

B PHARM
(SEM VI) THEORY EXAMINATION 2017-18
PHARMACEUTICAL CHEMISTRY-VII (MEDICINAL CHEMISTRY-II)

Time: 3 Hours**Total Marks: 100****Note:** 1. Attempt all Sections. Assume missing data suitably, if any.**SECTION A****1. Attempt all questions in brief. 2 x 10 = 20**

- a. Define drug design and its objectives.
- b. Define antihistamines. Write chemical structure for Diphenhydramine.
- c. Define arrhythmia and hyperlipidemia.
- d. Write chemical structure, IUPAC name and uses of Atenolol.
- e. Give chemical structure for Alogliptin and Tazarotene.
- f. Name with chemical structures potassium sparing diuretics.
- g. Explain benefits of COX-2 selectivity.
- h. Write synthesis and uses of Isosorbide dinitrate.
- i. Write structural features of Heparin.
- j. Name NSAIDs with anthranilic acid nucleus.

SECTION B**2. Attempt any three of the following: 10 x 3 = 30**

- a. Write synthesis and therapeutic uses of Glibenclamide, and Nifedipine.
- b. Write structure-based classification of NSAIDs with examples and structures. Outline synthesis of Paracetamol.
- c. Write a note on proton pump inhibitors.
- d. Define angiotensin converting enzyme inhibitors. Write their mechanism of action and synthesis of any one drug.
- e. Explain Multiple Regression Analysis. Compare SAR and QSAR.

SECTION C**3. Attempt any one part of the following: 10 x 1 = 10**

- (a) What are the objectives of Analog-based drug design? Explain the methods employed for it.
- (b) Write a note on: (i) Basic concept of drug design (ii) Molecular descriptors.

4. Attempt any one part of the following: 10 x 1 = 10

- (a) What are hypoglycemic drugs? Write detailed classification with examples and structures. Write synthesis of metformin.
- (b) What are the various structural features required for biological activity of statins.

- 5. Attempt any *one* part of the following: 10 x 1 = 10**
- (a) Write category and chemical synthesis of Ranitidine, Minoxidil and Warfarin.
 - (b) Write uses, synthesis and structure-activity relationship for Acetazolamide.
- 6. Attempt any *one* part of the following: 10 x 1 = 10**
- (a) Define diuretics. Write classification with examples and structures.
 - (b) Write uses, synthesis, and mechanism of action and essential structural features for Ibuprofen.
- 7. Attempt any *one* part of the following: 10 x 1 = 10**
- (a) Define Coxibs. Write classification and structure-activity relationship studies.
 - (b) Explain antithyroids drugs with synthesis of Propylthiouracil.