

MPC 102T

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ODD SEMESTER EXAMINATION , 2022-23

COURSE NAME :- M.PHARM

SEMESTER- IST

SUBJECT :- ADVANCED ORGANIC CHEMISTRY-1

TIME: 3 HOURS

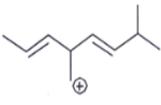
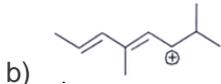
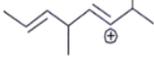
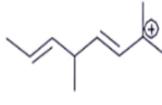
MAX MARKS:75

NOTE: Attempt all questions.

(2x10)

PART A

Multiple choices Question (Answer all Question)

- SN1 reactions occur through the intermediate formation of –
a) Carboanions b) Carbocations c) Free radicals d) None of these
- SN2 reaction is carried out with
a) 1° alkyl halide b) 2° alkyl halide c) 3° alkyl halide d) All of these SN1
- Reaction is the best carried out
a) 1° alkyl halide b) 2° alkyl halide c) 3° alkyl halide d) All of these
- Which carbonation is the most stable?
a)  b)  c)  d) 
- The order of decreasing stability of the following cations is?
(I) $\text{CH}_3\text{C}^+\text{HCH}_3$ (II) $\text{CH}_3\text{C}^+\text{HOCH}_3$ (III) $\text{CH}_3\text{C}^+\text{HCOCH}_3$
a) III > II > I b) I > II > III c) II > I > III d) I > III > II
- Name of isomers is formed in rearrangement reactions?
a) Structural isomers b) Geometrical isomers c) Optical isomer d) Conformational
- The product of Mannich reaction have two functional groups which are
a) Aldehyde and Alcohol b) Ketone And Amine c) Acid And Ketone d) Ester And Amine

8. Examine the false about the five membered heterocyclic rings?
- a) Five membered rings are more stable than 4 membered rings
 - b) Five membered rings are more stable than 6 membered rings
 - c) Five membered rings are more stable than 7 membered rings
 - d) Five membered rings are more stable than 8 membered rings
9. Five membered rings come under which category of heterocycle classification on the basis of chemical behavior?
- a) Excessive heterocycle
 - b) Efficient heterocycle
 - c) Equivalent heterocycle
 - d) Can't say about the five membered rings
10. The following statements best describes retro synthesis?
- a) The reaction conditions required to convert the product of a reaction back to the original starting materials
 - b) A strategy used to design a synthesis of a target molecule by working back from the target to simple starting materials
 - c) The design of a synthetic scheme using cheap, traditional reagents, rather than expensive modern reagents
 - d) The design of reaction conditions such that an equilibrium reaction is pushed towards the products rather than the starting materials.

PART B

Long answer type question (Answer any Two Questions) 10X2

- 11. Elaborate basic principle, terminologies and advantages of retro synthesis.
- 12. Demonstrate the synthesis of Ketaconazole, celecoxib, alprazolam and Mercaptopurine.
- 13. Design the synthesis of drug containing fused heterocyclic ring.

PART C

Short Answer Question (Answer any seven question) 7X5

- 14. Explain Saytzeff's rule for alkene with reaction and mechanism.
- 15. Elucidate SN1 and SN2 reactions with their mechanism.
- 16. Role of E1 and E2 reaction in organic chemistry.
- 17. How can we differentiate Carbocations with carboanions.

18. Discuss free radical with suitable examples.
19. Summarize a short note on Rearrangement reaction.
20. Demonstrate mechanism and synthetic application of Mannich reaction.
21. Find out the importance of Ozonolysis reaction in organic chemistry.
22. List out the application of diazomethane and dicyclohexylcarbodiimide.