Code No. 13307 / PCI

FACULTY OF PHARMACY

**M. Pharmacy   (Pharmaceutical Chemistry) I – Semester (Suppl.) Examination,
August 2019**

Subject : Advanced Organic Chemistry – I

Time : 3 hrs   **Max. Marks : 75**

Note : Answer any FIVE questions. All questions carry equal marks.

1   a) Discuss the method of formation, stability and important reactions of free radicals
        and carbanions.   8
    b) Write the mechanism and stereochemistry of E_1 and E_2 eliminations.   7

2   Write a method of preparation, mechanism and applications of following synthetic
    reagents (any three)
    a) Diazomethane   b) Osmonium tetroxide
    c) Triphenul phosphine   d) Witting reagent
    e) Aluminium isopropoxide   3 x 5 = 15

3   a) Discuss the important guidelines for disconnection of molecules.
    b) What is FGI, FGA, synthon and synthetic reagent? Explain giving one example
        for each.
    c) Discuss c-x disconnections in alcohols and carbonyl compnds.   6+4+5

4   Write the mechanism and synthetic applications of (any three)
    a) Doebner-Miller reaction   b) Sandmeyer reaction
    c) Shapiro and Suzuki reaction   d) Mannich addition   3 x 5 = 15

5   a) Write a note on (any two)
        i)   Knorr pyrazole synthesis
        ii) Combes Quinoline synthesis
        ii) Traube purine synthesis   2 x 4 = 8
    b) Explain the methods for protection and deprotection of
        i)   Carbonyl grp   ii) Amino grp   7

6   Mention the heterocyclic nucleus present and also the steps involved in the
    synthesis of following drugs (any three)
    i)   Micronazole   ii) Antipyrin
    iii) Chlorpromazine   iv) Quinacrine
    iv)   Triamterene   5 x 5 = 15

7   a) Discuss any two rearrangement reactions.
    b) Explain mechanism in SN^1 reaction and also mention its stereochemistry.
    c) What is Saytzeff's rule? Explain with example?   6+5+4

8   Write a note on (any three)
    a) Vilsmeyer-Hack reaction   b) Wilkinson reagent
    c) Sharpless asymmetric epoxidation   d) BOP reagent   3 x 5 = 15

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