Reg. No ..... Name .....

MSc DEGREE END SEMESTER EXAMINATION- MARCH 2020

SEMESTER 4 : CHEMISTRY

COURSE : **16P4CHET14EL : ADVANCED ORGANIC CHEMISTRY**

(For Regular - 2018 Admission and Supplementary - 2017, 2016 Admissions)

Time : Three Hours Max. Marks: 75

Section A
Answer any 10 (2 marks each)

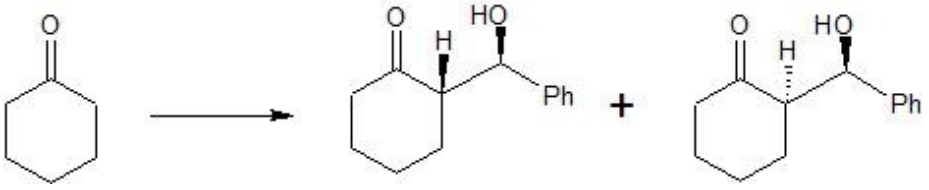
1. Calculate the atom ecomy in the epoxidation of styrene using perbenzoic acid?
2. Suggest areaction and reagent forthe following conversion?

3. What is SciFinder? Expalin
4. Explain any two roles of theory.
5. Mention the chemical transformations take place during the dark reactions stage of photosynthesis.
6. What is meant by biomimetic synthesis?
7. What is meant by the genetic code?
8. What are DNA chain cutting agents?
9. What are prostaglandins? Give the structure of PGE_2
10. What are hyper branched polymers? Give one example.
11. What are the requirements for biomedical polymers?
12. Give any two uses of nitrile rubber and butyl rubber.
13. What are co polymers with examples?

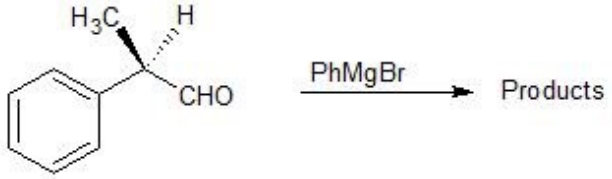
(2 x 10 = 20)

Section B
Answer any 5 (5 marks each)

14. Complete the reaction sequence and suggest a mechanism for the following.



15. Predict the products formed in the following reaction. Comment on the streochemistry involved.



16. Write a note on the steps involved in experimental study of a problem?
17. Give a brief idea about the method of least squares.
18. Write a note on methods of drug designing based on lead modification
19. Discuss N-T-AA analysis.Explain any two methods.
20. Write short note on the classification of polymers.
21. What are the applications of dendrimers in medicinal and Nano technological field?

(5 x 5 = 25)

Section C
Answer any 2 (15 marks each)

22. Give a detailed account of the twelve principles of Green Chemistry
23. Explain the method of biosynthesis. Illustrate the biosynthetic pathways for Cholesterol, Glucose and Morphine.
24. Give the structural features of penicillins and explain the mechanism of action. Comment of the type of interaction of penicillin and its receptor.
25. Give the synthesis of i) cyanin, ii) papaverine and iii) riboflavin.

(15 x 2 = 30)