

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**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.              | <b>06</b> |
| (b) | What do you mean by drug metabolism? Discuss in brief factors affecting drug metabolism. | <b>05</b> |
| (c) | What do you mean by CYP 450? Give its functions and importance.                          | <b>05</b> |
- Q.2**
- |     |  |           |
|-----|--|-----------|
| (a) | Define receptors. Explain occupational theory and induced fit theory of receptors. | <b>06</b> |
| (b) | Enlist factors affecting drug-receptor interaction. Explain them in brief.         | <b>05</b> |
| (c) | Match the followings: (A-B) (Drug-category)  | <b>05</b> |
- | 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. | <b>06</b> |
| (b) | Give synthesis of: (Any two)<br>i). Neostigmine ii) Dicyclomine iii). Adrenaline                 | <b>05</b> |
| (c) | Give short note on neuromuscular blocking agents.  | <b>05</b> |
- Q.4**
- |     |   |           |
|-----|---|-----------|
| (a) | Define adrenergic antagonists. Classify them with two examples and one structure of each category.  | <b>06</b> |
| (b) | Give SAR of phenylethanolamines.  | <b>05</b> |
| (c) | Classify following drugs in the category of adrenergic agonists and adrenergic antagonists:<br>Ephedrine, Adrenaline, Atenolol, Noradrenaline, Acebutolol, Isoprenaline, Guanethidine, Prazocin, Naphazoline, Phenoxybenzamine. | <b>05</b> |
- Q.5**
- |     |  |           |
|-----|--|-----------|
| (a) | Define sedative and hypnotics. Classify them with two examples and one structure of each category. | <b>06</b> |
| (b) | Give SAR of tricyclic antidepressants.   | <b>05</b> |
| (c) | Give short note on cognition enhancers.  | <b>05</b> |

- 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

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