

**VINAYAKA MISSION'S RESEARCH FOUNDATION  
(DEEMED TO BE UNIVERSITY), SALEM**

**B.PHARM. DEGREE EXAMINATION – July 2021**

**Fourth Semester**

**MEDICINAL CHEMISTRY - I**

Time : Three hours

Maximum: 75 marks

I. Write essays on any **TWO** questions: (2 x 10 = 20)

1. What are the different phases of drug metabolism? Write in detail about the factors affecting the metabolism of drugs.
2. Classify parasympathomimetic drugs with examples. Summarize on the SAR of parasympathomimetics. Write the synthesis of carbachol.
3. Classify antipsychotic drugs with examples. Write a note on the SAR of Phenothiazines. Give the synthesis of chlorpromazine hydrochloride.

II. Write short answers on any **SEVEN** questions: (7 x 5 = 35)

4. A brief note on protein binding.
5. Discuss on the distribution of adrenergic receptors.
6. Draw the structure and uses of the following:  
a. Dopamine b. Nor- epinephrine c. Clonidine d. Ephedrine e. Atenolol
7. Engrave the synthesis and mechanism of action of dicyclomine hydrochloride.
8. Discuss in detail about the action of solanaceous alkaloids.
9. Summarize on the SAR of benzodiazepines.
10. Draw the structure and uses of the following:  
a. Paraldehyde b. Phenobarbital c. Diazepam d. Haloperidol  
e. Molindone hydrochloride
11. The mechanism of action of ultra-short acting barbiturates. Write the synthesis of methohexital sodium.
12. Classify NSAIDs with examples. Write the synthesis of mefenamic acid

III. Write short notes on : (10 x 2 = 20)

13. Define partition coefficient.
14. Optical isomerism and geometrical isomerism.
15. Carve the synthesis of propranolol.
16. Name any four beta adrenergic blocking drugs.
17. Draw the structure and uses of atropine sulphate.
18. Enumerate the synthesis of ipratropium bromide.
19. Name any four sedative and hypnotic drugs belonging to benzodiazepines.
20. Write the structure and uses of trifluoperazine hydrochloride.
21. List out the pharmacological uses of the following:  
a. Sulpiride b. Valproic acid
22. Write the synthesis of Ketamine hydrochloride.

\*\*\*\*\*