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Roll No. .....

341451(41)

B. Pharmacy (Fourth Semester) Examination, Nov.-Dec. 2019

(PCI Scheme)

(Pharmacy Branch)

PHARMACEUTICAL ORGANIC CHEMISTRY-III

Theory (BP401T)

Time Allowed : Three hours

Maximum Marks : 75

***Note** : Attempt all Sections.*

Section-'A'

(Objective Type Questions) **20×1=20**

***Note** : Attempt all questions. Each question carries 1 mark.*

1. (i) Which of the following is an example of stereoisomerism?

(a) Chain isomerism

(b) Metamerism

(c) Tautomerism

(d) Optical isomerism

(ii) Opticallyactive molecules should posses the following property/properties :

(a) Lack of plane of symmetry

(b) Non super imposable mirror image

(c) Achiral centre

(d) (a) and (b) both

(iii) Which type of compounds are optically in active :

(a) Levo rotatory and dextro rotatory

(b) Racemic mixture

(c) Meso compound

(d) (b) and (c) both

iv) The methods for separation of racemic mixture are called :

(a) Racemic modification

(b) Racemic resolution

(c) Racemisation

(d) None of the above

(v) Tarteric acid has ..... number of isomeric structure :

(a) 4

(b) 6

(c) 2

(d) 8

(vi) Enantiomers are :

(a) Super imposable mirrors images

(b) Non super imposable mirror images

(c) Not mirror images

(d) None of the above

(vii) Following is an example of spceific configurati

(a) "d" and "l" configuration

(b) D and L configuration

(c) R and S configuration

(d) E and Z configuration

(viii) D-Galactose and D-Glucose are .....

(a) Enantiomers

(b) Diastereomers

(c) Epimers

(d) b and c both

(ix) "Syn" and "anti" geometrical isomerism found in

(a) Nitrogen containing compound

(b) Oxygen containing compounds

(c) Sulfer containing compound

(d) None of the above

(x) Example of atroisomerism is :

(a) Ethylene

(b) Biphenyl compounds

(c) Cyclohexane

(d) 1, 2-dichloromethane

(xi) Which of the following is bicyclic heterocycle :

(a) Purine

(b) Indole

(c) Quinoline

(d) All of the above

(xii) Which of the following is not a nitrogen containing heterocycle :

(a) Pyridine

(b) Oxazole

(c) Thiazole

(d) None of the above

(xiii) The example of seven membered heterocycle is :

(a) Isoquinoline

(b) Acridine

(c) Azepine

(d) Indole

(xiv) The heterocylic ring present in nitrogenous base of nucleotide is :

(a) Purines

(b) Pyrimidines

(c) Pyroidine

(d) (a) and (b) both

(xv) Which of the following heterocycle is not a five memberedring :

(a) Oxazole

(b) Furan

(c) Acridine

(d) Thiophene

(xvi) The two heteroatom containing heterocycle is :

(a) Pyrazole

(b) Pyridine

(c) Quinoline

(d) Azepine

(xvii) Metal hydride are catalysing the following reaction :

(a) Reduction reaction

(b) Oxidation reaction

(c) Hydration reaction

(d) Redox reaction

(xviii) The conversion of acetophenone to corresponding Ketoxime is called :

(a) Clemmensen reduction

(b) Beckmann's rearrangement

(c) Oppenauer oxidation

(d) Birch reduction

(xix) The reducing agent uses in Wolf Kishner reduction reaction is :

(a) Zn/mg + HCl

(b) $NaBH_4$

(c) $NaOH + NH_2NH_2$

(d) H_2SO_4 or PCl_5

(xx) The reaction involve with the formation of β-ketoester from condensation of two ester molecule is called :

(a) Brich reduction

(b) Cluisen condensation reaction

(c) Clemmensen reduction reaction

(d) Dakin reaction

Section-'B'

(Short Answer Type Questions) 7×5=35

Note : *Attempt any seven questions. Each question carries 05 marks.*

2. Write a brief account on stereospecific and steroselective reactions.

3. Discuss the asymmetric synthesis with suitable example.

4. Explain the reactions using metal hydride with example.

5. Write the reaction of synthesis and medicinal uses of indole.

6. Explain the aromaticity and synthesis of pyrrole.

7. Discuss the reaction and mechanism of beckmann's rearrangement reaction.

8. Briefly discuss the different methods involved in the determination of configuration of geometrical isomers.

9. Describe the parameters for the optical activity of organic compounds .

10. Discuss the conformational isomerism with suitable examples.

Section-'C'

(Long Answer Type Questions) **2×10=20**

Note : Attempt any two questions out of three questions. Each question carries 10 marks.

11. Write the detail about basicity, synthesis and medicinal uses of pyridine.

12. Give the reaction and mechanism of birch reduction,

oppenauer oxidation and claisen schmidth condensation reactions.

13. Discuss in detail of methods used for modification and resolution of racemic mixture.