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SRINIVASAN COLLEGE OF ARTS AND SCIENCE



(Affiliated to Bharathidasan University, Trichy)
(Recognized by UGC, Section 2(f) & 12 (b) of the UGC Act 1956)
PERAMBALUR - 621 212



M. Sc. DEGREE EXAMINATION, NOVEMBER 2022

MODEL EXAMINATION

ORGANIC CHEMISTRY - I

TIME: 03:00 Hrs

Maximum marks: 75

Class: I M.Sc., CHEMISTRY

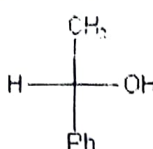
DATE:

SECTION - A

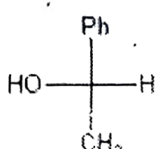
(10X1=10)

i) ANSWER ALL THE QUESTIONS

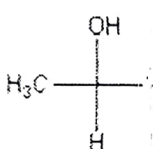
1. Pyridine IUPAC name
2. Neopentyl carbanion less stable due to
3. What is taft equation.....
4. What is Hammett equation.....
5. Compounds which have different arrangements of atoms in space while having same atoms bonded to each other are said to have....
6. Which of the following Fischer projections is different from the other three?



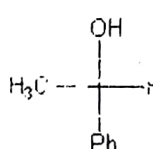
1



2



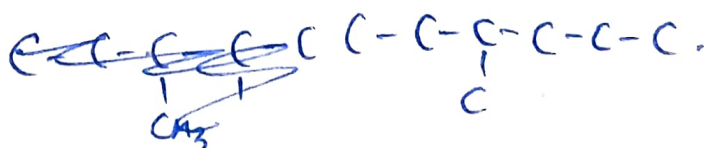
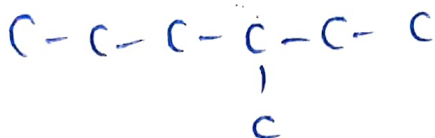
3



4

a) 1 b) 2 c) 3 d) 4

7. Which of the following is an alkane which can exhibit optical activity?
a) Neopentane b) Isopentane c) 3-Methylpentane d) 3-Methylhexane
8. Which of the following can make difference in optical isomerism?
a) heat b) temperature c) polarized light d) pressure
9. Which of the following is a characteristic of an aromatic compound?
(a) Cyclic (b) Planar (c) $(4n+2)\pi$ electrons (d) All of the above.
10. Which of the following is the correct representation to relate the two resonating Kekule structures of benzene? (a) $\rightarrow$ (b) $\equiv$ (c) $\leftrightarrow$ (d) $\rightleftharpoons$



10. Which of the following is the correct representation to relate the two resonating Kekule structures of benzene?

- (a) $\rightarrow$ (b) $\equiv$ (c) $\leftrightarrow$ (d) $\rightleftharpoons$

SECTION - B

(5X5=25)

ANSWER ALL QUESTIONS

11. (a) Discuss the IUPAC nomenclature rule for heterocyclic compound. [OR] (b) general methods to preparation structure and properties of carbocation
12. (a) Discuss the energy profile diagram. [OR].
(b) Explain the classification of solvents
13. (a) Discuss the elements of symmetry [OR]
(b) Draw the chairal compound structure
14. (a) discuss cahn rule for geometrical isomers [OR]
(b) Briefly explain the quantitative correlation b/w conformation and reactivity
15. (a) differentiate b/w homoaromaticity and anti-aromaticity [OR]
(b) What is the difference between 1,3,5 cyclohexatriene and benzene

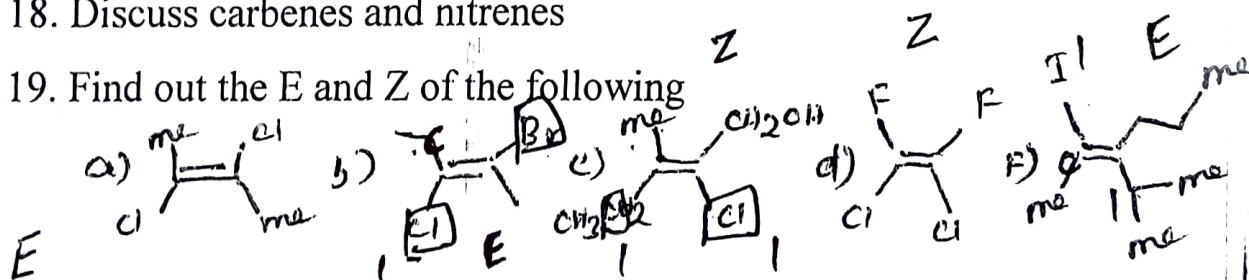
SECTION - C

(3X10=30)

ANSWER ANY THREE QUESTIONS

16. Discuss the nomenclature for fused ring system.
17. Explain the preparation and properties with structure of free radical and carbanion
18. Discuss carbenes and nitrenes

19. Find out the E and Z of the following



20. Find out the aromatic anti aromatic and nonaromatic of the following

