Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – V • EXAMINATION – SUMMER • 2014

Subject Code: 250004 Date: 11-06-2014

Subject Name: Pharmaceutical Chemistry-VI (Medicinal Chemistry)

Time: 10:30 am - 01:30 pm Total Marks: 80

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 (a) What is Medicinal Chemistry? Give importance of Medicinal chemist in drug development. **06**

(b) Explain the effect of following parameter on biological activity. **05**

1. Complexation
2. Hydrogen bonding

(c) Give preparation of Quinoline. **05**

Q.2 (a) Comment on following statements **06**

1. Imidazole is less basic than pyrazole.
2. Indole is aromatic
3. Thiophene is more reactive for electrophilic substitution than furan.

(b) Give SAR of antihistaminic agents. **05**

(c) Give structure, chemical name and synthesis of following compounds. **05**

1. Cetrizine
2. Chlorpheniramine

Q.3 (a) What are proton pumps Inhibitors? Explain its mechanism of action. Give Synthesis of Omeprazole. **06**

(b) Discuss reactivity of pyridine towards electrophiles and nucleophiles **05**

(c) What are antiemetic agents? Classify them with examples **05**

Q.4 (a) Give name, structure and uses of any two compounds of following **06**

1. Expectorants
2. Antiasthmatic agents

(b) What is eudismic ratio? Give importance of Chirality in drug action. **05**

(c) Give preparations of Furan. **05**

Q.5 (a) Explain the following terms with examples **06**

1. Prokinetics
2. Laxatives
3. Irritable bowel syndrome

(b) Write a note on Antitussive agents. **05**

(c) Give the importance of protein binding in drug action. **05**

Q. 6 (a) Explain the physicochemical parameters affecting drug absorption. **06**

(b) What is peptic ulcer? Give brief note on H_2-antagonists. **05**

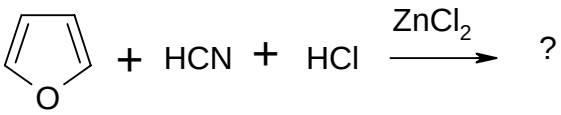
(c) Give a note on radiological contrast media. Give synthesis of diatriazoic acid. **05**

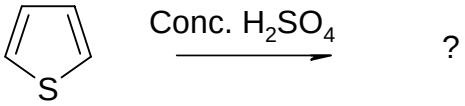
Q.7 What are Eicosanoids? Give name of major biosynthesis pathways and drug actions

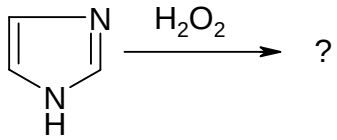
(a) mediated by Eicosanoids. **06**

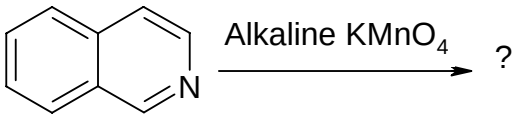
(b) Give reactions of Pyrrole. **05**

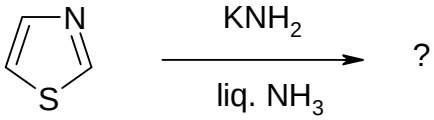
(c) Complete the following reactions. **05**

(1) 

(2) 

(3) 

(4) 

(5) 

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