

(LN 2016)

SEPTEMBER 2018

Sub. Code: 2016

**B.PHARM. DEGREE EXAMINATION**  
**PCI REGULATION – SEMESTER II**  
**FIRST YEAR**  
**PAPER II – PHARMACEUTICAL ORGANIC CHEMISTRY – I**

*Q.P. Code: 562016*

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)**

1. Define Elimination reaction. Discuss the mechanism of E<sub>1</sub> and E<sub>2</sub> reactions.
2. Explain the free radical addition reaction of conjugated dienes with examples.
3. Describe the mechanism, kinetics and stereochemistry of SN<sub>2</sub> reaction.

**II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)**

1. Explain the acidity of carboxylic acids.
2. Stability and rearrangement of carbocations.
3. Mechanism and examples of aldol condensation.
4. Explain the effect of substituents on basicity of amines.
5. Explain Diels Alder reaction with examples.
6. How to differentiate primary, secondary and tertiary alcohols?
7. SN<sub>1</sub> versus SN<sub>2</sub> reactions.
8. Benzoin condensation.
9. Explain about Markownikoff's rule.

**III. Short answers on: Answer ALL questions. (10 x 2 = 20)**

1. Define SP<sub>3</sub> hybridization.
2. Define optical isomerism with one example.
3. Give the structure of 2-Pentanol and isopropyl alcohol.
4. Define nucleophilles and electrophilles.
5. Structure and use of formaldehyde and paraldehyde.
6. Define conjugated dienes with examples.
7. What is tautomerism?
8. Any two qualitative test for aldehyde.
9. Structure and uses of methyl salicylate.
10. Define electromeric effect.

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(LO 2016)

MARCH 2019

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**PCI Regulation – SEMESTER II**  
**PAPER II – PHARMACEUTICAL ORGANIC CHEMISTRY – I**

*Q.P. Code: 562016*

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)**

1. Discuss  $SN_1$  and  $SN_2$  reactions with special reference to mechanism reactivity and stereochemistry.
2. What are alkyl halides? How will you prepare alkyl halides and aryl alkyl halides?
3. Explain the phenomenon of  $SP^4$  &  $SP^3$  trigonal hybridization with suitable example.

**II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)**

1. What is Diazonium reaction? Explain the general reaction.
2. Explain the Markonnikoff's rule and peroxide effect.
3. What is Diel's Alder reaction? Explain with examples.
4. Write the method of preparation of ether by williamson's synthesis.
5. How chloroform is prepared industrially? Write the properties, analytical test and uses of Chloroform.
6. Explain the formation of bonding, antibonding and nonbonding orbitals.
7. Give any three methods of preparation and three reactions of Amines.
8. Explain the photohalogenation and thermal halogenations of alkanes.
9. Explain any three methods of preparation of alcohols.

**III. Short answers on: Answer ALL questions. (10 x 2 = 20)**

1. Define and classify Carboxylic acids and Esters.
2. Define Ozonolysis with examples.
3. Wolf Kishner reduction.
4. What is hyperconjugation?
5. Give the IUPAC name of  $HO-CH_2-CH_2-COOH$
6. How is glycol synthesized?
7. Explain resonance effect.
8. Give the structure and use of amphetamine.
9. Write the structure and uses of cinnamaldehyde.
10. Write the structure and use of Benzyl Benzoate.

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SEPTEMBER 2019

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**PCI Regulation – SEMESTER II**  
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*Q.P. Code: 562016*

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)**

1. Explain the mechanism, reactivity and kinetics of  $SN_1$  reaction.
2. Explain Perkin condensation with mechanism and examples.
3. Explain the mechanism of free radical addition reaction of alkenes with examples.

**II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)**

1. Explain the basicity of amines.
2. Halogenation of alkanes.
3. Ozonolysis.
4. Explain Saytzeffs rule with examples.
5. Explain the mechanism of cannizaro reaction with examples.
6.  $E_1$  versus  $E_2$ .
7. Describe in detail about electrophilles and nucleophilles with examples.
8. Differentiate between primary, secondary, tertiary amines.
9. Explain about hybridization. Describe the molecular orbital structure of ethane.

**III. Short answers on: Answer ALL questions. (10 x 2 = 20)**

1. Define and classify alcohols.
2. Define hydrogen bonding with one example.
3. Structure and use of ethylene diamine.
4. 1, 4 addition of conjugated dienes.
5. Why aniline is less basic than ammonia?
6. Structure and use of vanillin and propylene glycol.
7. Qualitative test for amides.
8. IUPAC name of  $HO - CH_2 - CH_2 - CH_2 - COOH$ .
9. Medicinal uses and structure of Lactic acid and amphetamine.
10. General test to identify acetone and benzyl alcohol.

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(LQ 2016)

MARCH 2020

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**PCI Regulation – SEMESTER II**  
**PAPER II – PHARMACEUTICAL ORGANIC CHEMISTRY – I**

*Q.P. Code: 562016*

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)**

1. Discuss Sp<sup>2</sup> hybridization in alkenes.
2. a) Give the method of preparation of Carboxylic acid.  
b) Acidity of carboxylic acid.
3. a) How will you distinguish primary, secondary and tertiary amines?  
b) Discuss the basicity of amines.

**II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)**

1. How are aldehydes prepared? Give their important reactions.
2. Give the method of preparation on allyl halide.
3. Give some important reactions of alcohols.
4. Write about the effect of substituent on acidity of carboxylic acid.
5. Write a note on benzoin condensation.
6. Explain SN<sup>1</sup> reaction.
7. Write about IUPAC rules for naming cycloalkanes.
8. Write a note on Peroxide effect.
9. Write about conjugated dienes.

**III. Short answers on: Answer ALL questions. (10 x 2 = 20)**

1. Define ozonolysis.
2. How will you distinguish 1-butyne and 2 butyne?
3. Give the structure and uses of chloroform.
4. Write the structure and use of: a) Cetosteryl alcohol b) Glycerol.
5. Define Cannizzaro reaction.
6. Give the structure and use of: a) Hexamine b) Vanillin.
7. Define inductive effect.
8. What happens when methane is treated with Iodine in presence of an oxidizing agent HIO<sub>3</sub>?
9. Write the structure of the following: a) 1-methyl pentene b) 2-ethyl butane.
10. Define Isomerism.

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