



# Rajiv Gandhi University of Health Sciences, Karnataka

First Year M. Pharm Degree Examination – Oct/Nov 2014

**Time: Three Hours**

**Max. Marks: 100 Marks**

## MEDICINAL CHEMISTRY-II (Natural Products) (Revised Scheme 4)

**Q.P. CODE: 9348**

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary

### LONG ESSAYS (Answer any Two)

**2 x 20 = 40 Marks**

1. a) Prove the structure of papaverine based on its chemical degradation and synthesis.  
b) Describe the chemistry and SAR of penicillins along with any one synthesis. (12+8)
2. a) Describe the chemistry, mechanism of action and classification of steroidal hormones.  
Add a note on carotenoids and their therapeutic importance  
b) Give proof for the structure of Morphine. (12+8)
3. What are antibiotics? Describe how the  $\beta$  lactamase stable cephalosporins were developed.  
Add a note on Clavulanic acid analogs.

### SHORT ESSAYS (Answer any FIVE)

**5 x 10 = 50 Marks**

4. Elucidate the structure of Reserpine.
5. Illustrate the metabolism of Purines and Pyrimidines.
6. Illustrate the various reactions possible by microbial biotransformations.
7. Elucidate the structure of emetine.
8. Discuss the Purine and Pyrimidine based antineoplastic and antiparasitic agents.
9. Provide evidence for the structure of Vit C.

### SHORT NOTES

**2 x 5 = 10 Marks**

10. Discuss in detail the structure of vincristine and vinblastine.
11. Describe the structural features and development of amido penicillins.

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