

ICSE Chemistry: Model Paper 11

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] State your observations with balanced equations when [10]

1. Sulphur reacts with chlorine.
2. Iron is heated in a current of chlorine.
3. Aqueous copper sulphate is electrolysed between copper electrodes.
4. Sodium nitrate is strongly heated in a test-tube.
5. Burning magnesium is introduced into a jar containing sulphur dioxide.

B] Name the following by giving one term / phrase. [6]

1. Alkanes decomposed at high temperature in the absence of air.
2. Process of extraction of a metal in a pure state on a large scale from its ore by physical or chemical means.
3. The extent to which an electrolyte dissociates into ions.
4. Reheating of the quenched steel to varying temperature following by slow cooling.
5. Compounds of nitrogen are broken down into nitrogen and transferred to atmosphere.
6. A process in which the impure metal is heated on the sloping hearth of a furnace.

C] Consider following ions are present in an electrolyte:

Na^+ , K^+ , H^+ , SO_4^{2-} , Cl^- , OH^- . Electrolysis is carried out using platinum electrodes [5]

1. The ion that would be discharged at the anode.
2. The ion that would be discharged at the cathode.
3. Give a reason to support your answer in (1) and (2).
4. Summarize the ionic reactions taking place at the cathode and at anode.

D]

E]

Given below is a list of elements:

Sodium, Potassium, Magnesium, Silicon, Lithium, Phosphorus, Cesium, Argon,

Chlorine, Aluminium, Rubidium, Francium

1. Select from the list (i) Elements that belong to the same period.
(ii) Elements that belong to the same group (2Marks)
(2 Marks)
2. Arrange the members of the period in order of
(i) Decreasing atomic radii.
(ii) Decreasing valence electron (2 Marks)
3. Select from the period two elements that have
(i) Less than half-filled orbits
(ii) More than half-filled orbits (2 Marks)
4. Select from the group two elements that are
(i) Less reactive than potassium
(ii) More reactive than potassium (2 Marks)
5. Select from the list one element that is
(i) Used in atomic clocks
(ii) Radio-active and artificially produced. (2 Marks)

SECTION - II

Q2.

A. Give reasons for the use of sulphuric acid in

(i) Galvanization (ii) In lead accumulators

B. Draw a labelled diagram for electroplating of an article with nickel. State the reaction at the cathode and

anode in the above process.

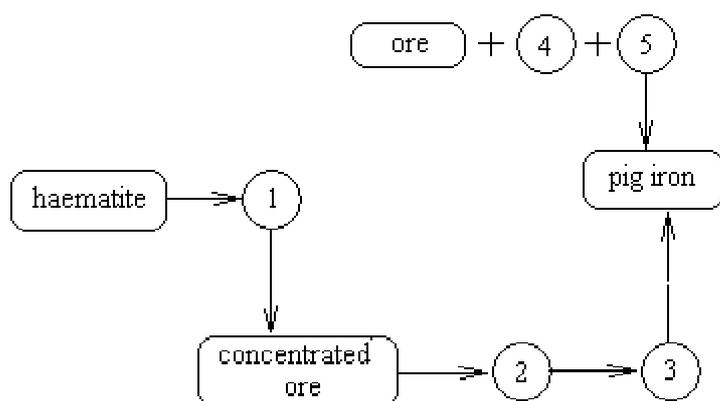
C. Explain with examples substitution reactions of alkanes.

D. How many moles of NaOH are contained in 160g of NaOH?

Q3.

A] (10 Marks)

Given below is an incomplete flow chart outlining the extraction of iron. Complete the chart by replacing the numbers.



B] Summarize the blast furnace reactions. Also state in which zone each reaction occurs (10 Marks)

d. Determine the valency of nitrogen in (1 Mark)
(i) Nitric Oxide (ii) Nitrogen dioxide