

**Third Professional B. Pharm (Ayurveda) Degree Regular/Supplementary
Examinations March 2025**

Chemistry of Natural products

Time: 3 Hours

Total Marks: 100

- *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*

Essays:

(2x10=20)

1. Explain any three methods of opening heterocyclic rings in the structure elucidation of alkaloids.
2. Outline the synthesis of Thiamine.

Short notes:

(10x5=50)

3. Explain N-terminal residue analysis and C-terminal residue analysis.
4. General Identification Test for Carbohydrates.
5. Explain carotenes.
6. Explain the constitution of menthol.
7. Explain the stereochemistry of ephedrine.
8. Vasopressin.
9. Discuss the structure elucidation of amygdalin.
10. Sarsapogenine.
11. Explain the Inter - relationship between pre-ergocalciferol, tachysterol, ergocalciferol and lumisterol.
12. Outline the synthesis of testosterone.

Answer briefly:

(10x3=30)

13. Mutarotation.
14. Oral contraceptives
15. Explain the test for identifying vitamin A.
16. Classify the carbohydrates. Give examples.
17. Mention three different roles of prostaglandins in the human body.
18. Outline the synthesis of uric acid.
19. Mention three uses of prednisolone.
20. Interrelationship between Caffeine, Theophylline and Theobromine.
21. What are conjugated proteins. Give two examples.
22. On a steroidal nucleus how will you represent the following.

- Alpha configuration
- Beta configuration
- Unknown configuration
