

Exam Date & Time: 07-Dec-2018 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm - Semester -III

End Semester Examination, DECEMBER- 2018

Course Code: PCH-BP301T

Course Title: PHARMACEUTICAL ORGANIC CHEMISTRY-II (THEORY)

Date:07-12-2018

Pharmaceutical Organic Chemistry II [PCH-BP 301T]

Marks: 75

Duration: 180 mins.

I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1) One of the following is a moderately activating group
 1) -NH₂ 2) -OCH₃ 3) -CH₃ 4) -C₆H₅ (1)
- 2) 1,3-cyclobutadiene has
 1) 2 Pi electrons 2) 6 Pi electrons 3) 4 Pi electrons 4) 8 Pi electrons (1)
- 3) Benzene undergoesreaction with bromine in the presence of FeBr₃
 1) condensation 2) addition 3) substitution 4) polymerization (1)
- 4) Sulphur trioxide is a /an.....
 1) electrophile 2) nucleophile 3) adduct 4) charged ion (1)
- 5)is an ortho/para director
 1) -CHO 2) -COOH 3) -Cl 4) -NO₂ (1)
- 6) Acid value is a measure of free..... in the sample
 1) alcohol 2) ester 3) aldehyde 4) acid (1)
- 7) Iodine value is determined by.....method
 1) pyridine hydrochloride 2) pyrrole bromide 3) pyridine sulphate 4) pyridine bromide (1)
- 8) Rancidity is caused byof ester linkage
 1) oxidation 2) reduction 3) hydrolysis 4) halogenation (1)
- 9) Oils contain larger proportion of fatty acids
 1) saturated 2) unsaturated 3) hydroxy 4) methoxy (1)
- 10) An idea about the average carbon chain length of fatty acid is known from (1)

- 1) iodine value 2) acid value 3) saponification value 4) acetyl value
- 11) The pK_a value of HI is (1)
1) -10 2) -7 3) 0.18 4) 9.9
- 12) Phenol when treated with bromine water gives.....precipitate (1)
1) Brown 2) violet 3) white 4) red
- 13) In trimethylamine.....effect dominates over the electronic effect (1)
1) resonance 2) isotopic 3) mesomeric 4) steric
- 14) Aromatic amines are.....than aliphatic amines (1)
1) more stable 2) less stable 3) more basic 4) more acidic
- 15) The K_b value of trimethyl amine is (1)
1) 4.2×10^{-4} 2) 0.6×10^{-4} 3) 6.0×10^{-4} 4) 0.2×10^{-4}
- 16) Methyl naphthalene on treatment with chromium trioxide gives (1)
1) menadione 2) naphthoquinone 3) anthraquinone 4) decalin
- 17) Phenathrene is treated with sodium and ethanol gives (1)
1) 9,10 dichlorophenathrene. 2) 9 nitro phenathrene, 3) 9,10 dihydrrophenathrene 4) 9,10 dibromophenathrene
- 18) Phenathrene with con nitric acid gives (1)
1) 9 nitro phenathrene 2) 8 nitro phenathrene 3) 10 nitro phenathrene 4) 6 nitro phenathrene
- 19) Benzyl chloride with benzene gives (1)
1) triphenyl methane 2) diphenyl methane 3) Benzaldehyde 4) benzophenone
- 20) Tolnaftate is used as (1)
1) antifungal 2) antiviral 3) anticancer 4) antimalarial agent

II Long Answers

Answer all the questions.

- 1) a) Explain the theory of reactivity in Electrophilic aromatic substitution with a neat energy diagram.(5 marks) (10)
b) Explain nitration and Friedel Craft's alkylation of Benzene with mechanism(5 marks)
- 2) Explain the following reactions of oils (10)
a) Rancidification b) Saponification c) Drying d) Hydrogenation

III Short Answers

Answer all the questions.

- 1) Discuss the effect of groups on electrophilic aromatic substitution reaction. (5)

- a) Explain 3 chemical tests for identification of Phenol.(3 marks) (5)
b) Give the structure and uses of resorcinol.(2 marks) (5)
- 3) a) Discuss the effect of substituents on acidity of phenol.(3 marks) (5)
b) Give two reactions of benzoic acid.(2 marks) (5)
- 4) Outline Haworth's synthesis of naphthalene and two important electrophilic reactions of naphthalene. (5)
- 5) Explain Bayer's strain theory and Sachse Mohr modification. (5)
- 6) Write the structure of triphenyl methane and diphenylmethane with two important reactions. (5)
- 7) Discuss two special reactions of cyclopropane and cyclobutane. (5)

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