

24U3136

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Name : .....

Reg. No : .....

**THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025**

(FYUGP)

**CC24UCHE3MN204 - ORGANIC CHEMISTRY IN DAILY LIFE**

(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 negative mesomeric effect with suitable examples. [Level:2] [CO1]
2. Explain rearrangement reactions with example. [Level:2] [CO1]
3. Explain positive electromeric effect with suitable examples. [Level:2] [CO1]
4. How is phenolphthalein prepared? [Level:1] [CO2]
5. What is catalytic dehydrogenation? Give one example. [Level:1] [CO2]
6. What is Hoffmann's bromamide reaction? Give a suitable example. [Level:1] [CO3]
7. Explain the reaction of acetone with HCN. [Level:2] [CO3]
8. Illustrate Kolbe's electrolysis with suitable example. [Level:1] [CO3]
9. What is meant by natural gas? What is its main constituent? [Level:1] [CO4]
10. Draw the structure of Allizarin and write down its two applications. [Level:1] [CO4]

**(Ceiling: 24 Marks)**

**Part B** (Paragraph questions/Problem)

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

11. Explain radical and polar reactions with suitable example. [Level:2] [CO1]
12. Compare and explain the rate of esterification of acetic acid, propionic acid, dimethyl acetic acid and trimethyl acetic acid. [Level:2] [CO1]
13. Explain why phenol is more acidic than alcohols. [Level:2] [CO2]
14. Analyze the stereochemical outcome of the  $S_N2$  reaction of 2-bromobutane with  $OH^-$ . [Level:2] [CO2]

15. Illustrate the following reactions of secondary alcohols with suitable example [Level:2] [CO3]  
(i) Oxidation (ii) Dehydrogenation
16. (i) How is methyl orange prepared? What is its use? [Level:2] [CO3]  
(ii) What are Gattermann reactions?
17. What is meant by an antibiotic? How is it different from an antiseptic? [Level:1] [CO4]
18. Define food preservatives and give two suitable examples. [Level:1] [CO4]
- (Ceiling: 36 Marks)**

**Part C (Essay questions)**

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

19. Explain the concept of the inductive effect in organic chemistry. How does it influence the stability and reactivity of organic molecules? [Level:2] [CO1]
20. (a) Explain a fermentation process for the manufacture of ethanol. [Level:2] [CO2]  
(b) Explain the following terms: (i) rectified spirit; (ii) denatured spirit; (iii) proof spirit; (iv) power alcohol.

**(1 × 10 = 10 Marks)**

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