

(LO 2031)

MARCH 2019

Sub. Code: 2031

B.PHARM. DEGREE EXAMINATION
PCI Regulation – SEMESTER III
PAPER I – PHARMACEUTICAL ORGANIC CHEMISTRY – II

Q.P. Code: 562031

Time: Three hours

Maximum: 75 Marks

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

1. Discuss three different methods of synthesis of Anthracene. Mention some of its important properties. How can be Anthracene converted to anthraquinone and alizarine.
2. Explain the preparation and effect of substituents on the acidic character of phenols.
3. Define aromatic electrophilic substitution reactions. Discuss the reaction and mechanism of Nitration, Halogenation, Sulphonation, Friedel-craft alkylation and Friedel-craft arylation.

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

1. Write any three methods for synthesis of Diphenyl methane.
2. Explain chemical reactions of aromatic carboxylic acids.
3. What are the methods used for the synthesis of phenanthrene.
4. Discuss the basicity of amines.
5. Write the preparation and synthetic utility of diazonium compounds.
6. Explain about Resonance theory of benzene.
7. Write any five reactions of naphthalene.
8. What are lipids? Write their classification in detail.
9. Write a note on Bayer's strain theory.

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

1. Difference between an oil and fat.
2. Hinsberg test.
3. Structure and uses of DDT and BHC.
4. Waxes.
5. Hybridization.
6. Mechanism of Halogenation of benzene.
7. Fatty acids.
8. Sachse Mohr's theory.
9. Saponification value.
10. Structure and use of Cresol and Resorcinol.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LP 2031)

SEPTEMBER 2019

Sub. Code: 2031

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

Q.P. Code: 562031

Time: Three hours

Maximum: 75 Marks

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

1. Explain the facts which supporting Kekule structure of Benzene. Briefly discuss about activating and deactivating group in Benzene.
2. Write the general method of preparations and reactions of aromatic amines.
3. a. Explain the various reactions of Fatty acids
b. Determination of Iodine value with its significance.

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

1. Describe the effect of substituent of Benzene.
2. Explain any three method for preparation of Phenol.
3. Write a detailed note on Basicity of amines.
4. Write briefly on acidity and effect of substituents of Aromatic acids.
5. Explain the determination of acid value with its significance.
6. What happens when Naphthalene?
 - a. Reduce with H_2/Ni
 - b. Oxidise with $KMnO_4$
 - c. Addition of excess Cl_2
 - d. With $Con.HNO_3$ and $Con.H_2SO_4$
 - e. With $Con.H_2SO_4$ at $40^\circ C$.
7. Explain the Haworth synthesis for Naphthalene.
8. Describe about Coulson and Moffitt's modification.
9. Explain any two reactions of each of Cyclopropane and Cyclobutane.

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

1. Two synthetic utility of diazonium salt.
2. Write any two Qualitative tests for Phenol.
3. Preparation of Biphenyl from Benzidine.
4. Classify polynuclear hydrocarbons.
5. What do you mean Essential fatty acid? Give the examples.
6. Give structure and common name of two fatty acid.
7. Explain Williamson's ether synthesis.
Give the structure and uses of the following:
8. a) DDT
b) Saccharin
9. a) *p*-cresol
b) 1-Naphthol
10. a) Picric acid
b) Diphenylmethane

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LR 0121]

JANUARY 2021

Sub. Code: 2031

(MARCH 2020 EXAM SESSION)

B. PHARMACY DEGREE EXAMINATION

PCI REGULATION – SEMESTER III

PAPER I – PHARMACEUTICAL ORGANIC CHEMISTRY – II

Q.P. Code: 562031

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Write the general methods for the preparation of Amines.
b) Enumerate the preparation and synthetic utility of Diazonium salts.
2. a) Write the structure of Naphthalene and briefly about the conventions used in Numbering Carbons.
b) Haworth synthesis and reactions of Naphthalene.
3. Define Aromatic electrophilic substitution reactions. Discuss the reaction and mechanism of Nitration, Friedel-Craft's Alkylation and Friedel-Craft's Acylation Reactions.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write any three methods for synthesis of Diphenyl methane.
2. Bayer's strain theory.
3. Synthesis of Phenanthrene.
4. Structure and uses of α , β -Naphthol, Resorcinol and Chloramine.
5. Resonance theory of Benzene.
6. Chemical reactions of Anthracene.
7. Important reactions of Cyclobutane.
8. Chemical reactions of Aromatic Carboxylic acids.
9. Determination of Acid value.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Difference between an Oil and Fat.
2. Hinsberg test.
3. Lipids and its classification.
4. Synthesis and uses of Triphenyl methane.
5. Waxes.
6. Define hybridization.
7. Mechanism of Halogenation of benzene.
8. Acidity of Phenols.
9. Basicity of amines.
10. Saponification value.

[BPHARM 0921]

SEPTEMBER 2021
(SEPTEMBER 2020 EXAM SESSION)

Sub. Code: 2031

B.PHARM. DEGREE EXAMINATION
PCI Regulation 2017 – SEMESTER III
PAPER I – PHARMACEUTICAL ORGANIC CHEMISTRY – II
Q.P. Code: 562031

Time: Three hours

Maximum: 75 Marks

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

1. Details the mechanism of reactions of Benzene with various electrophiles. Brief notes on orientation of second substituent in mono substitutes Benzene.
2. Discuss the principle involved in the determination of analytical constants of Fats and Oils. Write their clinical importance.
3. Enumerate the necessary modifications suggested by Coulson – Moffit for cyclo alkanes. Give the reactions of Anthracene.

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

1. Draw the orbital picture of Benzene and write a note about it.
2. Give the preparations for the following with mechanism:
i) meta-Dinitro benzene and ii) m – Cresol.
3. Replacement reactions of Diazonium Chloride with mechanism.
4. Brief about the basicity of Amines.
5. Haworth synthesis of Naphthalene.
6. Preparations and reaction of Diphenylmethane.
7. One medicinal compound with uses belonging to Triphenylmethane, Phenanthrene and Anthracene.
8. Draw the picture of i) Stable cyclohexane and ii) Angle strain in Cycloalkanes.
9. Resonance hybrid structure for Phenanthrene and write about its Resonance energy.

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

1. Why oils become rancid?
2. Saponification value.
3. Structure and medicinal uses of any two diphenylmethane derivatives.
4. Classify phenols with examples.
5. Structure and medicinal uses of DDT and BHC.
6. Give reason for the acidity of the phenols with the help of their resonance structure.
7. Schotten –Baumann reaction.
8. Compare their acidity: Salicylic acid, Benzoic acid and Nitro benzoic acid.
9. Give the reaction that yields soap and glycerol from fats and oils.
10. Define the value that is useful in finding the number of alcoholic groups present in fats and oils.