

Roll No.

Total No. of Questions : 10]

[Total No. of Pages : 02

J-731[5376] **[2126]**

B.Pharmacy (Semester - 2nd)

PHARMACEUTICAL CHEMISTRY - III (PHM - 1.2.4)

(ORGANIC CHEMISTRY - I)

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 x 2 = 30)

- a) Convert toluene into m-bromotoluene.
- b) What is Sandmeyer reaction? Give reactions.
- c) Give reactions involved in Wolff-Kishner Reduction.
- d) Aniline is treated with nitrous acid and then with cuprous chloride. What is the product obtained?
- e) Write the structure and uses of aspirin.
- f) What is Perkin reaction? Explain.
- g) What do you mean by racemisation? Explain giving examples.
- h) Explain the terms Chirality and meso-form.
- i) What is an R and S configuration? Give examples.
- j) How will you distinguish between 1 - propanol and 2 - propanol?
- k) What happens when chloroform is heated with ethylamine in the presence of alcoholic potassium hydroxide?
- l) How will you differentiate aldehydes and ketones in the lab?
- m) What are lewis acids and lewis bases?

P.T.O.

- n) Give two methods of preparation of Benzoic acid.
- o) What is Aldol condensation? Give its Mechanism.

Section - B

(4 x 5 = 20)

- Q2) What is Bayer Strain theory? How it accounts for certain aspects of the chemistry of cyclic compounds. What are its limitations?
- Q3) What is isomerism? Discuss the different types of isomerism, giving suitable examples.
- Q4) What is Markownikoff's rule? Explain the mechanism with a suitable effect. Add a note on peroxide effect.
- Q5) Write two methods of preparation of benzaldehyde. Explain all its reactions.
- Q6) How will you do the following conversion :
 - (a) 1 - Butene to butanal.
 - (b) Acetone to pinacol.

Section - C

(3 x 10 = 30)

- Q7) What are amines? How do they differentiate between different amines. Give any two methods of preparations of amines. Explain all its reactions.
- Q8) What is aromaticity? Explain in detail with reference to Benzene. Give the electrophilic and nucleophilic reaction mechanism of benzene.
- Q9) Explain the following reaction mechanisms with suitable examples.
 - (a) Reformatsky reaction.
 - (b) Wurtz-fitting reaction.
- Q10) Write short notes on
 - (a) Inductive effect.
 - (b) Dipole moments.

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