

2. What do you mean by physical and psychological drug dependence? Explain the pharmacological basis of drug dependence. 2+3=5
3. Write the advantage and disadvantage of IV route of drug administration. 5
4. Compare the pharmacological actions of barbiturates and benzodiazepines(BZs). 5
5. Discuss the therapeutic utility and side effects of alpha and beta adrenoceptor agonists. 5
6. Discuss in brief therapeutic utility and side effects of muscarinic antagonists. 5
7. Explain the basic mechanisms of action and classification of antiepileptic agents with example. 5
8. Explain the local actions of both topical and GIT at different concentration of ethanol. 5
9. Compare the actions of succinylcholine and d-tubocurarine. 5

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## B Pharm Even Semester Examination, September, 2023

### PHARMACEUTICAL SCIENCES

(4th Semester)

**Course No: BP-404T**  
(Pharmacology-I- Theory)

FM: 75  
Time: 3 Hours

*The figures in the right margin indicate full marks for the question*

- I. A. Multiple Choice questions 1x10=10**
1. Who is called father/founder of Experimental Physiology
    - a. Claude Bernard
    - b. Oswald Schmiedeberg
    - c. Louis Pasteur
    - d. William Procter
  2. Phase II clinical trial designed for evaluation of:
    - a. Safety and tolerability
    - b. Safety and efficacy
    - c. Dose and efficacy
    - c. Efficacy and toxicity
  3. Benzodiazepines enhance time spent in which stage of sleep?
    - a. Stage I
    - b. Stage II

- c. Stage III                      d. Stage IV
4. Phase I metabolic reaction always makes a drug
- a. Inactive                      b. Polar
- c. Active and polar      c. None of above
5. First pass effect can be avoided in the following route of drug administration
- a. Oral                      b. Rectal
- c. Sublingual              d. Both b and c.
6. Which drug produce relaxation of skeletal muscle by inhibiting Ca release:
- a. Baclofen                      b. Doxacurium
- c. Dantrolene              d. Diazepam
7. Local anesthetic molecules have higher affinity for channel protein of which sage of AP?
- a. resting phase              b. 4 phase
- c. 0 phase                      d. 1 phase
8. Sympathomimetics produce mydriasis by acting on
- a. Cilliary muscle      b. Radial muscle
- c. Spincter muscle      d. Detrusor muscle
9. The cofactor used for conversion of dopamine to nor-adrenaline is
- a. Pyridoxal phosphate
- b. Terahydrobiopterin
- c. Ascorbate

d. S-Adenosyl methionine

10. Adrenalin produce fall of blood pressure after brief rise due to action on \_\_\_\_\_ receptor.
- a. Alpha 2                      b. Alpha 1
- c. Beta 1                      d. Beta 2

**I. B. Objective type                      2x5=10**

1. Define dementia and amnesia
2. Define competitive and noncompetitive antagonist
3. Define tolerance and tachyphylaxis?
4. Define partial and inverse agonists
5. Define clearance (CL) of a drug.

**II. Long answers (Answer two out of three questions)                      10x2=20**

1. Write the steps and characteristics of cholinergic transmission                      5+5=10
2. Classify opioids. What are endogenous opioids? Discuss the mechanism of action and pharmacological properties of morphine.                      2+2+6=10
3. Give UPHAR classification of receptors with example. Discuss in details the signaling system in G-protein coupled receptor.                      4+6=10

**III. Short answers (Answer seven out of nine questions)                      5x7=35**

1. Explain the role of Cytochrome P450 mono-oxygenase system in drug metabolism.                      5