

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. | 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)
i). Neostigmine ii) Dicyclomine iii). Adrenaline | 05 |
| (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:
Ephedrine, Adrenaline, Atenolol, Noradrenaline, Acebutolol, Isoprenaline, Guanethidine, Prazocin, Naphazoline, Phenoxylbenzamine. | 05 |
- 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
