

19P312

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Name.....

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2020

(CBCSS-PG)

CC19P CHE3 C11 - REAGENTS AND TRANSFORMATIONS ON

ORGANIC CHEMISTRY'

(Chemistry)

(2019 Admission Regular)

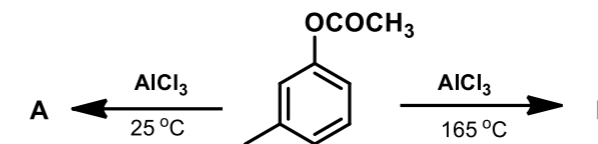
Time : Three Hours

Maximum : 30 Weightage

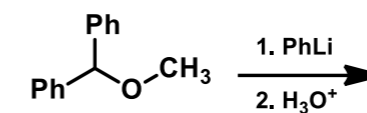
**Section A**

Answer any *eight* questions. Each question carries 1 weightage.

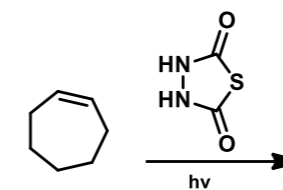
1. Give the structures of **A** and **B**.



2. Discuss mechanism of Wolf-Kishner Reduction.  
3. Explain Jacobsen epoxidation reaction.  
4. Give a method for the synthesis of glutathione.  
5. What is meant by molecular recognition?  
6. Predict the product of the following.



7. Explain ionic polymerization with a suitable example.  
8. Predict the product of the following.



9. Discuss the structure of RNA.  
10. Explain the use of trimethyl silyl chloride (TMSCl) in organic synthesis.

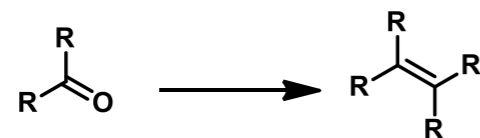
(8 x 1 = 8 Weightage)

**Section B**

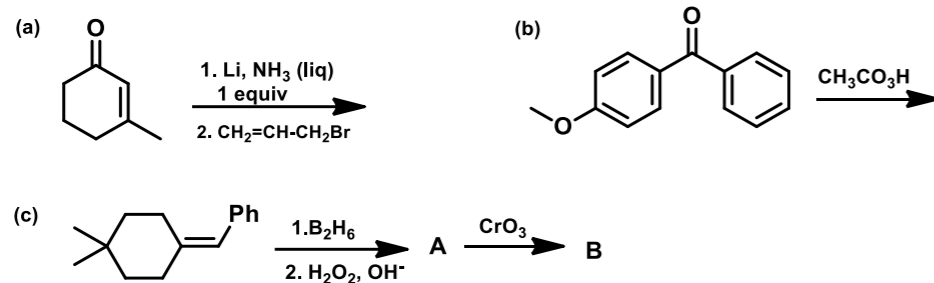
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Answer any *six* questions. Each question carries 2 weightage.

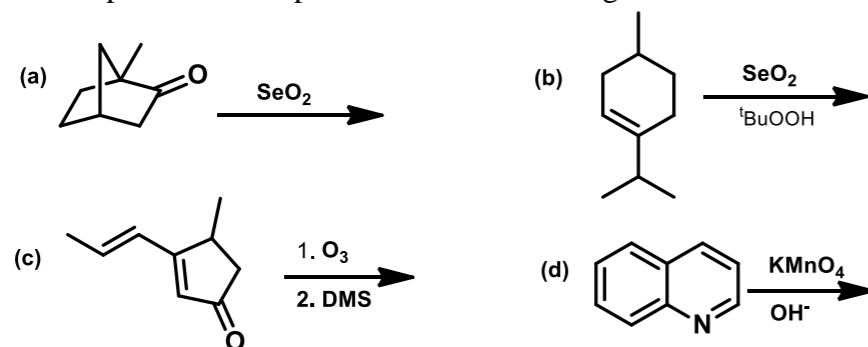
11. How will you synthesize the following alkene by coupling of carbonyl compounds? Illustrate it with suitable mechanism.



12. Predict the products of the following.



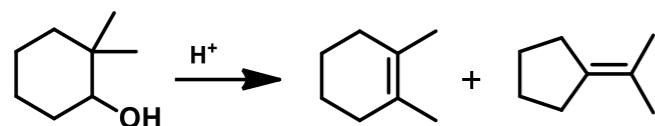
13. Predict the product of the products of the following.



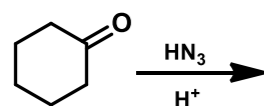
14. Write a note on Merrifield's solid phase peptide synthesis.

15. Discuss the synthetic uses of (a) ionic liquids (b) Baker's yeast and (c) LDA.

16. Outline the mechanism for the following transformations.



17. Complete and outline the mechanism of the following reaction.



18. Briefly discuss the uses of supramolecular devices with suitable examples.

(6 x 2 = 12 Weightage)

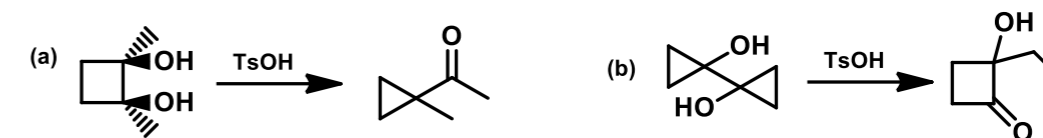
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**Section C**

Answer any *two* questions. Each question carries 5 weightage.

19. (a) Give the mechanisms of Swern and Dess-Martin oxidations.

(b) Suggest mechanisms for the following conversions.



20. (a) Give the synthesis and reactions of (1) aziridine and (2) quinonlone

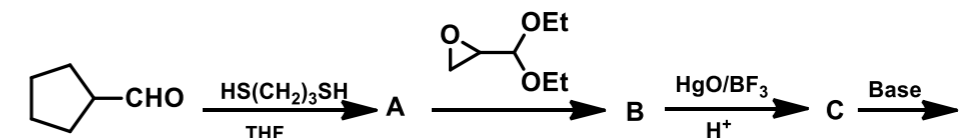
(b) Suggest any one synthesis for (1) thymine and (2) guanine

21. (a) What are the synthetic applications of (1) DCC and (2) Crown ethers?

(b) Write a note on sequence determination of peptides.

22. (a) Illustrate the mechanisms of (1) Stille coupling (2) Demjanov rearrangement

(b) Identify A, B, C and D in the following sequence



(2 x 5 = 10 Weightage)

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(3)