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DE—7—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

Pharm D (First Year) EXAMINATION

MARCH/APRIL, 2018

PHARMACEUTICAL ORGANIC CHEMISTRY

(Friday, 27-4-2018)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—70

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Draw chemical structure and reaction wherever necessary.

1. Solve any *five* of the following : 2×5=10

(a) Define oxidizing and reducing agent with suitable example.

(b) What is hyperconjugation ?

(c) Write Markonikov's rule.

(d) What are protic and aprotic solvents ?

(e) Give medicinal uses of urea.

(f) Define persistent radical with suitable example.

(g) What is aldol condensation ?

2. Solve any *two* of the following : 2×6=12

(a) What is SN^2 reaction ? Explain mechanism and kinetics of SN^2 reaction.

(b) Explain various methods of preparation of cycloalkanes.

(c) Discuss Hoffmann rearrangement reaction.

3. Solve any *two* of the following : 2×6=12

(a) What are free radicals ? Explain the mechanism of free radical chain reactions.

(b) Write method of preparation, assay procedure and uses of aspirin.

(c) Write various reactions of alkene.

P.T.O.

4. Solve any *two* of the following : 2×6=12
- (a) Explain the mechanism of peroxide initiated addition of HBr.
 - (b) Write IUPAC rules for nomenclature of alkene, alkene and dienes.
 - (c) What is claisen condensation ? Write its mechanism.
5. Solve any *two* of the following : 2×6=12
- (a) Explain methods of balancing redox reaction.
 - (b) What is isomerism ? Explain various types of isomers with suitable example.
 - (c) Explain mechanism of sulfonation and nitration.
6. Solve any *two* of the following : 2×6=12
- (a) What is heat of hydrogenation ? Write a note on stability of alkenes.
 - (b) What is orientation effect ? Explain ortho, meta and para directing groups.
 - (c) Write the procedure for assay of chlorbutol and dimercaprol.