

16352(J) 5-16

**B. Pharmacy 2nd Semester Examination**

**Pharmaceutical Chemistry-II (Organic Chemistry) (CBS)**

**BP-201**

**Time : 3 Hours**

**Max. Marks : 60**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Candidates are required to attempt five questions selecting one question from each section A, B, C and D of the question paper and subparts of the questions in section E are compulsory.

**SECTION - A**

1. (a) What is carbocations; define the structure of carbocations. (6)
- (b) How are alkyl halides prepared? Describe their synthetic utility. (6)
2. (a) Write a note on Wurtz reaction. (6)
- (b) How is ethyl alcohol manufactured from molasses or starch? (6)

**SECTION - B**

3. (a) What are cycloalkanes? Describe the stability of cycloalkanes. (6)
- (b) How are dienes prepared? Describe their important reactions. (6)
4. How are aliphatic carboxylic acid prepared? Describe the important reactions. (12)

[P.T.O.]

**SECTION - C**

5. (a) Explain why phenol is more acidic than ethyl alcohol. (6)
- (b) What is Friedel-Crafts alkylation and their mechanism? (6)
6. Discuss the mechanism of  $S_N1$  and  $S_N2$  reactions of alkyl halides. (12)

**SECTION - D**

7. (a) How are ketones prepared? Describe their important reactions. (6)
- (b) Write short note on Reimer-Tiemann reaction and Kolbe reaction. (6)
8. Explain the resonance stabilization of allyl cations: hyper conjugation. (12)

**SECTION - E**

9. Attempt all questions.
  - (a) What happens when ethyl chloride is treated with sodium metal?
  - (b) A triple bond consists of.....bonds.
  - (c) What happens when sodium benzoate is heated with soda-lime?
  - (d) The number of structural isomers of alcohols with molecular formula  $C_4H_9OH$  is.....?
  - (e) Grain alcohol is another name for.....?
  - (f) Lucas test is used to determine the type of.....?
  - (g) Phenol is acidic because of.....?
  - (h) Ethers react with cold concentrated  $H_2SO_4$  to form.....?
  - (i) Aliphatic primary amines react with cold nitrous acid to form.....?
  - (j) Hinsberg's reagent is.....acid.
  - (k) A primary amine can be identified by using.....+ KOH.
  - (l) The reduction of ketone always gives.....alcohol. (1×12=12)