Reg. No ..... Name **18P418**

M Sc DEGREE END SEMESTER EXAMINATION - MARCH 2018

SEMESTER 4 : CHEMISTRY

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

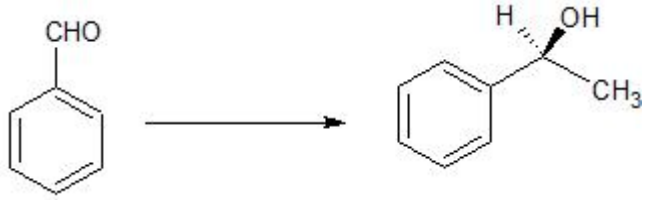
(For Regular - 2016 admission)

Time : Three Hours Max. Marks: 75

Section A

Answer any 10 (2 marks each)

1. What is NCD? What is its advantage?
2. What is Jacobsen's catalyst? What is its use?
3. How can you acheive the following conversion?



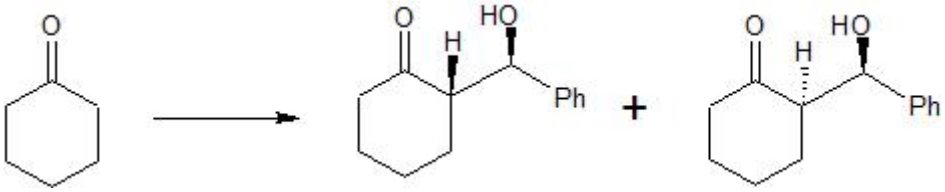
4. Mention any two common mistakes in applying scientific methods.
5. Explain any two roles of theory.
6. Comment on the significance of the two carbon unit, acetyl coenzyme in biosynthesis.
7. How will you achieve the biosynthetic transformation of mevalonic acid into five carbon units?
8. Write the general steps involved in the biosynthesis of RNA.
9. Distinguish between agonist and antagonist
10. What are hyper branched polymers? Give one example.
11. Describe vulcanisation with one example.
12. Describe syndiotactic polymers with one example.
13. What are temperature resistant polymers? Give two examples.

(2 x 10 = 20)

Section B

Answer any 5 (5 marks each)

14. Discuss any two methods of asymmetric hydrogenation citing suitable example.
15. Complete the reaction sequence and suggest a mechanism for the following.



16. Discuss briefly on the frame work of scientific enquiry?
17. Discuss briefly on the characteristics of research.
18. Write a note on methods of drug designing based on lead modification
19. Discuss briefly on enzyme inhibition.

20. Write the synthesis and uses of Buna N rubber.
21. Write short note on the classification of polymers.

(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. What are receptor proteins? Give its classification. Discuss the forces of interaction a drug with the receptor and the theories of drug receptor interactions.
25. Discuss the synthesis of a) atropine, b) prostaglandins and c) β-carotene.

(15 x 2 = 30)