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P-014-1042003 Seat No. _____

M. P. M. (Sem. II) (CBCS) Examination

July - 2018

BP202T : Pharmaceutical Organic Chemistry - I

Faculty Code : 014

Subject Code : 1042003

Time : **3** Hours] [Total Marks : **75**

1 Answer the following questions : **20**

(1) Define organic compound. Classify it with examples.

(2) Define and classify isomers.

(3) Explain Sp^3 Hybridization of Alkane.

(4) What is Dienes ? Classify it with example.

(5) Explain Saytzeffs orientation for addition reaction of alkene.

(6) Justify the statement : Bromination of alkane is more selective then chlorination.

(7) Write reaction involved in Benzoin and Aldol condensation.

(8) Explain method for synthesis of Grignard reagent.

(9) Comment : Order for basicity of amine is $2° > 1° > 3°$ in aqueous solution.

(10) What is Diel-Alder reaction ?

2 Answer the following questions : (Any **Two**) **20**

(1) What is Alkyl halide ? Explain reaction, mechanism and stereochemistry of nucleophilic aliphatic substitution reaction in Alkyl halide.

(2) Define Carbonyl compounds. Give any two methods for preparation and reactions of aldehyde and ketone.

(3) Give structure and uses of following compounds :

(a) Trichloroethylene

(b) Propylene glycol

(c) Chloral hydrate

(d) Salicylic acid

(e) Ethylenediamine

3 Answer the following questions : (Any **Seven**) **35**

(1) Write a note on structural isomerism in organic compound.

(2) Enumerate chemical reactions of alkane and explain halogenations in detail.

(3) Explain E_2 versus E_1 reactions in alkene.

(4) Write name of qualitative tests for identification of carboxylic acid, ester, amide, alcohol and aliphatic amine.

(5) Explain structure of alcohol and explain laboratory methods for preparation of alcohol.

(6) Write reaction and mechanism of Cannizzaro reaction and Perkin condensation.

(7) Explain stability and free radical addition reactions of conjugated diene.

(8) Explain Acidity of carboxylic acids and effect of substituents on acidity of carboxylic acid.

(9) Write structure of Tartaric acid, Vanilin, Glycerol, Hexamine and Amphetamine.
