24U3101 (Pages: 2) Name : .....

Reg. No : .....

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

CC24UCHE3MN205 - ORGANIC CHEMISTRY AND POLYMERS

(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. Explain the term heterolysis. [Level:2] [CO1]
2. Give an example for a chemical reaction that involve negative electromeric effect. [Level:2] [CO1]
3. Give one example for electrophilic addition reaction. [Level:2] [CO1]
4. Illustrate the following reactions with an example Wurtz-Fittig reaction. [Level:2] [CO2]
5. Explain Lucas test. [Level:2] [CO2]
6. How can benzenediazonium chloride be converted to phenyl hydrazine? [Level:2] [CO3]
7. How is Nylon 66 prepared? [Level:2] [CO4]
8. Cite an example for how a biodegradable plastic can be prepared. [Level:2] [CO4]
9. Give any two uses of Phenolphthalein. [Level:2] [CO2]
10. Explain the reaction of propanal with HCN. [Level:2] [CO3]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

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

11. Explain the role of steric effect in determining the order of basicity of methylamine dimethylamine and trimethylamine. [Level:2] [CO1]
12. Distinguish between free radical reaction and polar reaction. [Level:2] [CO1]
13. Explain how ethanol is manufactured from molasses. [Level:2] [CO2]
14. Mention the distinguishing features of inductive effect and mesomeric effect. [Level:2] [CO1]

15. How can acetic acid be converted to trichloroacetic acid? [Level:2] [CO3]

16. Starting from grignard reagent how will you synthesis secondary and tretiary alcohols. [Level:2] [CO3]

17. Differentiate between thermoplastics and thermosetting polymers on the basis of intermolecular forces with examples. [Level:2] [CO4]

18. Describe tacticity in polymers. [Level:2] [CO4]

(Ceiling: 36 Marks)

Part C (Essay questions)

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

19. Explain the effect of substituent on the acidity of aliphatic carboxylic acids. [Level:2] [CO1]

20. Give comparitive description of the basicities of aniline, p-nitroaniline and p-anisidine [Level:2] [CO4]

(1 × 10 = 10 Marks)

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