

**CHE-554**  
**Drugs and**  
**Pharmaceuticals**

M.Sc. CHEMISTRY (MSCCH - 12/13/16/17)

Second Year, Examination-2019

**Time: 3 Hours**

**Max. Marks: 80**

.....  
Note:- This paper is of Eighty (80) marks divided into two (02) Section A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

**Section-A**

(Long Answer Type Questions)

Note:- Section - A contains five (05) long answer-type questions of fifteen (15) marks each. Learners are required to answer any three (03) questions only. (3×15=45)

1. What are receptors? Explain the role of receptors in the regulation of physiological reactions.
2. Explain the binding role of hydroxyl group, ketones, amino group and aromatic rings in drug synthesis.
3. What are prodrugs? Write the principles of prodrug design.
4. What are the Hammett substituent constant's, how are they helpful in drug discovery.
5. Formulate the synthesis of (S) ipuprofen.

### **Section-B**

(Short Answer Type Questions)

Note:- Section-B contains eight (08) short answer type questions of seven (07) marks each. Learners are required to answer any five (05) questions only. (5×7=35)

1. Discuss the development of salbutamol.
2. What are isosteres and bioisosterer? Explain their role in drug design.

3. Write an account on structure activity relationship studies of benzodiazepines.
4. Write Briefly about Taft's steric parameter.
5. What is the structure of salbutamol and write its mechanism of action.
6. Write the synthesis of methyl Dopa.
7. What is genetic engineering? Explain.
8. Give the structure of carbochol? Formulate its synthesis.

\*\*\*\*\*