

Faculty of Pharmacy

End Semester Examination May 2025

PY3CO09 Pharmaceutical Organic Chemistry -II

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))

Q1. Draw the structure and give uses of BHC.

Marks CO BL
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 imitations 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 10 1 2 substituted benzene.

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

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	10
Syhetic Uses: 5 marks	

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	10
Note and effects: 5 Marks	

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	5
Significance: 2 marks	

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

5 3 2

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

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	5
Synthesis: 2 Marks (Any one)	
Uses: 1 Mark (Any two)	

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

5 4 1

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

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)	5
Derivatives: 2 Marks (synthesis and uses)	

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
