

**PARUL UNIVERSITY**  
**FACULTY OF PHARMACY**  
**B. PHARM Summer 2022- 23 Examination**

**Semester: 4****Date: 19/04/2023****Subject Code: BP404T****Time: 10:00am to 1:00pm****Subject Name: PHARMACOLOGY- I****Total Marks: 75****Instructions:**

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

**Q.1 Multiple Choice Questions (MCQs) (1 Mark Each) (20)**

1. The following drug metabolizing reaction is entirely non- microsomal
 

a) Glucuronide conjugation	b) Acetylation
c) Reduction	d) Oxidation
2. Receptor agonists possess:
 

a) Affinity but no intrinsic activity	b) Intrinsic activity but no affinity
c) Affinity and intrinsic activity with a + sign	d) Affinity and intrinsic activity with a - sign
3. Muscarinic cholinergic receptors:
 

a) Are located only on parasympathetically innervated effector cells	b) Mediate responses by opening an intrinsic Na <sup>+</sup> ion channel
c) Are present on vascular endothelium which has no cholinergic nerve supply	d) Predominate in the autonomic ganglia
4. Pilocarpine is used for:
 

a) Glaucoma	b) paralytic ileus
c) Urinary retention	d) All the above
5. Select the longer acting ocular beta blocker:
 

a) Timolol	b) Betaxolol
c) Cartiolol	d) Levobunolol
6. Which of the following drugs is a nondepolarizing neuromuscular blocker:
 

a) Succinylcholine	b) Vecuronium
c) Dantrolene sodium	d) Decamethonium
7. Local anesthetics block nerve conduction by:
 

a) Blocking all cation channels in the neuronal membrane	b) Hyperpolarizing the neuronal membrane
c) Interfering with depolarization of the neuronal membrane	d) Both 'B' and 'C' are correct
8. 'Dissociative anesthesia' is produced by:
 

a) Ketamine	b) Fentanyl
c) Propofol	d) Both 'A' and 'B' are correct
9. Hypnotic benzodiazepines increase the period of time spent in the following stage of sleep
 

a) Stage II	b) Stage III
c) Stage IV	d) REM stage
10. The drug of choice for trigeminal neuralgia is:
 

a) Aspirin	b) Imipramine
c) Carbamazepine	d) Valproic acid
11. Sodium valproate has been shown to:
 

a) Attenuate 'T' type Ca <sup>2+</sup> current in neurons	b) Inhibit degradation of GABA by GABA transaminase
c) Prolong neuronal Na <sup>+</sup> channel inactivation	d) All the above
12. Clobazam is a benzodiazepine used as:
 

a) Hypnotic	b) Muscle relaxant
c) Anxiolytic	d) Antiepileptic
13. Drug administered through the following route is most likely to be subjected to first-pass metabolism:

- a) Oral
- b) Sublingual
- c) Subcutaneous
- d) Rectal

14. Majority of drugs cross biological membranes primarily by:

- a) Passive diffusion
- b) Facilitated diffusion
- c) Active transport
- d) Pinocytosis

15. An 'orphan drug' is:

- a) A very cheap drug
- b) A drug which has no therapeutic use
- c) A drug needed for treatment or prevention of a rare disease
- d) A drug which acts on Orphan in receptors

16. Bioavailability of drug refers to:

- a) Ratio of oral to parenteral dose
- b) Percentage of administered dose that reaches systemic circulation in the unchanged form
- c) Ratio of orally administered drug to that excreted in the feces
- d) Ratio of drug excreted unchanged in urine to that excreted as metabolites

17. Which of the following is not true of the blood-brain barrier:

- a) It is constituted by tight junctions between the endothelial cells of brain capillaries and the glial tissue
- b) It allows passage of lipid soluble drugs into the brain
- c) It limits entry of highly ionized drugs into the brain
- d) It regulates passage of substances from brain into blood

18. Which of the following is always true:

- a) A more potent drug is more efficacious
- b) A more potent drug is safer
- c) A more potent drug is clinically superior
- d) A more potent drug can produce the same response at lower doses

19. Which of the following is true of 'placebos':

- a) Placebo is a dummy medication
- b) Placebo is the inert material added to the drug for making tablets
- c) Placebos do not produce any effect
- d) All patients respond to placebos

20. Which of the following is a type B (unpredictable) adverse drug reaction:

- a) Side effect.
- b) Toxic effect
- c) Idiosyncrasy
- d) Physical dependence

**Q.2 Long Answers (any 2 out of 3) { 10 mark each }**

**(20)**

1. Classify parasympathomimetic. Discuss the pharmacological action, mechanism of action and therapeutic uses of any one cholinergic drug.
2. What is bio-transporters? Explain the various phases of biotransformation reactions with suitable examples.
3. Classify sedatives with example. Explain the mechanism of action, side effect, and therapeutic use of diazepam.

**Q.3 Short Answers (any 7 Out of 9) { 5 mark each }**

**(35)**

1. Write different phases of clinical trials.
2. Write a note on drug addiction and drug habituation with examples.
3. Write a note on parenteral route of drug administration.
4. Write on the transduction mechanism in G-Protein coupled receptors.
5. Classify antiepileptic drugs. Explain different types of epilepsy
6. Discuss factors affecting of bioavailability
7. Describe pharmacological actions, therapeutic uses, and adverse effects of atropine.
8. Define general anesthesia. Write the stages of general anesthesia.
9. Write a note on centrally acting skeletal muscle relaxants.