

**First Semester M.Pharm Degree Regular/Supplementary Examinations
April 2025
M.Pharm (Pharmacognosy)**

Paper III – Phytochemistry (MPG 103T)

(Common for 2019 and 2024 Scheme)

Time: 3 Hours

Total Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays

(3x10=30)

1. Define the term secondary metabolites. Explain the biogenetic pathways leading to the formation of quinine. Add a note on chemistry of cinchona alkaloids
2. Describe the purpose and protocol design for conducting clinical trial for lead compounds
3. Describe on supercritical fluid extraction in the separation and analysis of plant constituents

Short Notes

(9x5=45)

4. Tracer techniques
5. Biogenesis of withanolides
6. “Search for a lead compound from nature” with examples
7. Chemistry of artemesin and their derivatives
8. What are the parameters for selection of a suitable solvent for extraction of crude drugs
9. Flash column chromatography
10. Role of HPTLC in characterization of phyto-constituents
11. Explain the application of HNMR spectroscopy in the structural elucidation of plant constituents with suitable examples
12. Briefly elucidate the structure of caffeine
