

22/11/14 (Reg)

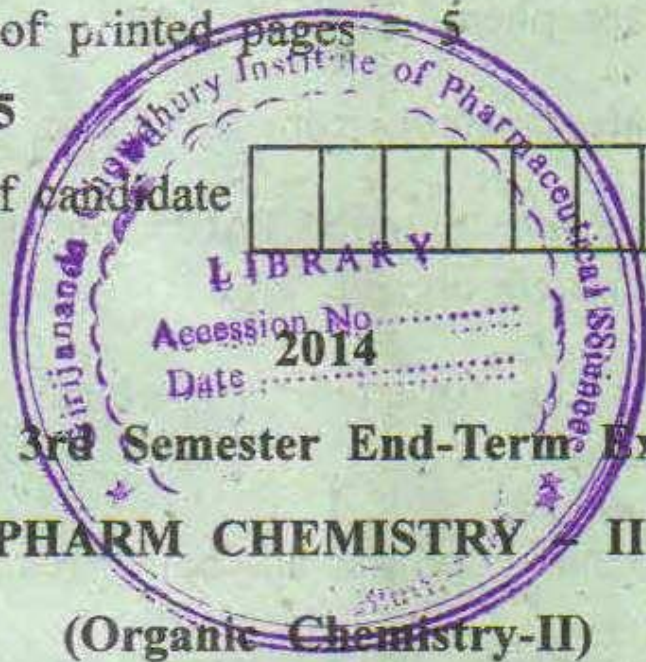
Total No. of printed pages = 5

PY 132305

Roll No. of candidate

--	--	--	--	--	--	--	--	--	--

SCANNED



B. Pharm 3rd Semester End-Term Examination

PHARM CHEMISTRY - III

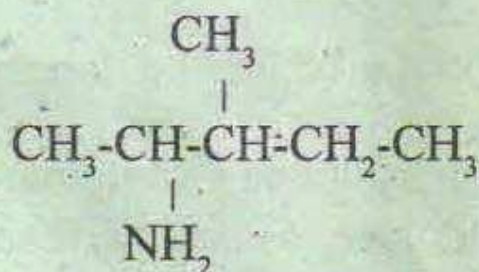
(Organic Chemistry-II)

Full Marks - 100 Pass Marks - 35 Time - Three hours

The figures in the margin indicate full marks for the questions.

1. (a) How acetaldehyde is prepared from acetylene? 1×10=10

(b) Write IUPAC name of



(c) Explain delocalisation of electron in benzene.

[Turn over

- (d) Prepare phenol from aniline.
- (e) Prepare benzene from acetylene.
- (f) Give example and IUPAC name of an  $\alpha, \beta$  unsaturated organic acid.
- (g) Write the structure of aluminium tert-butoxide.
- (h) Write name of the alkylating reagents.
- (i) What happen when trans-2-butane reacts with HBr in presence of organic peroxide.
- (j) Write some catalyst used specially for Friedal Crafts reaction.
- (k) Define stereoisomerism.
- (l) Define catalytic hydrogenation.

2. Answer any *ten* questions of the following :

2×10=20

- (a) How NBS is prepared in the laboratory ?
- (b) How  $\alpha, \beta$  unsaturated compounds are prepared by aldol condensation reaction ?
- (c) Write two reactions of NBS as oxidising reagent.

- (d) Explain the basic criterias for a cyclic compound to be aromatic.
- (e) Explain acidity of phenol.
- (f) What is the oxidation product of anthracene? Write with reaction.
- (g) Explain how ethanol is acidic.
- (h) Briefly describe basicity of amines.
- (i) Write examples of four functional derivatives of carboxylic acid.
- (j) Define Markovnikov rule with example.
- (k) Define sterio selective reaction.
- (l) What is the catalytic hydrogenation product of benzene ?

3. (a) Differentiate between : 3×3=9

- (i)  $E_1$  elemination and  $E_2$  elemination.
- (ii) Stereo specific reaction and stereo selective reaction.
- (iii) Syn addition and anti addition.

(b) Explain the following reaction with example.  
(any seven). 3×7=21

(i) Aldol condensation reaction.

(ii) Clemmensen reduction.

(c) Friedel Crafts reaction.

(d) Oxidation of primary and secondary alcohol.

(e) Diel's Alder reaction.

(f) Write the structure of the following compound :  
Isobutyric acid, Isovaleric acid, 3,4 dimethyl  
hexanoic acid.

(g) Classify carboxylic acid with suitable  
example.

(h) Explain acidity of phenol.

4. Answer any *five* of the following questions :

(i) Explain stereo selective reaction with  
example.

(ii) Explain the basicity of amines.

(iii) Describe catalytic hydrogenation of benzene.

- (iv) Write any two methods of preparation for phenol.
- (v) Explain the reason why  $\alpha$  - hydrogen of aliphatic aldehydes imparts acidity.
- (vi) Write any two methods of preparation of diazomethane.  $4 \times 5 = 20$

5. Answer any *four* of the following questions :

- (i) Describe stereo specific reaction with suitable reaction.
- (ii) Explain nucleophilic aromatic substitution both bimolecular displacement mechanism and benzene mechanism.
- (iii) Write a note on polynuclear aromatic compounds.
- (iv) Explain the mechanism of Hoffmann's amide degradation.
- (v) Write two reactions to differentiate formaldehyde and acetaldehyde.  $5 \times 4 = 20$