



- (vi) Phenytoin is an enzyme \_\_\_\_\_
- (a) Inhibitor (b) Inducer  
(c) Both (a) and (b) (d) None of the above
- (vii) The active metabolite of diazepam is
- (a) Temazepam (b) Nor diazepam  
(c) Dihydro diazepam (d) Nitrazepam
- (viii) \_\_\_\_\_ inhibits phenytoin metabolism.
- (a) Chloramphenicol (b) Carbamazepine  
(c) Warfarin (d) Ethambutol
- (ix) Which of the following is a propionic acid derivative?
- (a) Nabumetone (b) Phenylbutazone  
(c) Ibuprofen (d) Diclofenac
- (x) Chlorpromazine has \_\_\_\_\_ side chain.
- (a) Aliphatic (b) Piperidine  
(c) Piperazine (d) Pyrazine
- (xi) The starting compound for acetaminophen is
- (a) p-aminophenol (b) Toluene  
(c) Acetanilide (d) Phenol
- (xii) Which of the following antipsychotic agent has piperidine side chain?
- (a) Trifluoperazine (b) Fluphenazine  
(c) Thioridazine (d) Triethylperazine
- (xiii) Drug of choice for absence seizure is \_\_\_\_\_
- (a) Phenytoin (b) Paramethadione  
(c) Valproate (d) Diazepam
- (xiv) Which of the following is a starting material for synthesis of Adrenaline?
- (a) Tryptophan (b) Tyrosine  
(c) Tyramine (d) Tolazoline
- (xv)  $\beta_3$  receptor is mainly found in \_\_\_\_\_
- (a) Heart (b) Bronchial muscle  
(c) Adipose tissue (d) Blood vessels
- (xvi) Which of the following is a selective  $\alpha_1$  agonist?
- (a) Naphazoline (b) Oxymetazoline  
(c) Both (a) and (b) (d) only (b)

(xvii) \_\_\_\_\_ is the starting material for the synthesis of procyclidine hydrochloride.

- (a) Benzophenone (b) Acetophenone  
(c) 1,5-diketo ester (d) 1,5-dibromopentane

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(xviii) Ketamine hydrochloride is \_\_\_\_\_ acting barbiturates.

- (a) Short (b) Intermediate  
(c) Long (d) Ultra short

(xix) Which of the following  $\beta$  blocker has maximum local anesthetic property?

- (a) Propranolol (b) Pindolol  
(c) Bisoprolol (d) Betazolol

(xx) \_\_\_\_\_ is not a choline ester.

- (a) Carbachol (b) Metacholine  
(c) Pilocarpine (d) Acetylcholine

2. Answer any *seven* questions :

(7 × 5 = 35)

- (a) Write a note on Protein binding of drugs along with various drugs bound to plasma proteins.
- (b) Define and classify cholinergic agent with suitable examples. Describe the structural activity relationship of muscarinic agonist. (2 + 3 = 5)
- (c) Discuss the structural activity relationship of sympathomimetic drugs. Give the synthesis and mechanism of action of adrenaline. (3 + 2 = 5)
- (d) Define and differentiate between local anesthetics and general anesthetics. Give the synthesis and mechanism of action of ketamine. (2 + 3 = 5)
- (e) How do hypnotics differ from sedatives? Explain the structural activity relationship of Barbiturates as sedatives and hypnotics. (1 + 4 = 5)
- (f) Discuss about optical isomerism of drug molecule and biological action. What is Easson — Stedman Theory? (3 + 2 = 5)
- (g) What is bioisosterism? Classify bioisosterism with suitable examples. Discuss the application of bioisosterism in drug design. (1 + 2 + 2 = 5)
- (h) Write a brief notes on anticonvulsants.
- (i) Write short notes on: (3 + 2 = 5)
- (i) Different stages of anesthesia.
- (ii) Biosynthesis of Acetyl choline.

3. Answer any two questions :

(2 × 10 = 20)

- (a) Discuss the reactions involved in Phase I metabolism.
  - (b) Classify NSAIDs along with suitable examples & write the mechanism of action, synthesis and uses of mefenamic acid and ibuprofen. (2 + 4 + 4 = 10)
  - (c) Write the mechanism of action and synthesis of the following compound :  
(4 + 3 + 3 = 10)
    - (i) Salbutamol
    - (ii) Tolazoline
    - (iii) Phenytoin.
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