24U3102 (Pages: 2) Name : .....

Reg. No : .....

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

CC24UCHE3MN202 - BIOORGANIC CHEMISTRY

(Chemistry - Minor Course)

(2024 Admission - Regular)

Time: 2.0 Hours Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 3 marks.

1. Compare the stability of ethene and propene. [Level:2] [CO1]
2. Explain the resonance structure of aniline. [Level:2] [CO1]
3. Compare the acidity of chloroacetic acid and trichloroacetic acid. [Level:2] [CO1]
4. Discuss about electromeric effect. [Level:2] [CO1]
5. Explain the reaction between Grignard reagent with CO_2. [Level:2] [CO3]
6. Discuss the preparation method of amines using nitrocompound. [Level:2] [CO3]
7. Show the fischer projections of the open chain forms of D-glucose and D-fructose. [Level:2] [CO4]
8. Explain the D and L forms of glyceraldehyde. [Level:2] [CO4]
9. Explain the terms (i) peptide (ii) peptide bond. [Level:2] [CO5]
10. Discuss about steroids and steroid nucleus. [Level:2] [CO5]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

Answer ***all*** questions. Each question carries 6 marks.

11. Discuss an example each for (i) substitution reaction (ii) rearrangement reaction [Level:2] [CO2]
12. Discuss two examples for reactions involving formation of carbocation. [Level:2] [CO2]
13. Discuss the preparation method of methyl orange. [Level:2] [CO3]
14. Illustrate, with an example each, when aldehyde is reacted with (i) HCN and (ii) sodium bisulphite. [Level:2] [CO3]

15. Discuss any six uses of starch. [Level:2] [CO4]

16. Explain one identification test of glucose and any four uses of glucose. [Level:2] [CO4]

17. Explain DNA fingerprinting with its applications. [Level:2] [CO5]

18. Describe on (i) Xanthoproteic test (ii) Ninhydrin test [Level:2] [CO5]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

19. Explain the terms electrophiles, nucleophiles and free radicals with suitable examples. [Level:2] [CO1]

20. Discuss the cyclic structure of D-Glucose, D-fructose and D- Ribose. [Level:2] [CO4]

(1 × 10 = 10 Marks)

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