30/11/19 M

## [This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper; 7552

Unique Paper Code : 32173909

Name of the Paper : Pharmaceutical Chemistry

Name of the Course : B.Sc. (Hons.) / B.Sc. (Prog.):

SEC

Semester : III

Duration: 2 Hours Maximum Marks: 37

## Instructions for Candidates

- 1. Write your Roll No. on the top immediately on receipt of this question paper.
- 2. Attempt three questions in all. Question No. 1 is compulsory and carries 15 marks.
- 3. All other questions are of 11 marks each.
- 1. Attempt any five questions:  $(5\times3=15)$ 
  - (i) What are the medicinal uses of Sulphacetamide. Give its structure.

- (ii) How is Paracetamol synthesized? Write the chemical reactions involved.
- (iii) Which class of the drug does Glyceryl trinitrate belong to? Write its structure.
- (iv) What is apharmacophore? Give one example.
- (v) What are the medicinal uses of Acyclovir? Give its structure.
- (vi) What are anti-bacterial agents. Give one example along with its structure.
- 2. (i) Write short note on the following: (4)
  - (a) Central Nervous System targeting drugs
  - (b) Antibiotic agents
  - (ii) What are NSAIDs? Give examples of common drugs used for the same. Briefly discuss their mode of action. (4)
  - (iii) Describe the drug discovery timeline for Penicillin. How can it be produced commercially using fermentation technique? (3)

1	Streptomycin	a	Antiviral agent
2	Ibuprofen	b	Antifungal drug
3	Sulphanethoxazole	С	Antibiotic
4	Acyclovir	d	Antipyretic agent

- (ii) Give the synthesis and uses of Dapsone. (4)
- (iii) What do you understand by the terms lead compound and drug toxicology? (3)
- 4. (i) Give the structure of the following drugs: (4)
  - (a) Aspirin
  - (b) Chloramphenicol
  - (c) Penicillin
  - (d) Diazepam
  - (ii) Explain the synthesis of Ethyl alcohol **OR**Vitamin C using fermentation method. (4)

(4)

(iii) Describe drug modification and its role in modern drug development. (3)