

T.Y.B.SC. SEM – V (CBCS - 2016 Course) : SUMMER - 2019

SUBJECT : CHEMISTRY: ORGANIC CHEMISTRY – I

Day : Monday
Date : 15/04/2019

Time : 11.00 A.M. To 02.00 P.M.
Max. Marks : 60

S-2019-0868

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
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Q.1 Attempt **ANY TWO** of the following: [12]

- a) Draw chair conformations of *cis* and *trans* 1, 4 – dimethyl cyclohexane. Comment on their stability and optical activity.
- b) What is Hoffmann and Saytzeff elimination? Illustrate with suitable examples.
- c) Write a note on : Markownikoff's rule and peroxide effect.

Q.2 Attempt **ANY TWO** of the following: [12]

- a) Discuss factors affecting on E₁ and E₂ mechanism.
- b) Discuss mechanism and stereochemistry of SN¹ reaction.
- c) Write a note on : Friedel Craft's alkylation of benzene.

Q.3 Attempt **ANY TWO** of the following: [12]

- a) What is ozonolysis? Discuss its mechanism.
- b) What is nitration? Discuss the mechanism of nitration of benzene.
- c) Write a note on : Factors affecting on SN¹ and SN² mechanism.

Q.4 Attempt **ANY THREE** of the following: [12]

- a) What is hydroxylation? Discuss it with alkaline KMnO₄.
- b) Explain the terms:
 - i) The Bredt's rule
 - ii) Conformation and configurations
- c) Discuss activating and deactivating groups.
- d) Write a note on : Reaction and mechanism of SN².

P.T.O.

Q.5 Predict the product/s and suggest the mechanism for **ANY FOUR** of the [12]
following:

