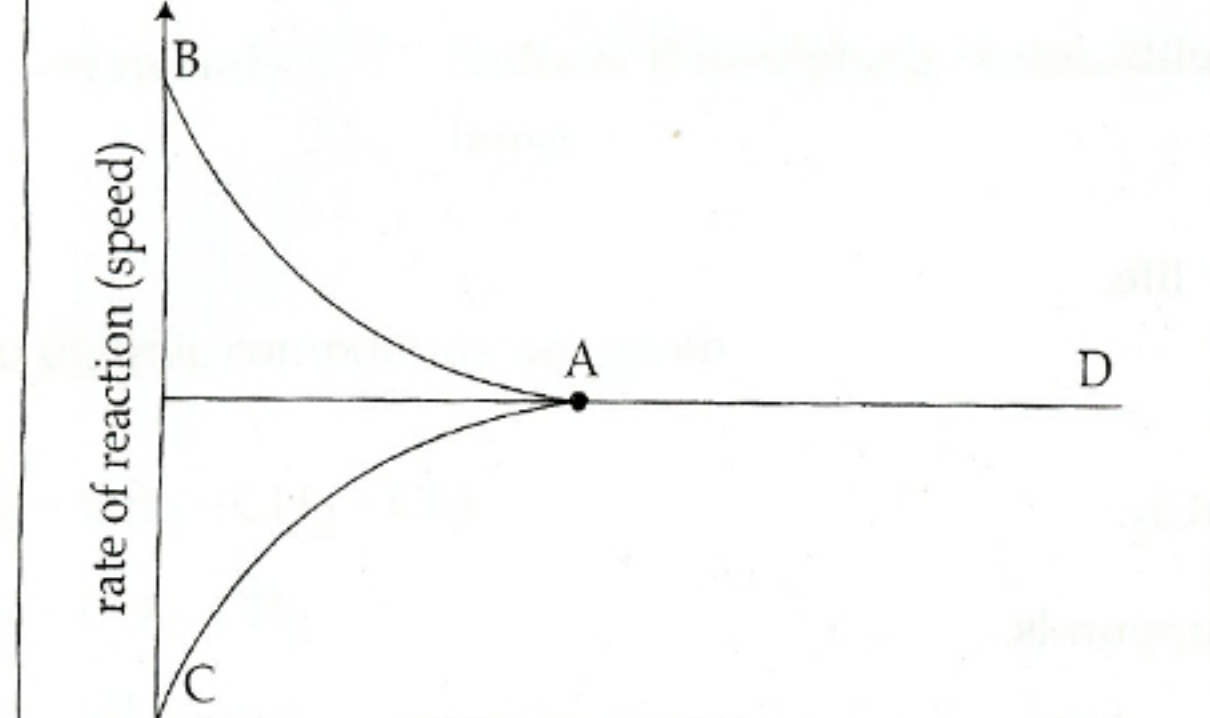
- (d) The presence of which salt can be identified using this experiment ? 1

OR

A graph representing the chemical reaction.



is given :



- (a) Which portions of the graph represent the production and dissociation of SO₃ ? 2

(BA, CA, C, B)

- (b) AD represent _____ state of chemical reaction system. 1

- (c) Name the substances present in the system at the point A. 1

5

1035

Score

12. CH₃ - CH₂ - CH₂ - CH = CH₂ is an unsaturated hydrocarbon.

- (a) To which homologous series this compound is a member ? 1

- (b) Write the general formula representing this homologous series. 1

- (c) Write the structural formula of the member successive to this compound. 1

13. "Use of plastic becomes the reason for deforestation, but at the same time it also becomes the reason to bring down deforestation". 2

Substantiate this statement.