

Third Year B.Pharm Degree Supplementary Examinations - March 2015

**PHARMACEUTICAL CHEMISTRY IV
(Chemistry of Natural Products)**

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Write equations wherever necessary.

Essay

(3x10=30)

1. Define alkaloids and classify them chemically with examples. Outline the general method of isolation of alkaloids from plants.
2. Discuss the structure and chemical properties of sucrose.
3. Explain the nomenclature and stereo chemistry of steroids.

Short notes

(14x5=70)

4. Explain the essential amino acids and mention the structures of four of them.
5. Chemistry and uses of ionones.
6. Structural elucidation of ephedrine.
7. Chemical structure and biological activities of thyroxine.
8. Chemistry of bile acids.
9. Chemical structure and biological importance of vitamin C and vitamin B₂.
10. Explain the inter- relationship of caffeine, theobromine and theophylline.
11. Synthesis and use of any one non-steroidal oestrogenic compound.
12. Explain the secondary structure of proteins.
13. Chemical structure of various aglycones of cardiac glycosides.
14. Explain the significance of analytical constants of fats and oils.
15. Chemical structure and uses of clinically useful prostaglandins.
16. Important synthetic gluco-corticoids.
17. Pharmaceutical importance of various carbohydrates.
