

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**End Semester Examination – Summer 2022**

**Course: B. Pharmacy**

**Sem:IV**

**Subject Name: Medicinal Chemistry-I**

**Subject Code: BP402T**

**Max Marks: 75**

**Date:27/08/2022**

**Duration: 3.45 Hr.**

**Instructions –**

- 1. All questions are compulsory**
- 2. Answers to MCQs should be written in full sentences**
- 3. Draw diagrams / figures wherever necessary**
- 4. Figures to right indicate full marks**

**Q. 1. Multiple Choice Questions (MCQs) = 20 x 1 = 20 (All the questions are compulsory)**

i) Gaseous and volatile drugs and their metabolites are excreted through\_\_\_\_\_.

- a) Skin  
b) Lungs  
c) Billiary route  
d) Saliva

ii) Major site of drug metabolism is\_\_\_\_\_.

- a) Lung  
b) Liver  
c) Skin  
d) Gastrointestinal tract

iii) Conversion of alcohols to aldehydes is \_\_\_\_\_ metabolic reaction.

- a) Oxidation  
b) Reduction  
c) Hydrolysis  
d) Conjugation.

iv) Enzyme used for glucuronic acid conjugation is\_\_\_\_\_.

- a) Glutathione S-transferase  
b) UDP-Glucuronyl transferase  
c) SAM  
d) PAPS

v) Henderson-Hasselbalch equation is used to determine\_\_\_\_\_ of drug.

- a) Partition Coefficient  
b) Solubility  
c) % ionization  
d) pH.

vi) % ionisation of drug depends upon\_\_\_\_\_.

- a) pKa of the drug  
b) pH of the body fluid  
c) Partition coefficient of drug  
d) Both a. and b.

vii)  $\beta_2$  receptors are found in\_\_\_\_\_.

- a) Heart
- b) Bronchi
- c) Adipose tissue
- d) Skeletal muscles.

viii) Muscarinic receptors are \_\_\_\_\_ receptor.

- a) Nuclear
- b) G-protein Coupled
- c) Enzyme
- d) Ligand gated Ion Chanel.

ix) Which of the following drug is a direct acting sympathomimetic drug.

- a) Phenylephrine
- b) Pseudoephedrine
- c) Propylhexedrine
- d) Ephedrine

x) Which of the drug is alpha adrenergic blocker?

- a) Propranolol
- b) Metibranolol
- c) Atenolol
- d) Tolazoline

xi) Acetylcholine on hydrolysis gives....

- a) Serine and acetic acid
- b) Choline and carbamic acid
- c) Acetic acid and serine
- d) Choline and acetic acid

xii) Chlordiazepoxide, a psychotherapeutic agent belongs to class of \_\_\_\_\_.

- a) Carbamates
- b) Propanediol
- c) Benzodiazepine
- d) Phenothiazine.

xiii) Acetylcholine is biosynthesized from \_\_\_\_\_.

- a) L-Cysteine
- b) L-Codeine
- c) L-Serine
- d) L-Cholic acid

xiv) Hypnotics are \_\_\_\_\_.

- a) Strong depressant of CNS
- b) Strong stimulant of CNS
- c) Mild depressant of CNS
- d) Mild stimulant of CNS

xv) Chemical name 5-ethyl, 5-phenyl barbituric acid belong to

- a) Hexobarbital
- b) Phenobarbital
- c) Pentobarbital
- d) Secobarbital

xvi) Which one of the following receptor is block by Neuroleptic agent?

- a) Cholinergic
- b) Adrenergic
- c) GABA
- d) Dopaminergic

xvii) Which of the Anticholinergic agent useful as a spasmolytic drug?

- a) Pyridostigmine
- b) Dicyclomine

c) Tropicamide d) Glycopyrrolate

xviii) Phenobarbital is orally administered in the treatment of:

- a) Grand mal epilepsy b) Petit mal epilepsy  
c) Jackson epilepsy d) Psychomotor epilepsy.

xix) Which of the following barbiturate derivative acts as anticonvulsant agent?

- a) Hexobarbital b) Phenobarbital  
c) Pentobarbital d) Secobarbital

xx) Which of the following drugs is acts as Cholinergic Blocking agent?

- a) Physostigmine b) Neostigmine  
c) Pyridostigmine d) Dicyclomine

**Q. 2.** Long Answers = 2 x 10 = 20 (Answer 2 out of 3)

- i) Discuss the various physicochemical properties affecting the biological activity of drugs.  
ii) Classify sedatives and hypnotics. Add a note on SAR and MOA of Barbiturates.  
iii) Discuss the SAR of Parasympathomimetic agents and add a note on cholinergic receptors.

**Q. 3.** Short Answers = 7 x 5 = 35 (Answer 7 out of 9)

- i) Discuss SAR of sympathomimetic drugs. Add a note on direct acting sympathomimetic drugs.  
ii) Describe SAR of Morphine analogues. Add a note on Narcotic antagonists.  
iii) Describe the factors that affect drug metabolism.  
iv) Define Epilepsy and describe general mechanism of action of anticonvulsant drugs.  
v) Classify anticonvulsant drugs and add a note on hydantoin derivatives.  
vi) Classify antipsychotic drugs. Add a note on SAR and MOA of phenothiazine derivatives.  
vii) Write a note on Biosynthesis and catabolism of catecholamine.  
viii) Outline the synthesis of Phenytoin and Barbitol.  
ix) Write a note on adrenergic receptor. Classify sympathomimetic drugs with examples

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