

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Summer 2020

Course: B. Pharmacy

Sem: IV

Subject Name: Pharmaceutical Organic Chemistry-III

Subject Code: BP401T

Max Marks: 75

Date: 24/08/2022

Duration: 3.45 Hrs.

Instructions –

1. All questions are compulsory
2. Answers to MCQs should be written in full sentences
3. Draw diagrams / figures wherever necessary
4. Figures to right indicate full marks

I. Multiple Choice Questions

(20 Marks)

- 1) Which of the following prefix is used for Sulphur?
a) Oxa b) Aza c) Thia d) Sila
- 2) Number of optical active isomers in tartaric acid are
a) 2 b) 4 c) 6 d) 8
- 3) Furan react with Ammonia in the presence of aluminum trioxide at 400°C to give
a) Pyridine b) Furfural c) Pyrrole d) Furoic acid
- 4) Enantiomers are ---
a) Mirror images of each other b) Not mirror images of each other
c) Not concern with mirror images d) Diastereomers of each other
- 5) Suffix used for three membered heterocyclic saturated compound containing N is
a) Etidine b) Epidine c) Iridine d) Inidine
- 6) Notation used for dextro rotatory compounds is
a) D b) L c) d d) l
- 7) Electrophilic substitution in Thiophene usually occurs at
a) O atom b) C-2 Position c) C-3 Position d) Both A&B
- 8) Which of the following reagent reacts with pyrrole to form 2-formylpyrrole
a) HCOOH b) CHCl_3 & KOH c) H_2O_2 d) $(\text{CH}_3\text{CO})_2\text{O}$
- 9) Conversion of ketoximes to N-substituted amides takes place in ----- reaction
a) Beckmann b) Birch c) Claisen Schmidt d) Dakin

- 10)) n-Propyl alcohol and isopropyl alcohol are examples of isomerism.
a) Functional b) Position c) Chain d) Metamerism
- 11) In -----synthesis 1,4- diketone is used as starting material
a) Fiest Benary b) Paal Knorr c) Traube d) Bischler
- 12) The synonym for pyrrole is_____.
a) Furan b) Pyrrole c) Pyridine d) Benzopyridine
- 13) Thiophene contains following heteroatom
a) S b) N c) O d) C
- 14) Following is the core component in structure of chloroquine
a) Isoquinoline b) Quinoline c) Thiophene d) Pyridine
- 15) Pyridine is ----- in nature
a) Weakly acidic b) Weakly basic c) Strong Acidic d) Neutral
- 16) What is the order of reactivity of pyrrole, furan & thiophene towards electrophile
a) furan, pyrrole, thiophene b)pyrrole, furan, thiophene
c) thiophene, pyrrole, furan d) furan, thiophene, pyrrole
- 17) Zinc amalgam & HCl is used as reagent in
a) Wolf-Kishner reduction b) Clemmensen reduction c) Birch reduction d) Dakin reaction
- 18) Wolff Kishner reduction mechanism begins with the formation of a
a) Hydride ion b) Hydrazone anion c) Nitrogen anion d) Nitrogen cation
- 19) ----- isomerism is observed in doubly bonded compounds
a) Structural b) Stereo c) Geometrical d)Optical
- 20) Identify the chiral molecule among the following
a) Isopropyl alcohol b) 2-pentanol c) 1-bromo 3-butene d) Isobutyl alcohol

II. Long Answers (Answer any Two) (20 Marks)

- 1) Define and explain with examples the asymmetric synthesis.
- 2) Explain in detail conformations and conformational analysis of n-Butane and Cyclohexane.
- 3) Give principle, reaction and mechanism of Birch reduction and Wolf Kishner reduction.

III. Short Answers (Answer any Seven) (35 Marks)

- 1) Define Biphenyl compounds and explain atropisomerism.
- 2) Explain the elements of symmetry with suitable examples.
- 3) Define Stereospecific reaction and explain it with examples.

- 4) Write the EAS reactions and medicinal uses of furan.
- 5) Write methods of preparation & reactions of Thiophene.
- 6) Give reaction mechanism of Paal-Knorr synthesis in pyrrole.
- 7) Why pyridine is much basic than pyrrole; explain on the basis of resonance.
- 8) Outline the method of synthesis of Indole.
- 9) Write methods of preparation & medicinal uses of pyrimidine.

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