

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-IV • EXAMINATION – SUMMER -2020

Subject Code: BP402TP**Date: 27-10-2020****Subject Name: Medicinal Chemistry I****Time: 10:30 AM TO 1:30 PM****Total Marks: 80****Instructions:**

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

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| Q.1 | (a) | Write all possible routes for the metabolism of norepinephrine. | 06 |
| | (b) | Write the biosynthesis of norepinephrine with chemical reactions. | 05 |
| | (c) | Discuss the types of cholinergic receptors with their distribution. | 05 |
| Q.2 | (a) | Describe the SAR of adrenergic agonists. | 06 |
| | (b) | Write a note on indirectly acting sympathomimetics. | 05 |
| | (c) | Write the synthesis of salbutamol and propranolol. | 05 |
| Q.3 | (a) | Discuss in brief the development of medicinal chemistry. | 06 |
| | (b) | Make an introductory note on phase I and phase II metabolism. | 05 |
| | (c) | Discuss the importance of protein binding and hydrogen bonding in producing drug's biological action. | 05 |
| Q.4 | (a) | Classify the antiepileptics with one drug's structure from each class. | 06 |
| | (b) | Discuss the structural modifications of 5-phenyl-1,4-benzodiazepin-2-one. | 05 |
| | (c) | Write the synthesis of any two anticonvulsant drugs. | 05 |
| Q.5 | (a) | Define the word 'opioids'. Write the name and structures of narcotic antagonists. | 06 |
| | (b) | Write the mechanism of action of NSAIDs. Write the synthesis of any one NSAID from aryl propionic acid class. | 05 |
| | (c) | Classify the NSAIDs with one drug's structure from each class. | 05 |
| Q. 6 | (a) | Define neuroleptics. Write the mechanism of action and possible side effects of them. | 06 |
| | (b) | Describe the structural modification of side chain of phenothiazines. | 05 |
| | (c) | Classify the general anaesthetics with two drugs' structures from each class. | 05 |
| Q.7 | (a) | Classify the parasympathomimetics with two drugs' structures from each class. | 06 |
| | (b) | Write a note on cholinesterase reactivators. | 05 |
| | (c) | Write the chemical class, synthesis and use of dicyclomine hydrochloride. | 05 |
