

Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination – June 2014

Time: Three Hours

Max. Marks: 70 Marks

MEDICINAL CHEMISTRY

Q.P. CODE: 2865

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

LONG ESSAYS (Answer any Two)

2 x 10 = 20 Marks

1. Define anti-neoplastic agents. Classify them with examples. Write the mechanism of action of antimetabolites as anti-neoplastic agents. Outline the synthesis of Chlorambucil.
2. Classify anti-tubercular agents. Discuss their mechanism of action. Outline the synthesis of Isoniazid and Ethambutol.
3. Explain the Structure and activity relationship of Tetracyclines. Discuss their mode of action.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. Outline the synthesis and mode of action of Ciprofloxacin.
5. Discuss the role of c-AMP/c-GMP in regulating smooth muscle tension. Write the structure of Isosorbidedinitrate.
6. Define and Explain 'Prodrug' with appropriate examples.
7. What are Carbonic Anhydrase Inhibitors? Discuss their mode of action.
8. Discuss the SAR of Sulphonamides. Add a note on their mode of action.
9. Explain with examples a) Halogen containing anti-infective agents and
b) Dyes used as local anti-infective agents
10. Outline the synthesis of Trimethoprim. Mention its uses.
11. What are High Ceiling Diuretics? Outline the synthesis of Ethacrynic acid.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Write the structures of any TWO anti-thyroid agents.
13. What are Monolactams? Write the structure of any one compound.
14. Write the structure and chemical name of Nifedipine.
15. What are potassium channel antagonists? Write the structure of any one compound.
16. Write any two structural features of pyrimidines which acts as anti-malarials.
17. Outline the synthesis of Warfarin.
18. Write the structure and uses of Zidovudine.
19. Discuss the concept 'QSAR'. Mention its objectives.
20. Name any two Aminoglycoside antibiotics. Write the structure of any one.
21. Define 'Anthelmintics'. Write the structure of any one compound.
