(9/12/01

Roll No. .....

Total No. of Questions : 10] [Total No. of Pages : 02

B.Pharmacy (Sem.-2nd)
PHARMACEUTICAL CHEMISTRY - III
(Organic Chemistry - I)

SUBJECT CODE :PHM - 1.2.4

Paper ID : [D0110]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours Maximum Marks : 80

Instruction to Candidates:

1) Section - A is **Compulsory**.
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Three** questions from Section - C.

Section - A

Q1) *(15 × 2 = 30)*

a) How hydrogen bonding affects boiling point?

b) Define Hybridization.

c) Nitrogen trifluoride has smaller dipole moment than ammonia.

d) Which is the strongest acid in each pair :

(i) H_2S or HS^-
(ii) H_2O or OH^-

e) Define transition state.

f) Differentiate between absolute and relative configuration.

g) What is the Chirality?

h) What is racemic mixture.

i) What is the difference between racemic modification and meso compounds?

j) What is Saytzeff rule?

k) Alkene undergo electrophillic addition where as benzene undergoes electrophillic substitution reaction.

l) Although Chlorines deactivation still it is o- or p- direction in electrophillic substitution reaction.

m) Draw the orbital picture of Benzene.

n) Write down the general structure of following compounds :

(i) Anhydride.
(ii) Amide.
(iii) Ester.
(iv) Cyclic amides.

o) Why carboxylic acids are more acidic than alcohol?

Section - B

(4 × 5 = 20)

Q2) What is the basic difference between S_N1 and S_N2 reaction mechanism?

Q3) How carbocations are generated, their structure and reaction the undergo?

Q4) Define electrophiles and nucleophiles with suitable examples.

Q5) Explain specification of configuration with respect to sequence rule.

Q6) What is ozonolysis. Explain.

Section - C

(3 × 10 = 30)

Q7) Explain various theories of Acid and Bases with suitable examples.

Q8) Write down various methods for synthesis and reaction of alcohol.

Q9) What are activators and deactivators in electrophillic substitution reaction in benzene. How does they affect reactivity and orientation.

Q10) Explain the mechanism for acid and base catalyzed hydrolysis of esters.