

B.Pharm I Year I Semester (R15) Regular &amp; Supplementary Examinations January 2017

**PHARMACEUTICAL ORGANIC CHEMISTRY – I**

Time: 3 hours

Max. Marks: 70

**PART - A**

(Compulsory Question)

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- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define the following terms: (i) Refractive index. (ii) Surface tension.
  - (b) Write a brief note on Hyperconjugation.
  - (c) Write a brief note on hybridization.
  - (d) Write the IUPAC rules for naming aldehydes.
  - (e) What is Saytzeff's rule?
  - (f) Write a note on polarity of carbonyl compounds.
  - (g) Write the mechanism of Cannizzaro reaction.
  - (h) Write a note on geometrical isomerism.
  - (i) Write a note on inter & intra molecular forces.
  - (j) Write a note on electrophilic addition reactions of alkenes.

**PART - B**

(Answer all five units, 5 X 10 = 50 Marks)

**UNIT - I**

- 2 Discuss the generation & stabilities of: (a) Carbocations. (b) Carbanions.

**OR**

- 3 Write in brief about the different physico-chemical properties of drug molecules in relation to biological activity.

**UNIT - II**

- 4 Write in brief about the free radical substitution reactions of alkanes & its selectivity & reactivity of halogens.

**OR**

- 5 What is isomerism? Explain in brief about the structural isomerism with examples.

**UNIT - III**

- 6 Write the mechanism of Markovnikov's rule and peroxide effect with examples.

**OR**

- 7 Discuss the stability of Conjugated Dienes. Explain 1, 2 – addition reactions of Conjugated Dienes with examples.

**UNIT - IV**

- 8 What are  $SN_1$  and  $SN_2$  reactions? Explain the mechanism of  $SN_2$  reaction & write the factors affecting  $SN_2$  reaction.

**OR**

- 9 Write a brief note on:
- (a) Walden inversion.
  - (b) Keto-enol tautomerism.
  - (c) Elimination reaction.

**UNIT - V**

- 10 Write a brief note on:
- (a) Benzoin condensation.
  - (b) Perkins reaction.

**OR**

- 11 Write a brief note on:
- (a) Oppenauer oxidation.
  - (b) Aldol condensation.