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

[BPHARM 0122] JANUARY 2022 Sub. Code: 2040
(MARCH 2021 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. a) List out the physicochemical properties that influence biological action. With suitable examples explain how the following properties affect drug absorption. (6)
   i) Solubility ii) Ionization iii) Hydrogen bonding.
   b)Write briefly on enzyme system involved in I Phase metabolism of drugs. (4)
2. a) What are adrenergic neurotransmitters? Classify them with suitable examples.(3)
   b) Write in detail about biosynthesis and catabolism of catecholamines. (3)
   c) Mention the use and synthesis of salbutamol (4)
3. a) Define and classify sedatives and hypnotics with suitable examples. (3)
   b) Summarize the SAR of benzodiazepines. (3)
   c) Write the synthesis and use of diazepam. (4)

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

1. Write a note on the different types of receptors meant for drug action.
2. Outline the various factors that influence metabolism.
3. Write a note on cholinergic blocking agents.
4. Write a note on phenothiazines as antipsychotic agents.
5. Define beta-adrenergic blocking drugs with structural representation.
6. What are anticonvulsants? Write the SAR of barbiturates.
7. Define general anaesthetics with a mention on their mechanism of action. Write the structure and uses of i) Methohexital Sodium ii) Ketamine Hcl.
8. Summarise the SAR of beta-blockers.
9. What are NSAIDs? Write the synthesis of Ibuprofen.

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

1. Agonist.
2. Ferguson principle.
3. Clinical uses of alprazolam.
4. Protein binding of drugs.
5. Structure and uses of phenobarbitone.
6. Dissociative anaesthetics.
7. Cholinergic receptors.
8. Xenobiotics.
9. Structure and use of phenytoin.
10. Synthesis of aspirin from benzoic acid.

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