

T16

DEPARTMENT OF GENERAL EDUCATION

DIET ERNAKULAM

VAIBHAVAM 2021

SSLC ACADEMIC SUPPORT

CHEMISTRY TEST 2

(Units 3&4)

Time : 45 minutes

Score: 20

Instructions

- **Total score in the question paper is 30. Answers of best written questions/ sub questions, for 20 score, are evaluated.**
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Question number 1 to 7 (1 score for each question)

1. Identify the relationship in the first pair and complete the second one

Tin : Liquefaction :: Zinc :

2. Which one of the following is the process of heating the concentrated ore in a current of air at the temperature below its melting point.

(Calcination, Roasting, Leaching)

3. NaCl in solid state is not an electrical conductor. Why?

- a) In its solid state ions have no freedom of movement.
- b) There are no ions.
- c) The electrons have no freedom of movement.
- d) There is low attraction force.

4. ----- maintains the electrical neutrality of the galvanic cell.

5. Minerals from which metals can be extracted easily are known as -----.

6. Name the positive ions attracted towards the negative electrode during electrolysis.

7. Name the process of industrial production of aluminium.

Question number 8 to 10 (2 score for each question)

8. The solutions of $ZnSO_4$ and $CuSO_4$ are taken in two different test tubes. An iron nail is kept immersed in each one.

- a) In which test tube the iron nail undergoes a colour change?
- b) What is the reason for colour change?

9. Name of some alloy steels are given below. Find the suitable one for the following

(Alnico, Stainless steel, Nichrome)

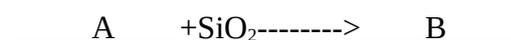
a) Which steel is used to make permanent magnet?

b) Which steel is used to make heating coils?

10. Haematite is converted into iron in the blast furnace.

a) Which compound is acting as the reducing agent in the blast furnace?

b) Complete the following equations.



Question number 11 to 13 (3 score for each question)

11. In the electrolysis of molten NaCl

a) Write the chemical equation of reaction taking place at anode?

b) Name the gas obtained at anode?

c) Which metal is deposited on cathode?

12. Write any 3 practical utilities of electrolysis?

13. Match the columns A, B and C suitably

A	B	C
Characteristics of Ore	Method of concentration	Example
Ore particles are heavier than the impurities	Froth floatation	Tin stone
Ore particles are lighter than the impurities	Magnetic separation	Ore of gold
Magnetic property	Levigation	Zinc sulphide

Question number 14 & 15 (4 score for each question)

14.a) Draw a galvanic cell by selecting required materials from the following.

MgSO₄, CuSO₄, AgNO₃, Zn rod, Mg ribbon, Cu rod, beakers, copper wires, water, salt bridge, voltmeter.

b) Identify anode and cathode in the above cell?

15. Cryolite is added to alumina and subjected to electrolysis to extract aluminium.

a) Why cryolite is added to alumina?

b) Write down the chemical formula of alumina?

c) Write the equations of reactions taking place in the anode and cathode?