SVKM'S NMIMS

Shobhaben Pratapbhai Patel / School of Pharmacy & Technology Management

Programme: B. Pharm / B. Pharm + MBA
Academic Year: 2019-20
Subject: Medicinal Chemistry II

Year: IV

Semester: VII
Marks: 70
Time: 2.00 pm to 5.00 pm
Duration: 3 hrs.
No. of Pages : 2

Date: 28 November 2019

FINAL EXAMINATION

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

1) Question No. 1 is compulsory.
2) Out of remaining questions, attempt any FOUR questions.
3) **In all FIVE questions to be attempted.**
4) All questions carry equal marks.
5) **Answer to each new question to be started on a fresh page.**
6) **Figures in brackets on the right hand side indicate full marks.**
7) **Assume suitable data if necessary.**

Section A

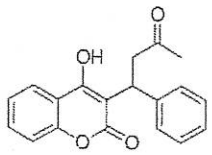
Q.1. Name the chemical class to which the following drug belongs, write its structure, mechanism of action in short and major indication 7*2=14 M

A. Diphenhydramine

B. Cimetidine

C. Acetazolamide

D. Identify the drug and give its therapeutic use



E. Explain the mechanism of action of verapamil

F. Write the structure of Amlodipine

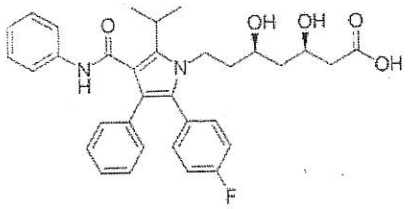
G. Write the synthesis of ethacrynic acid

Section B (Answer Any four of the following)

Q.2. 8M

A. Classify oral hypoglycemic agents chemically. What are the different drugs belonging to each class? Write in short about newer molecular targets for treatment of type 2 diabetes mellitus

B. Identify the molecule and explain the mechanism of action and therapeutic use 6M



Q.3. 8M

A. Write the chemical classification of diuretics with one example of each class. Explain mechanism of action, general indications, adverse effects of each class.

B. With structures give the metabolism of morphine. 6M

Q.4. 8M

A. Write a note on different agents used in treatment of peptic ulcer. Write general structure of various classes and their mode of action. What are the structural requirements for various proton pump inhibitors?

B. With structures give the metabolism of diltiazem. 6M

Q.5.

A. Give chemical classification of H1 antagonists. Give mode of action, general indications and adverse effects. 8M

B. Explain the term ischemia and give characteristics of angina. Explain the mechanism of action and side effects of nitroglycerine and amyl nitrate. 6M

Q.6.

A. Write the synthesis of following drugs: Cetrizine, tolazamide. 8M

B. Give the structure of codeine and its uses and explain why codeine is weak μ receptor agonist compared to morphine? Justify. 6M

Q.7.

A. Write metabolic pathways for the following drugs 8M

a) Promethazine

b) Amlodipine

B. Enlist all the derivatives obtained from the modification of C6-OH of morphine 6M