

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

[LR 1220]

DECEMBER 2020

Sub. Code: 4262

(AUGUST 2020 EXAM SESSION)

B. PHARMACY DEGREE EXAMINATION

THIRD YEAR – (Regulation from 2009-2010)

PAPER II – MEDICINAL CHEMISTRY - I

Q.P. Code: 564262

Time: Three hours

Answer ALL questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain the following physiochemical parameters related to biological activity with Example (**4x5=20**)
a) Steric effect b) Protein binding c) Geometrical isomerism d) Hydrogen bonding.
2. a) Define anticonvulsants? Classify with examples. (**6**)
b) Give detailed account of Structure Activity Relationship of Local anesthetics. (**6**)
c) Outline the synthesis for (i) Chlorpromazine HCl (ii) Thiamylal sodium. (**4+4**)

II. Write notes on:

(8 x 5 = 40)

1. Describe the biosynthesis of adrenergic neurotransmitters.
2. Relate the structural features of any four drugs from cholinergic.
3. Give four structures of quaternary ammonium compounds as Ganglionic blockers.
4. Outline the synthesis and uses of Indomethacin.
5. Give the route of synthesis of Chlorthiazide and Procaine.
6. Draw any four structures of antihistamines under amino alkyl ethers.
7. Give the synthesis and mechanism of action of Doxepin HCl.
8. Classify Sedatives and Hypnotics with at-least one structure for each class.

III. Short answers on:

(10 x 2 = 20)

1. Draw the structure and medicinal uses of Methadone HCl.
2. Summarize at-least three points about chemistry of Eicosanoids.
3. Sketch the structure and medicinal uses of Codeine and Morphine.
4. Write a note on Ranitidine and Famotidine in terms of chemistry.
5. Outline the structures of Halothane and Enflurane.
6. Give two examples as Prodrugs.
7. Draw the structure and uses of Propantheline.
8. Give two examples of potassium sparing diuretics.
9. Sketch two structures of bronchodilator.
10. Give two reactions of Phase-I Metabolism.
