

P. P. SAVANI UNIVERSITY

Third Semester of M.Sc. Examination
December-2021

SSCH8090-Medicinal Chemistry

16.12.2021, Thursday Time: 12:30 p.m. to 3:00 p.m. Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Make suitable assumptions and draw neat figures wherever required.
3. Use of scientific calculator is allowed.

Section-I

- Q.1 Very Short Questions (Attempt any five) [10]**
- 1.1 What is the clinical utility of Sorbinol and Captopril reductase?
 - 1.2 What is the clinical utility of Alanine racemase and Dihydrofolate reductase?
 - 1.3 What is Stimulation and Inhibition?
 - 1.4 What is pharmacokinetics and pharmacodynamics?
 - 1.5 What is minimum dose and maximum dose?
 - 1.6 Write the different fundamental mechanism of drug action?
- Q.2 Write Short Notes (Attempt any two) [06]**
- 2.1 Write a short note on plasma half-life, toxic dose, and lethal dose of drugs?
 - 2.2 Give a short note on Renal excretion?
 - 2.3 Discuss the distribution mechanism of Drugs?
- Q.3 Detail questions (Attempt any two) [14]**
- 3.1 Write the role of medicinal chemists? Draw the schematic diagram of drug design?
 - 3.2 Discuss about the biotransformation processes of drugs?
 - 3.3 Explain different types of drug designs with diagram? Discuss about Clinical trials-Different Phases of drugs?

Section-II

- Q.1 Very Short Questions (Attempt any five) [10]**
- 1.1 State the different stages of anesthesia?
 - 1.2 Write the synthesis steps of Chloroform?
 - 1.3 Draw the structure of Fluoxetine and Trazodone?
 - 1.4 Write the retrosynthesis method of Ibuprofen?
 - 1.5 What is the mechanism of Osmotic diuretics and Loop diuretics?
 - 1.6 Write the synthesis steps of Metformin?
- Q.2 Write Short Notes (Attempt any two) [06]**
- 2.1 Discuss the classification of sedative hypnotics?
 - 2.2 (a) Draw structure of cocaine? (b) Name the enzyme used to metabolize ester anesthetics?
 - 2.3 (a) What is NSAID? (b) Discuss the classifications of NSIDs?
- Q.3 Detail questions (Attempt any two) [14]**
- 3.1 (a) Discuss about mechanism of action of carbonic anhydrase inhibitor?
(b) Write the synthesis method of Acetazolamide
 - 3.2 (a) What is barbiturates? (b) Discuss about the Chemistry, synthesis and uses of Paraldehyde?
 - 3.3 (i) Write two uses of barbiturates? Draw the structure of (a) Barbitone (b) Cyclobarbitone (c) Pentobarbitone (d) Mephobarbital (e) Phenobarbitone?