

**B. PHARM.
FOURTH SEMESTER
PHARMACOLOGY - I
BP404T**

(USE SEPARATE ANSWER SCRIPTS FOR OBJECTIVE & DESCRIPTIVE)

Duration: 3 hrs.

Full Marks: 75

[PART-A: Objective]

Time: 20 min.

Marks: 20

Choose the correct answer from the following:

1×20=20

- Most drugs administered orally follow which kinetics?
 - Zero order kinetics
 - First order kinetics
 - Second order kinetics
 - All of these
- _____ is the most abundant plasma protein with an ability to bind to drugs.
 - Globulin
 - Ghrelin
 - Albumin
 - All of these
- Excretion occurs by the help of which organ?
 - Liver
 - Kidneys
 - Both
 - None of these
- Clinical pharmacology deals with:
 - Action of drugs
 - Receptors
 - Targets of disease
 - None of these
- Distribution is _____ process.
 - Irreversible
 - Reversible
 - Unchanged
 - None of these
- The increase in level of physiological activity of specialized cells or physiological system is called as:
 - Depression
 - Stimulation
 - Replacement
 - Differentiation
- According to which theory as a drug approaches to a receptor, the receptor alters the conformation of its binding site to produce drug-receptor complex?
 - Occupation theory
 - Induced fit theory
 - Rate theory
 - Both a and c
- Receptors are _____ located in cell membranes which specifically recognize and bind to ligand/drugs.
 - Lipids
 - Amino acids
 - Glycoproteins
 - Hormones
- In human beings, therapeutic index formula is:
 - $TI=TD_{50}/ED_{50}$
 - $TI=LD_{50}/ED_{50}$
 - Both a and b
 - None of the above

10. Which of the following are factors modifying drug action?
 - a. Old age
 - b. Genetic factors
 - c. Polypharmacy
 - d. All of these
11. The synthesis of GABA starts from which molecule?
 - a. Glutamate
 - b. Glutamine
 - c. Glutaminase
 - d. None of these
12. GABA_A receptors are:
 - a. Metabotropic
 - b. G-protein coupled
 - c. Ionotropic
 - d. None of these
13. How many types of Glutamate receptors have been identified?
 - a. 1
 - b. 5
 - c. 3
 - d. None of these
14. The synthesis of Serotonin starts from which molecule?
 - a. Tryptophan
 - b. 5-hydroxy tryptophan
 - c. Tryptophan decarboxylase
 - d. None of these
15. How does serotonin affect the GIT?
 - a. Stimulates peristalsis
 - b. Decrease acid and pepsin secretion
 - c. Both a & b
 - d. None of these
16. Characteristic feature of transdermal route of drug delivery is:
 - a. Rapid
 - b. Slow and sustained
 - c. Variable
 - d. None of these
17. Which of the following is a chemical which binds to a receptor and activates it to produce a biological response?
 - a. Antagonist
 - b. Agonist
 - c. Drugs
 - d. Hormones
18. The primary mechanism of action of local anaesthetics is:
 - a. Blockade of potassium channel
 - b. Blockade of calcium channel
 - c. Blockade of neurotransmitter channel
 - d. Blockade of sodium channel
19. Stage II of anaesthesia is a stage of:
 - a. Analgesia
 - b. Respiratory depression
 - c. Excitement or delirium
 - d. Surgical anaesthesia
20. Most common Phase-II reaction is:
 - a. Sulphate conjugation
 - b. Glucoronide conjugation
 - c. α -amino acid conjugation
 - d. Methylation

PART-B : Descriptive

Time: 1 hr. 40 minutes

Marks : 35

[*Answer any seven (7)*]

1. Write a note on the various types of membrane transport. 5
2. Write in details about the various routes of drug administration. 5
3. Describe the various phases of clinical trials. 5
4. Write a short note on Serotonin (5-HT). 5
5. Write the classification of neurotransmitters. 5
6. Write the definition and classification of sedatives and hypnotics. 5
7. Write a note on Pre-anaesthetic agents. 5
8. Write a short note on Pharmacovigilance. 5
9. Write a note on neurohumoral transmission in the CNS. 5

Time : 1 Hr.

Marks : 20

[*Answer any two (2)*]

1. Describe the following pharmacokinetic parameters along with the factors influencing them (*any two*): 10
 - a) Absorption
 - b) Distribution
 - c) Metabolism
 - d) Excretion
2. Write in details about the various pharmacokinetic drug interactions. 10
3. Describe the various stages of general anaesthesia. Mention the pharmacokinetics of general anaesthesia. 10

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