

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER-VI • EXAMINATION – SUMMER-2018

Subject Code:260004**Date: 08/05/2018****Subject Name: Pharmaceutical chemistry-VIII (Medicinal chemistry)****Time:10:30am to 01:30pm****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) Give major pathways of drug metabolism. Explain phase-I reactions in brief. **06**
- (b) What do you mean by drug metabolism? Discuss in brief factors affecting drug metabolism. **05**
- (c) What do you mean by CYP 450? Give its functions and importance. **05**
- Q.2**
- (a) Define receptors. Explain occupational theory and induced fit theory of receptors. **06**
- (b) Enlist factors affecting drug-receptor interaction. Explain them in brief. **05**
- (c) Match the followings: (A-B) (Drug-category) **05**
- | A (Drug) | B (Category) |
|------------------|--------------------------|
| 1) Phenytoin | A) Antidepressant |
| 2) Amitriptyline | B) Opioid analgesic |
| 3) Diclofenac | C) Antiepileptic |
| 4) Morphine | D) Cholinergic agonist |
| 5) Salbutamol | E) NSAIDs |
| | F) Adrenergic antagonist |
- Q.3**
- (a) Define parasympathomimetics. Classify them with two examples and one structure of each category. **06**
- (b) Give synthesis of: (Any two) **05**
- i). Neostigmine ii) Dicyclomine iii). Adrenaline
- (c) Give short note on neuromuscular blocking agents. **05**
- Q.4**
- (a) Define adrenergic antagonists. Classify them with two examples and one structure of each category. **06**
- (b) Give SAR of phenylethanolamines. **05**
- (c) Classify following drugs in the category of adrenergic agonists and adrenergic antagonists: **05**
- Ephedrine, Adrenaline, Atenolol, Noradrenaline, Acebutolol, Isoprenaline, Guanethidine, Prazocin, Naphazoline, Phenoxybenzamine.
- Q.5**
- (a) Define sedative and hypnotics. Classify them with two examples and one structure of each category. **06**
- (b) Give SAR of tricyclic antidepressants. **05**
- (c) Give short note on cognition enhancers. **05**

- Q. 6** (a) Define NSAIDs. Classify them with two examples and one structure of each category. **06**
- (b) Give short note on antiparkinson's agents. **05**
- (c) Give synthesis of: (Any two) **05**
i). Paracetamol ii). Chlorpromazine iii). Thiopental sodium.
- Q.7** (a) Define antiepileptics. Classify them with two examples and one structure of each category. **06**
- (b) Give SAR of phenothiazines. **05**
- (c) Give synthesis of: (Any two) **05**
i). Amphetamine ii). Phenobarbitone iii). Lignocaine
