

# **2012 Scheme**

**QP CODE: 312006**

**Reg. No: .....**

**Third Year B.Pharm Degree Supplementary Examinations June 2022**

## **Pharmaceutical Chemistry IV (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*
- *Write chemical structures/equations wherever necessary.*

### **Essay**

**(3x10=30)**

1. Elucidate the structure of morphine.
2. Classify carbohydrates with examples. Explain the chemistry of sucrose.
3. Describe four methods for the synthesis of  $\alpha$ -amino acids.

### **Short notes**

**(14x5=70)**

4. Explain mutarotation
5. Describe the method for the determination of saponification value and give its significance.
6. Explain the chemistry and biological activities of thyroxine.
7. Structural features of Ergosterol
8. Explain isoelectric point and give its significance.
9. Explain the pharmaceutical importance of carbohydrates.
10. Discuss the inter-relationship of caffeine, theobromine and theophylline
11. Structure and physiological role of glucagon
12. Discuss the chemistry and pharmaceutical uses of vitamin B<sub>1</sub>
13. Write the structure, biological activities and uses of a synthetic corticosteroid.
14. Outline the synthesis of progesterone from cholesterol.
15. Describe osazone formation
16. Discuss the chemistry of cardiac glycosides.
17. Outline a method for the synthesis of peptides

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