

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VI • EXAMINATION – SUMMER • 2014

Subject Code: 260004

Date: 28-05-2014

Subject Name: Pharmaceutical Chemistry-VIII

Time: 10.30 am To 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.**

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|------------|---|-----------|
| Q.1 | (a) Define and classify cholinergic agents. What are cholinesterase inhibitors? How do they act? Give examples. | 06 |
| | (b) Outline the synthetic steps involved in (any two):
i) Salbutamol ii) Neostigmine iii) Ephedrine iv) Dopamine | 05 |
| | (c) Write a note on selective serotonin reuptake inhibitors used as antidepressants. | 05 |
| Q.2 | (a) Classify the drugs used in epilepsy with examples. What structure is common to all of them? Draw the synthesis of Phenytoin. | 06 |
| | (b) Write a short note on Psychomotor stimulants OR Narcotic antagonists. | 05 |
| | (c) Enumerate the structural features essential for directly acting Sympathomimetic agents. | 05 |
| Q.3 | (a) What are major pathways of metabolism? Describe the importance of conjugation reaction in drug metabolism giving specific examples. | 06 |
| | (b) Give an account of forces involved in the drug receptor interaction. | 05 |
| | (c) Write note on drugs used in Alzheimer's disease OR Parkinson's disease. | 05 |
| Q.4 | (a) Define & classify local anaesthetics giving examples for each class with structures. Explain the SAR of benzoic acid derivatives. | 06 |
| | (b) Outline the synthetic steps involved in (any two):
i) Procaine ii) Lignocaine iii) Benzocaine iv) Halothane | 05 |
| | (c) What is myasthenia gravis? Write the structures of the drugs used in the treatment of myasthenia gravis. | 05 |
| Q.5 | (a) Classify antidepressants. Describe in detail about MOA, SAR & therapeutic uses of MAO inhibitors. | 06 |
| | (b) What are Opioid analgesics? Write SAR & MOA of Morphine. | 05 |
| | (c) Give the structure and IUPAC nomenclature of (any two):
i) Amphetamine ii) Thiopental iii) Ibuprofen iv) Diclofenac | 05 |
| Q.6 | (a) Write the advantages of selective COX-2 inhibitors over non-selective NSAIDs. Classify NSAIDs and write MOA of Indomethacin. | 06 |
| | (b) What is schizophrenia? Explain SAR of Phenothiazine derivatives as CNS depressants. | 05 |
| | (c) Write note on Neuromuscular blocking agents OR Stereochemical aspects of drug metabolism with examples. | 05 |

- Q.7**
- (a) Explain the followings: **06**
- i) Why lidocaine is administered with adrenaline?
 - ii) Why thiobarbiturates are metabolized in vivo faster than Phenobarbital?
 - iii) Why Sulindac, a potent nonselective COX inhibitors, is said to have a lower risk of stomach bleeding and nephrotoxicity than other aspirin-like NSAIDs such as Indomethacin.
- (b) What are β -blockers? Write the structures and uses of (any two): **05**
- i) Propranolol ii) Atenolol iii) Metoprolol
- (c) Write a note on drugs used in the management of Gout and Hyperuricemia. **05**
