

NOVEMBER/DECEMBER 2018

MCH22 — INORGANIC CHEMISTRY — II

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 6 = 30 marks)

Answer ALL questions.

1. (a) Describe Schottky defect, Frenkel defect and F-centre.

Or

- (b) Write notes on solid state electrolytes.

2. (a) Describe internal conversion.

Or

- (b) Write notes on direct nuclear reactions.

3. (a) Comment on the nuclear reactions responsible for stellar energy.

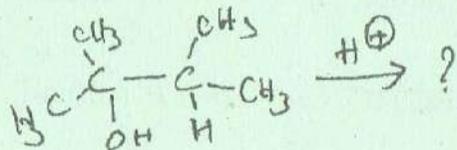
Or

- (b) Explain Radio Immuno Assay (RIA).

3. (a) What is Wolf rearrangement? Discuss the mechanism of the active reaction.

Or

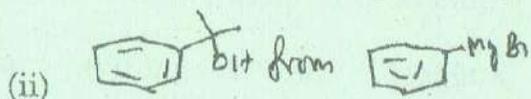
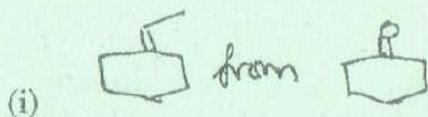
- (b) Predict the product(s) and suggest suitable mechanism of following reaction.



4. (a) Explain the preparation and applications of DCC.

Or

- (b) How will you synthesis the following compounds?



5. (a) Suggest a method of synthesis of simple flow one.

Or

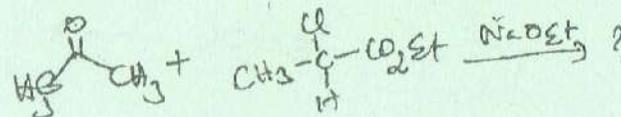
- (b) How will you synthesis vitamin A, by Wiltig method?

SECTION B — (3 × 15 = 45 marks)

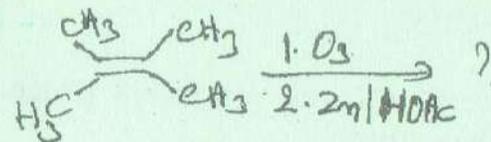
Answer any THREE questions.

6. (a) Describe Michael addition reactions with suitable examples. (10)

- (b) Find out the product(s) and propose suitable mechanism for the following reaction: (5)



7. (a) Complete the following reactions and suggest suitable mechanism: (7)



- (b) Explain the reductions reaction by  $\text{NaCNBH}_3$ . (5)

- (c) Which is best oxidation reagent for conversion of primary alcohol to aldehyde? Why? (3)

8. (a) What is the product for the following reaction? Give suitable mechanism. (6)

