

NTK/KW/15/6982

Faculty of Pharmacy

B.Pharm. Third Semester (C.B.S.) Examination

PHARMACEUTICAL CHEMISTRY—III (ORGANIC)

Paper—II (3T-2)

Time : Three Hours]

[Full Marks : 80

**N.B. :**— (1) Question No. 1 is compulsory.(2) Solve any **FOUR** questions from the remaining.

(3) Draw neat labeled diagram wherever necessary.

1. Solve any **FIVE** of the following :  $5 \times 4 = 20$ 

(a) Write the mechanism of Hofmann degradation reaction.

(b) Justify that SN 1 reactions are accompanied by rearrangement.

(c) Explain conformation of n-butane.

(d) Why cyclopropane always undergo ring opening reaction ?

(e) State how heat of hydrogenation proves unusual stability of benzene.

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| <p>(f) Explain any two reactions of carboxylic acid.</p> <p>(g) Aldehydes are more reactive than ketone. Explain.</p> <p>2. (a) Discuss Aldol condensation with suitable examples. 8</p> <p>(b) Explain Cannizzaro's reactions with suitable examples. 7</p> <p>3. Give detailed account of <math>SN^2</math> reaction including mechanism, orientation and reactivity. 15</p> <p>4. Outline the laboratory synthesis of following from benzene :</p> <p>(a) p-chloro benzoic acid</p> <p>(b) p-toluidine</p> <p>(c) Diphenyl methane</p> <p>(d) m-bromo phenol</p> <p>(e) Styrene. 15</p> <p>5. Write in detail about method of preparation of alkenes using suitable examples. 15</p> <p>6. (a) Elaborate the detailed account of E2 mechanism supporting evidences and stereochemistry. 8</p> <p>(b) Write a short note on Hinsberg test. 7</p> | <p>7. Discuss the electrophilic aromatic substitution reaction of benzene with :</p> <p>(a) Nitration</p> <p>(b) Sulphonation</p> <p>(c) Friedel-Craft's alkylation</p> <p>(d) Friedel-Craft's acylation</p> <p>(e) Halogenation. 15</p> |
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