

## I B. Pharmacy I Semester Supplementary Examinations, February - 2020

## PHARMACEUTICAL ORGANIC CHEMISTRY-I

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions  
All Questions carry **Equal** Marks

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1. a) Write methods used for preparation of free radicals. (9M)  
b) What are nucleophiles? Write in brief on their role in organic reactions. (6M)
2. a) Write factors influencing shape of organic molecule. Write its significance in pharmaceutical chemistry. (8M)  
b) Write a note on reactivity of carbocations. (7M)
3. a) Discuss the conformational isomerism observed in cyclohexane. (8M)  
b) Write in brief on free radical substitution reactions on alkanes. (7M)
4. Write the reaction mechanism and synthetic applications of (15M)  
(a) Birch reduction (b) Friedel crafts acylation reaction (c) Ozonolysis
5. a) Write in detail on ortho/para directing groups in electrophilic aromatic substitution reactions of monosubstituted benzene. (8M)  
b) Write two methods used for preparation of anthracene? Add a note on its oxidative reactions. (7M)
6. a) Compare  $SN^1$  and  $SN^2$  reactions. Write the role of solvent on SN reactions. (9M)  
b) Write in detail on Markovnikov's rule. (6M)
7. How do you achieve the following synthetic reactions? (15M)  
(a) Aniline to p-bromoaniline  
(b) Benzene to butylbenzene  
(c) Ethylene to polyethylene
8. Write reasons for the following: (15M)  
(a) Benzene shows low reactivity towards nucleophilic substitution reactions  
(b) Hydration of propyne gives acetone  
(c) Hydroxy is not a good leaving group