



UTTARAKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)
उत्तराखण्ड मुक्त विश्वविद्यालय, हल्द्वानी (नैनीताल)

M.Sc. Second Year Chemistry

Last Date of Submission:

15 May, 2014

Course Title: Drugs and Pharmaceuticals

Course Code: CHE554

Year: 2013-14

Maximum Marks: 40 Marks

Section 'A'

Section 'A' contains 08 short answer type questions of 5 marks each. Learners are required to answer 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

Briefly discuss the following:

1. Write a short note on the followings:
 - i. Random screening.
 - ii. Synthetic banks
 - iii. Folklore medicines
2. What are receptors? Briefly explain the role of receptors in the regulation of physiological reaction.
3. What are isosteres and bioisosteres? Explain their role in drug design.
4. What are the Hammett substituent constant (s), how are they useful in drug discovery.
5. Write the structure and uses of the following;
 - i. Sulfomethoxazole
 - ii. Sulfadiazine
 - iii. Sulfisoxazole
 - iv. Sulfacetamide
6. Discuss β -Lactam Antibiotics? Give preparation and structural features of Penicillin.
7. Write down the biosynthesis of Dopamine, Phenoxybenzamine and Ranitidine.
8. Explain the mechanism of action of DNA-polymerase inhibitors.

Section 'B'

Section 'B' contains 04 long answer-type questions of 10 marks each. Learners are required to answer 02 questions only.

1. i. What is genetic engineering? Explain.
 - ii. What are the quality control methods in drug development?
 - iii. What are the drugs used as the adrenergic stimulants?
2. Write down the Biosynthesis of Methyl dopa, dopamine, Terbutaline, Propranolol, Metoprolol and Atenolol.
3. What is the enzyme inhibition? Explain glucosidase and proton pump inhibition.
4. Write the structure and medicinal importance the following drugs;
 - (a) Quinacrine
 - (b) Metronidazole
 - (c) Ciprofloxacin
 - (d) Amino tetracycline
 - (e) Ciprofloxacin
 - (f) Catecholamines
 - (g) Atropine

