

**Third Year B.Pharm Degree Supplementary Examinations  
November 2018**

**Pharmaceutical Chemistry IV  
(Chemistry of Natural Products)**

**(2010 Scheme)**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Write chemical structures/equations wherever necessary.

**Essay**

**(3x10=30)**

1. Give a detailed account on structural elucidation of vitamin D
2. Explain the following reactions:
  - Acetyl chloride reacts with amino acid
  - Nitrosyl chloride reacts with amino acid
  - Amino acid when heated with hydro iodic acid
  - Ninhydrin reacts with amino acid
  - Amino acid when heated with acetic anhydride in pyridine solution
3. Discuss the structural elucidation of ephedrine.

**Short notes**

**(14x5=70)**

4. Classification of terpenoids and isoprene rules
5. Pharmaceutical importance of monosaccharides and disaccharides
6. Classification of amino acids and proteins with example
7. Chemical structure and structural activity relationship of any one cardiac glycoside
8. General method of isolation of alkaloid
9. Structural elucidation of caffeine
10. Chemical structure and numbering of any two steroidal ring system
11. Biological activities and uses of testosterone
12. Synthesis and uses of any two non-steroidal estrogenic compounds
13. Chemistry of morphine
14. Acetyl value and peroxide value
15. Structure and physiological role of glucagon
16. Skeletal structure and biological activities of cortisone
17. Biological importance of prostaglandins

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