K25FY3527 Pages: 1 Reg No:.....
Name:.....

Third Semester FYUGP Degree (Reg) Examination November 2025

KU3DSCCHE215 - CHEMISTRY OF BIOMOLECULES

2024 Admission onwards

Time : 1.5 hours Maximum Marks : 50

Section A

Answer any 6 questions. Each carry 2 marks.

1. What are nucleosides and nucleotides?
2. Write one function of RNA.
3. Give one example of bathochromic shift in organic compounds.
4. Write the mathematical expression for Beer-Lambert's law
5. What is meant by optical activity?
6. Why does the chair form of cyclohexane show no angle strain?
7. Write two chemical properties of glucose.
8. Is sucrose a reducing sugar? Why ?

Section B

Answer any 4 questions. Each carry 6 marks.

9. Explain how diastereomers differ in physical properties unlike enantiomers.
10. Analyze the stereochemistry of 2,3-butanediol and relate it to meso form.
11. Draw Newman projection of ethane conformations and explain.
12. Draw the fisher projection and pyranose structure of fructose
13. Explain the molecular structure and properties of starch
14. Describe the hydrolysis of cellulose.

Section C

Answer any 1 questions. Each carry 14 marks.

15. a)Evaluate the structural features of DNA and RNA
    b)Explain Michaelis Menten theory of the mechanism of enzyme action
16. a)Discuss the applications of IR spectroscopy in qualitative and quantitative analysis.
    b)Discuss the applications of mass spectroscopy in structure determination and isotopic analysis

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