THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0122] OCTOBER 2022 Sub. Code: 2040
(MARCH 2022 EXAM SESSION)

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – 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. Describe in brief the biosynthesis, release, uptake and metabolism of acetylcholine.
2. Outline the synthesis and medicinal uses of (a) Ipratropium bromide (b) Neostigmine (c) Carbachol (d) Dicyclomine hydrochloride.
3. Explain the various types of Phase I biotransformation pathways.

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

1. Discuss in detail the various stereochemical aspects of drug metabolism.
2. Discuss the chemistry and structural activity relationship of beta-adrenergic blocking agents with examples.
3. Outline the synthesis and medicinal uses of (a) Propranolol (b) Tolazoline.
4. Classify antipsychotics and write the structure and uses of (a) Prochlorperazine maleate (b) Thiothixene.
5. Describe in detail the structural activity relationship of hydantoin class of anticonvulsant drugs.
6. Classify general anaesthetics. Outline the synthesis of halothane.
7. Describe the synthesis and medicinal uses of (a) Fentanyl citrate (b) Methadone hydrochloride.
8. Write a note on structural activity relationship of 3,5-pyrazolidine dione derivatives used as anti-inflammatory agents.
9. Sketch the synthetic route for Mefenamic acid.

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

1. Write any two factors affecting solubility.
2. Write the structure and uses of (a) Phenacetin (b) Sulindac.
3. What are adrenergic receptors?
4. Write the structure and uses of Pilocarpine.
5. Give the structure of (a) Chlordiazepoxide (b) Meprobamate.
6. Outline the synthesis of Phenytoin.
7. Write the structure of any two oxazolidine diones.
8. Mention the different stages of anaesthesia.
9. Write the structure and uses of (a) Indomethacin(b) Diclofenac.
10. List out the ideal characteristics of general anaesthetics.

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