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Total No. of Questions : 11 ]

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# SP-679

## M.Sc. (Final) Examination, 2021

### CHEMISTRY

Paper - VIII (A)

(Group-B CH-505)

(Organic Synthesis)

Time : 1½ Hours ]

[ Maximum Marks : 75

#### Section-A

(Marks : 2 × 10 = 20)

**Note :-** Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

(खण्ड-अ)

(अंक : 2 × 10 = 20)

**नोट :-** सभी दस प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

#### Section-B

(Marks : 5 × 5 = 25)

**Note :-** Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 5 marks.

(खण्ड-ब)

(अंक : 5 × 5 = 25)

**नोट :-** सभी पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 5 अंक का है।

#### Section-C

(Marks : 10 × 3 = 30)

**Note :-** Answer any *three* questions out of five. (Answer limit 500 words). Each question carries 10 marks.

(खण्ड-स)

(अंक : 10 × 3 = 30)

**नोट :-** पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए। (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 10 अंक का है।

**BI-320**

( 1 )

**SP-679** P.T.O.

**Section–A**

2 each

1. (i) What is the use of L.D.C. ? Explain.
- (ii) How is organozinc reagent helpful in organic synthesis ?
- (iii) What is the difference between hydrogenation reaction and hydrogenolysis reaction ?
- (iv) Explain Damjanov reaction.
- (v) What do you mean by reversal of polarity ?
- (vi) Explain synthons and synthetic equivalents.
- (vii) Give a method to synthesized 3-membered ring.
- (viii) Discuss uses of acetylene in organic synthesis.
- (ix) Write a structure of Camphor.
- (x) Give structural formula of Reserpine.

**Section–B**

5 each

2. What is meant by Super Grignard reagent ?

*Or*

Discuss applications of organometallic compound of Rh.

3. Explain reduction reaction of carbonyl compounds.

*Or*

Write a note on oxidations with Ruthenium tetraoxide, Iodobenzene diacetate and Thallium (111) nitrate.

4. Discuss Chemoselectivity.

*Or*

Explain principle of protection of carbonyl group.

5. What is meant by Regioselectivity ? Explain.

*Or*

Write a note on Diels-Alder reaction.

6. Explain Synthesis of Vitamin D.

*Or*

Outline the Synthesis of Cortisone.

**Section-C**

10 each

7. Write a short note on preparations, properties and applications of Grignard Reagent.
8. Give details about non-benzenoid aromatics and polycyclic aromatic compounds.
9. Write a note on one group C-X and two group C-X disconnections.
10. Discuss Michael addition and Robinson annulation reaction.
11. Give complete synthesis of Juvabione.