Roll No.....

Total No. of Sections : 03
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Code No. : 02/202(B)

Second Semester Examination, May-2018

M.Sc. CHEMISTRY

Paper - II

CONCEPT IN ORGANIC CHEMISTRY

Time : 3 Hrs. **Max.Marks : 80**

Note : Section 'A' consists of 10 very short answer type questions, all of which are compulsory and should be attempted first. Section 'B' consists of four short answer type questions with internal options. Section 'C' consists of four long answer type questions with internal choice.

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Section - 'A'

Answer the following very short-answer-type questions in one or two sentences : **(2×10=20)**

Q.1 Define Cross-conjugation.

Q.2 What are antiaromatic and homoaromatic compounds?

Q.3 What is auto-xidation? Give one example.

Q.4 What are axial and equatorial bonds in cyclohexane?

Q.5 Write plane of symmetry with one example.

Q.6 What is the difference between configuration and conformation?

Q.7 Write the conformation of Glucopyranose.

Q.8 What is disrotatory process?

Q.9 Define Ene reaction.

Q.10 What do you meant by HUMO and LUMO.

P.T.O.

Section - 'B'

Answer the following short-answer-type questions with word limit 200-250 : (5 4=20)

Q.1 Define the term 'Catenanes'. Discuss its methods of preparation.

OR

Describe the PMO approach for aromaticity.

Q.2 Write a brief note on Neighbouring group assistances in free radical reactions.

OR

Discuss the coupling of alkynes by diazonium salts.

Q.3 Discuss the conformation of mono substituted cyclohexanes and their relative stability.

OR

Explain Resolution of racemic mixture with suitable example.

Q.4 Draw correlation diagram for conrotatory interconverscon of cyclobutene-butadiene system.

OR

Explain Woodward-Hoffmann rule for orbital symmetry with respect to Electrocyclic reaction.

Section - 'C'

Answer the following long-answer-type questions with word limit 400-450 : (10 4=40)

Q.1 What are inclusion compounds? Discuss their methods of preparation and application.

OR

Discuss the aromaticity of non-benzenoid aromatic compounds with examples.

Q.2 Explain the mechanism of free radical substitution reaction at an aromatic substrate.

OR

Discuss the Free radical rearrangement and its mechanism with example.

Q.3 Taking the examples of some cyclohexane derivatives. Discuss the effect of conformation on chemical reactivity.

OR

With suitable examples, discuss the stereochemistry of sulphur compounds.

Q.4 Discuss the sigmatropic rearrangement and explain its classification.

OR

Explain pericyclic reaction with Huckel-Mobius method.

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