

Sem-IV Rev
Organic Chemistry - IV

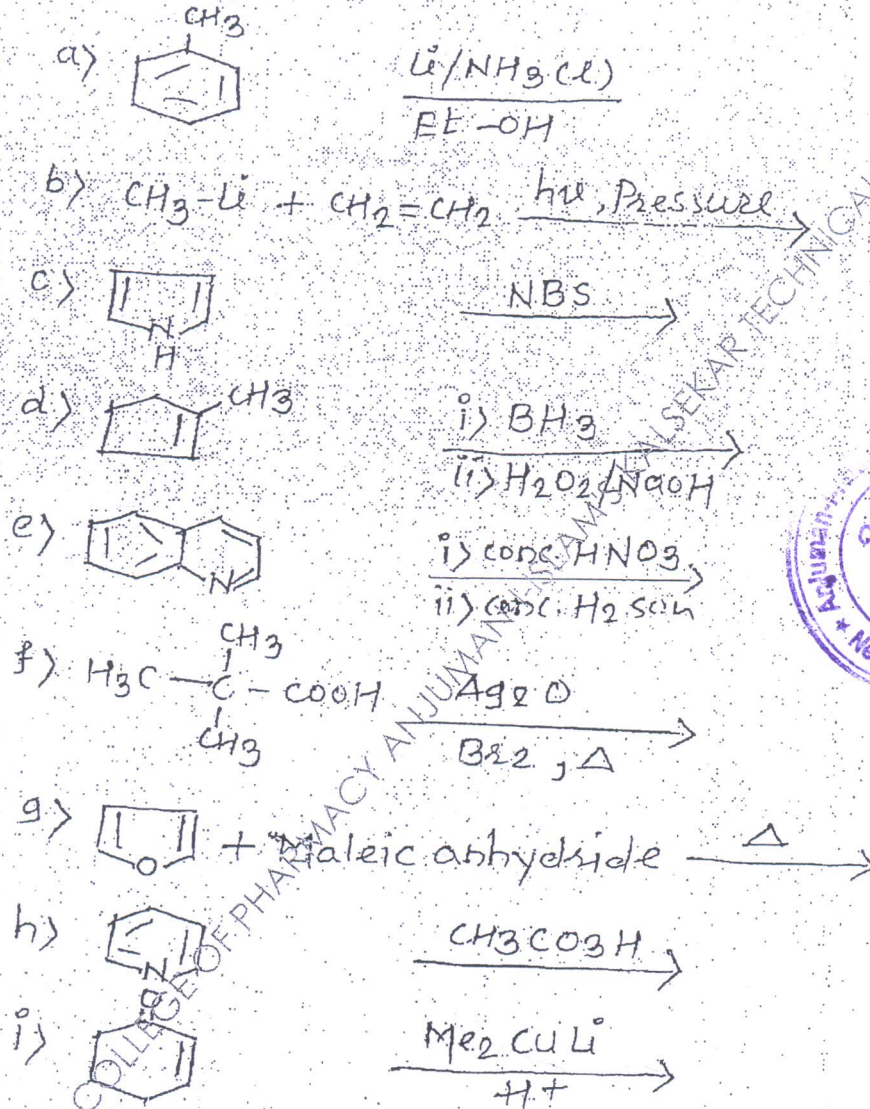
QP Code : 02055

(2 Hours)

[Total Marks : 40

- N.B. : (1) Question No. 1 is compulsory.
 (2) Attempt any four questions out of remaining six questions.
 (3) All sub-questions for a given question should be grouped and write together.

1. Give the structure of the products for the following reactions (any eight) :—



2. (a) Write the detail mechanism for the following name reactions (any three) :— 6
- Madelung Indolesynthesis
 - Knorr-Pyrrole synthesis
 - Skraup Synthesis
 - Bischler-Napieralski Synthesis.

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- (b) Draw resonating structures for (any two) :— 2
- Furan
 - Quinoline
 - Pyridine N-oxide.
3. (a) Attempt the following conversion (any three) :—
- Aniline to Chlorobenzene
 - 2-Butanol from Acetaldehyde
 - Benzaldehyde to Cinnamic acid
 - Toluene to p-Toluic acid.
- (b) What is Bakelite ? How it is prepared ? 2
4. (a) What are copolymers ? Discuss applications of copolymers in pharmaceuticals ? 4
- (b) Write a note on "Merrifield solid phase" technique for synthesis of tri-peptide ? 4
5. (a) Give products of Pyridine on reaction with following :— 4
- NaNH_2
 - $\text{Na}\backslash\text{NH}_3$ (liq)
 - Raney Ni / H^+
 - NaBH_4
- (b) Write the structures of the product obtained by reaction of methyl lithium with— 4
- Dry ice
 - Diisopropyl ketone
 - Olefin
 - 1, 3-unsaturated ketone.
6. (a) Explain the following statements with proper justification (any three) :— 6
- Furan, Pyrrole and Thiophene are aromatic
 - Pyridine is more basic than Pyrrole
 - The magnitude of resonance energy of thiophene is higher than that for pyrrole or furan
 - Electrophillic substitution of Indole occurs at 3rd position.
- (b) Write short note on Birch Reduction reaction. 2
7. (a) Write a note on Amino acid-Protecting groups. 4
- (b) Suggest any two methods of synthesis for the following (any two) :— 4
- Isoquinoline
 - Pyrrole
 - Pyridine,

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Pharmacology-I

2014-15

QP. Code : 02058

(2 Hours)

[Total Marks : 40

- N. B. : (1) Question No. 1 is compulsory.
(2) Attempt any four out of remaining five questions.
(3) Figures to the right indicate full marks.

1. Attempt any four of the following :- 8
- (a) Discuss the limitations of oral route of drug administration.
 - (b) Explain in brief drawbacks of bulk purgative
 - (c) Define and explain agonist with example.
 - (d) Discuss in brief carrier transport mechanism.
 - (e) Explain the mechanism of action of warfarin.
 - (f) Define receptor? Comment on functions of receptors.
2. (a) Write a note on drug induced carcinogenicity. 4
(b) Define drug. Write a note on mechanism of drug action. 4
3. (a) Explain the effect of age and disease on drug action. 4
(b) Explain enzyme induction & enzyme inhibition. 4
4. (a) Discuss in detail pharmacotherapy of megaloblastic anaemia. 4
(b) Write a short note on antiplatelet agents. 4
5. Discuss pharmacotherapy of diarrhoea. 8
6. Write short notes on (any two) : 8
- (a) Prokinetic agents
 - (b) Prodrugs
 - (c) Emetics & antiemetics
 - (d) Parenteral route of drug administration.



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