

(LQ 2040)

MARCH 2020

Sub. Code: 2040

B.PHARM. DEGREE EXAMINATION
PCI Regulation – SEMESTER IV
PAPER II – MEDICINAL CHEMISTRY – I

Q.P. Code: 562040

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. a) What are sedative and hypnotics? Classify sedative and hypnotics.
b) Discuss the structural activity relationship of benzodiazepines and outline the synthesis of Diazepam.
2. Explain in detail about Phase II metabolism reactions with examples.
3. Discuss the structural activity relationship of β phenyl ethyl amines of direct acting sympathomimetics.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Explain the biosynthesis, metabolism and physiological role of adrenergic neurotransmitters.
2. Discuss the structural activity relationship of anticonvulsants and outline the synthesis of ethosuximide.
3. Explain the mechanism of nonsteroidal anti-inflammatory agents and outline the synthesis of Ibuprofen.
4. Explain the factors affecting drug metabolism including stereochemical aspects.
5. Discuss the structural activity relationship of β blockers and outline the synthesis of propranolol.
6. What are the general anaesthetics? Classify general anaesthetics with examples.
7. a) Explain the biosynthesis and catabolism of acetylcholine
b) Explain the muscarinic and nicotinic receptors and their distribution.
8. What are narcotic analgesics? Classify narcotic analgesics and outline the synthesis of fentanyl citrate.
9. Classify sympathomimetic agents and outline the synthesis of salbutamol.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Write the structure and medicinal uses of prazocine.
2. Write briefly on the mechanism of action of phenothiazine.
3. Give the structure and medicinal uses of any one fluorobutyrophenones.
4. What is Easson Stedman hypothesis?
5. Write briefly on SAR of imidazoline nucleus of α adrenergic receptor agonist.
6. Explain the mechanism of action of β -haloalkylamines of adrenergic receptor antagonist.
7. Explain why non selective β blockers are contraindicated for the patients in conditions like Asthma and bronchitis?
8. Write the structure, numbering and uses of codeine.
9. Write briefly on mechanism of action of phenytoin.
10. What happens on replacement of oxygen atom by sulphur atom on carbon-2 of barbiturates structure? Give its actions and uses.
