

Date:14/07/2024

AVM INSTITUTE

MODEL FIRST MIDTERM EXAMINATION-JULY-2024

12TH STANDARD

CHEMISTRY

Time:2 hours

Max Marks:50

Answer any 4 question (Question no 5 is compulsory)

4 x 2 = 8 marks

Part-1

- 1) Give the basic requirements of vapour phase refining.
- 2) What is meant by burnt alum?
- 3) Define unit cell.
- 4) Define half life of a reaction.
- 5) How is phenol prepared from chlorobenzene?

Part-2

Answer any 4 question (Question no 10 is compulsory)

4 x 3 = 12 marks

- 6) Derive the integrated rate law for zero order reaction $A \rightarrow \text{product}$.
- 7) Classify the following into covalent, molecular, ionic and metallic solids. (i) Diamond (ii) Brass (iii) NaCl (iv) Naphthalene (v) Glucose (vi) SiO_2 .
- 8) How will you prepare bleaching powder?
- 9) Mention the factors responsible for the anomalous behaviour of the first element of p-block.
- 10) How will you differentiate primary, secondary and tertiary alcohols.

Part-3

Answer all the questions

5 x 5 = 25 marks

- 11) a) Explain zone refining process with an example.
(or)
- b) (i) What is inert pair effect? (2m)
(ii) How will you convert boric acid into boron nitride? (3m)
- 12) a) (i) Why HF cannot be stored in glass bottles? (2m)
(ii) Write the properties of interhalogen compounds? (3m)
(or)
- b) What is packing efficiency? Calculate the percentage efficiency of packing in case of body centred cubic unit crystal.
- 13) a) (i) What is elementary reaction? Give the differences between order and molecularity of a reaction. (3m)
(ii) Define average rate and instantaneous rate. (2m)
(or)
- b) (i) Give the uses of diethyl ether. (2m)
(ii) Write any one method of preparation for diethyl ether. (3m)

- 14) a) (i) Give the limitations of Ellingham diagram. (2m)
(ii) Explain the method of refining nickel. (3m)
(or)
- b) (i) Write the difference between graphite and diamond. (3m)
(ii) Give the uses of borax. (2m)
- 15) a) (i) Give the difference between crystalline and amorphous solids. (3m)
(ii) Why ionic crystals are hard and brittle? (2m)
(or)
- b) (i) Write Williamson ether synthesis. (2m)
(ii) What happens when glycerol react with KHSO_4 . (2m)
(iii) Write Riemer- Tiemann reaction. (1m)

Mark summary:

2 x 4 = 8 marks
3 x 4 = 12 marks
5 x 5 = 25 marks
Submitting on Time = 3 marks
Handwriting = 1 mark
Presentation = 1 mark

Total = 50 marks

ALL THE BEST!!!

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