



Faculty of Pharmacy

End Semester Examination May 2025

PY3CO09 Pharmaceutical Organic Chemistry -II

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|------------------|------------|------------------------------|------|
| Programme | : B.Pharm. | Branch/Specialisation | : - |
| Duration | : 3 hours | Maximum Marks | : 75 |

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Section 1 (Answer all question(s))

Marks CO BL

Q1. Draw the structure and give uses of BHC.

2 1 1

| Rubric | Marks |
|----------------------------------|-------|
| Structure: 1 Mark Use: 1 Mark | 2 |

Q2. What is Huckel rule? Give example.

2 1 1

| Rubric | Marks |
|----------------------------------|-------|
| Rule: 1 Mark Example : 1 mark | 2 |

Q3. Write any two qualitative tests of phenol.

2 2 1

| Rubric | Marks |
|-------------------------|-------|
| Two tests : 1 mark each | 2 |

Q4. Give one example of aromatic acid with structure.

2 2 1

| Rubric | Marks |
|------------------------------------|-------|
| Example and structure: 1 mark each | 2 |

Q5. Enlist any two causes of rancidification?

2 3 1

| Rubric | Marks |
|---------------------------|-------|
| Any 2 causes: 1 mark each | 2 |

Q6. Define saponification value with its formula.

2 3 1

| Rubric | Marks |
|--------------------------------------|-------|
| Definition: 1Mark Formula: 1 Mark | 2 |

Q7. Draw the structure and give any two medicinal uses of Naphthalene.

2 4 1

| Rubric | Marks |
|--|-------|
| Structure: 1 Mark 2 Uses: 0.5 Mark each | 2 |

Q8. Draw the structure of isolated Benzenoid polynuclear hydrocarbon.

2 4 1

| Rubric | Marks |
|-------------------|-------|
| Structure 2 marks | 2 |

Q9. Write any two limitations of Baeyer's strain theory.

2 5 1

| Rubric | Marks |
|-------------------------------|-------|
| Two limitations: 1 mark each. | 2 |

Q10. Write any two reactions of cyclobutane.

2 5 1

| Rubric | Marks |
|-------------------------------|-------|
| Two limitations: 1 mark each. | 2 |

Section 2 (Answer any 2 question(s))

Marks CO BL

Q11. What do you mean by electrophilic aromatic substitution? Write effect of substituents on reactivity on substituted benzene.

10 1 2

| Rubric | Marks |
|--|-------|
| Electrophilic aromatic substitution : 5 Marks Effect of substituents on reactivity: 5 Marks | 10 |

Q12. Why are aromatic amines less basic than aliphatic amines? Write the synthetic uses of aryl diazonium salts.

10 2 2

| Rubric | Marks |
|--|-------|
| Reason: 5 Marks Syhetic Uses: 5 marks | 10 |

Q13. Write Friedal Craft alkylation reaction with its mechanism. Write a note on acidity of phenols and effects of substituents on acidity.

10 2 2

| Rubric | Marks |
|---|-------|
| Reaction with its mechanism: 5 Marks Note and effects: 5 Marks | 10 |

Section 3 (Answer any 2 question(s))

Marks CO BL

Q14. Write the reactions of fatty acids in detail.

5 3 2

| Rubric | Marks |
|--|-------|
| Reactions: 5 Marks (Any two 2.5 Marks) | 5 |

Q15. Write the principle involved in the determination of acid value with its significance.

5 3 2

| Rubric | Marks |
|--|-------|
| Principle:3 marks Significance: 2 marks | 5 |

Q16. Write a note on drying and non-drying oils.

5 3 2

| Rubric | Marks |
|--|-------|
| Drying oils with example:. 2.5 Marks Non-Drying oils with example:. 2.5 Marks | 5 |

Section 4 (Answer any 2 question(s))

Marks CO BL

Q17. Classify polyunsaturated hydrocarbons and give synthesis and uses of Phenanthrene.

5 4 2

| Rubric | Marks |
|--|-------|
| Classification:2 marks Synthesis: 2 Marks (Any one) Uses: 1 Mark (Any two) | 5 |

Q18. Give structure, synthesis, reactions and uses of Anthracene.

5 4 1

| Rubric | Marks |
|--|-------|
| Structure: 1 Mark Synthesis: 2 Mark (Any one) Reaction: 1 Mark (Any one) Uses: 1 Mark (Any two) | 5 |

Q19. Write a note on diphenyl methane and its derivatives.

5 4 1

| Rubric | Marks |
|---|-------|
| Note on diphenyl methane: 3 marks (Synthesis 2 , structure uses 1) Derivatives: 2 Marks (synthesis and uses) | 5 |

Section 5 (Answer all question(s))

Marks CO BL

Q20. Discuss Baeyer's strain theory with its significance.

5 5 2

| Rubric | Marks |
|--------------------------------------|-------|
| Discussion with Significance:5 Marks | 5 |

Q21. What is Coulson and Moffit's modification?

5 5 2

| Rubric | Marks |
|-----------------------------------|-------|
| Explanation with example: 5 Marks | 5 |

Q22. Write a brief note on theory of strainless rings.

5 5 2

| Rubric | Marks |
|---------------------|-------|
| Brief note: 5 Marks | 5 |
