

## Question Paper

Exam Date &amp; Time: 25-Nov-2019 (09:30 AM - 12:30 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Medicinal Chemistry II [PCH-BP501T - S2]

Marks: 75

Duration: 180 mins.

## I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

## II Long Answers

Answer all the questions.

- 21) Discuss the general SAR features of H1 antihistamines (5)
- A) Outline the synthesis of diphenhydramine (2)
- B) Classify antihyperlipidemic agents with one structure from each class (3)
- C) Write the structure and uses of Prednisolone, betamethasone (4)
- 22) Write the structure and uses of Prednisolone, betamethasone (4)
- 4) Write the structure and uses of Prednisolone, betamethasone (4)
- 6) Write the structure and uses of Prednisolone, betamethasone (6)

## III Short Answers

Answer all the questions.

- 23) Give the structure, mechanism and uses of Methimazole 3M (5)  
What are cardiotonics and where are they used? Give example. 2M
- 24) Write the structure and mechanism of a Dihydropyridine used as antihypertensive agent 3M (5)  
Give the synthesis of Mechlorethamine 2M
- 25) How do you synthesise Procaine from p-nitrotoluene (5)  
Classify local anesthetics giving examples (3+2)
- 26) Outline the synthesis of acetazolamide and chlorthiazide (5)
- 27) Classify calcium channel blockers as antianginals giving one structure from each class (3)
- A) Compared to 1,4-dihydropyridines which is only used in the management of angina and hypertension (2)  
B) why verapamil and diltiazem are clinically used in the treatment of angina, hypertension and cardiac arrhythmia.
- 28) What are osmotic diuretics? Give the structure of any one. (2)
- A) Outline the synthesis of dysopyramide. (3)  
B)
- 29) Explain why sulphonyl urea derivatives are called as hypoglycaemics whereas biguanides and thiazolidinediones are called as antihyperglycemics. (2)
- A) Give the structure and uses of any one alpha-glucosidase inhibitors (1)  
B)
- C) Outline the synthesis of tolbutamide. (2)

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## Question Paper

Exam Date & Time: 27-Nov-2019 (09:30 AM - 12:30 PM)



### MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmacology II [PHA-BP503T]

#### II Long Answers Answer

all the questions.

- 1) Discuss the various strategies to prolong the action potential of the excitable cells of the heart, which would be useful in managing arrhythmias. (4) With the help of a diagram, explain the mechanism of action of two classes of anti-arrhythmic drugs that act via modulation of GPCR activity. (6) (10)
- 2) Classify oral hypoglycaemic agents with examples. With a neat diagram, the mechanism of action of different class of any two class of oral hypoglycaemic agents. (10) (10)

#### III Short Answers Answer

all the questions.

- 1) Discuss the differences in the mechanism of anti-coagulant actions of warfarin and heparin? (5)
- 2) Explain the anti-hyperlipidaemic mechanism of rosuvastatin and ezetimibe. (5)
- 3) Illustrate the pathological role of RAAS pathway in hypertension. Giving examples list the classes of different drugs that modulate RAAS pathway. (5)
- 4) Define bioassay. Explain the principles of bioassay. (5)
- 5) Describe the mechanism of action of NSAIDs. What are the advantages of COX2 selective drugs. (5)
- 6) Explain the Pharmacological actions and uses of SERM (5)
- 7) Explain the therapeutically useful Pharmacological actions of Corticosteroids. List out any four toxic effect of Steroids. (5)



## Question Paper

Exam Date & Time: 29-Nov-2019 (09:30 AM - 12:30 PM)



### MANIPAL ACADEMY OF HIGHER EDUCATION

Industrial Pharmacy I [PCE-BP502T - S3]

Marks: 75

Duration: 180 mins.

Multiple Choice Questions (MCQs)

#### II Long Answers

Answer all the questions.

- 1) Define a cold cream. With the help of a formula, explain the principle involved and formulation of a good cold cream. (10)
- 2) Explain the parts of an aerosol valve system and write a note on the quality control tests for pharmaceutical aerosols (10)

#### III Short Answers

Answer all the questions.

- 1) Define Preformulation. Briefly discuss any two Biopharmaceutical classification system with one example for each type. (5)
- 2) Briefly discuss isotonicity requirements for parenteral products. (5)
- 3) Write a note on formulation of ophthalmic preparations (5)
- 4) Briefly discuss various factors affecting corneal absorption (5)
- 5) Explain the rotary die process of preparing soft gelatin capsules (5)
- 6) Write about the ingredients used in the formulation of Hard Gelatin Capsules (5)
- 7) Briefly describe the steps in the semi automatic method of filling Hard Gelatin Capsules (5)

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