SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.
B.Sc.(Chemistry) - END SEMESTER EXAMINATIONS APRIL-2023
SEMESTER - VI
20UCHCT6014 - Organic Chemistry-II

Total Duration : 2 Hrs 30 Mins. Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Explain the reaction of carbonyl compounds with RMgX. Give the importance of this reaction.
2. Predict the product of the following reaction;
   (a) Glucose + Con.HNO_3 $\rightarrow$? (b) Glucose + Na/Hg $\rightarrow$?
   (c) Fructose + [H] $\rightarrow$? (d) Fructose + [O] $\rightarrow$? .
3. Confirm the structure of citral by its synthesis and draw $cis - trans - isomers$ of citral.
4. Explain about the classification of molecular rearrangements with examples.
5. Describe the structure of DNA.
6. Differentiate between the properties of mono, di and polysaccharides.
7. What are alkaloids ? How are they isolated?
8. Write the mechanism of pinacol-pinacolone rearrangement.

Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks)

9. Explain the mechanism of following reactions:
   (i)Perkin reaction (ii) Aldol condensation
   (iii) Wolf-kishner reduction
10. Write a detailed method for the synthesis of polypeptide by Merrifield's method.
11. Outline the mechanism of following conversions:
    (i) Aldopentose $\rightarrow$ Aldohexose (ii) Aldohexose $\rightarrow$ Aldopentose
12. Establish the structure of vitamin C.

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13. Predict the product of the following reactions and give its mechanism.

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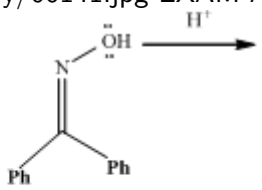
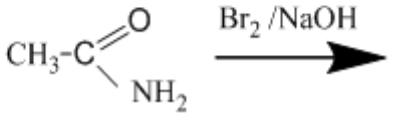
(i) 

(ii) 

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