



- Notes : 1. Discuss the reaction, Mechanism wherever necessary.
2. All questions are compulsory.

1. Multiple choice questions.**20**

- i) Following route is most likely to be subjected to first-pass metabolism.
 - a) Oral
 - b) Sublingual
 - c) Subcutaneous
 - d) Rectal
- ii) Cytochrome P450 isoenzymes is involved in the metabolism of largest number of drugs in human.
 - a) CYP 3A4
 - b) CYP 2C9
 - c) CYP 2E1
 - d) CYP 1A2
- iii) Conjugation is
 - a) Process of drug reduction by special enzymes
 - b) Process of drug oxidation by special oxidases
 - c) Coupling of a drug with an endogenous substrate
 - d) Solubilization in lipids
- iv) Pharmacodynamic involves the study of following EXCEPT
 - a) Biological and therapeutic effects of drugs
 - b) Absorption and distribution of drugs
 - c) Mechanisms of drugs action
 - d) Drug interactions
- v) Tick the substances whose mechanisms are based on interaction with ion channels
 - a) Sodium channel blockers
 - b) Calcium channel blockers
 - c) Potassium channels activators
 - d) All of the above
- vi) What phenomenon can occur in case of using a combination of drugs?
 - a) Tolerance
 - b) Tachyphylaxis
 - c) Accumulation
 - d) Synergism
- vii) A teratogenic action is
 - a) Toxic action on the liver
 - b) Negative action on the fetus causing fetal malformation
 - c) Toxic action on blood system
 - d) Toxic action on kidneys
- viii) More common and less serious adverse drug reaction is
 - a) Predictable (Type A)
 - b) Unpredictable (Type B)
 - c) Both a & b
 - d) None of above
- ix) Following is a co-transmitter except
 - a) VIP
 - b) NYP
 - c) ATP
 - d) Ach

- x) Parasympathomimetic agents use in
- Glaucoma
 - To reverse the effect of mydriatics
 - To prevent formation of adhesions between iris and lens
 - All of above
- xi) Atropine is highly selective for
- M1 receptor subtype
 - M2 receptor subtype
 - M3 receptor subtype
 - All of the above
- xii) α_2 receptor is located at
- Prejunctionally
 - Postjunctionally
 - Extrajunctionally
 - All of the above
- xiii) Noradrenaline is selective action on which of the following receptors.
- $\alpha_1 + \alpha_2 + \beta_1 + \beta_2$ and β_3
 - $\alpha_1 + \alpha_2 + \beta_1 + \beta_2$ and weak β_3
 - $\alpha_1 + \alpha_2 + \beta_1 + \beta_3$ but no β_2
 - $\beta_1 + \beta_2 + \beta_3$ but no α
- xiv) Beta adrenoreceptor subtypes is contained in all the following tissues EXCEPT
- Bronchial muscles
 - Heart
 - Pupillary dilator muscle
 - Fat cells
- xv) Indicate the irreversible Alfa receptor antagonist
- Tolazoline
 - Labetalol
 - Prazosin
 - Phenoxybenzamine
- xvi) Amide linked local anesthetic agent is
- Cocaine
 - Lidocaine
 - Tetracaine
 - Benzocaine
- xvii) A good local anesthetic agent shouldn't cause
- Local irritation and tissue damage
 - Systemic toxicity
 - Fast onset and long duration of action
 - Vasodilatation
- xviii) Diazepam is
- GABA agonist
 - GABA antagonist
 - Glycine Antagonist
 - Adrenaline blocker
- xix) The state of "general anesthesia" usually includes
- Analgesia
 - Loss of consciousness, inhibition of sensory and autonomic reflexes
 - Amnesia
 - All of the above
- xx) Indicate the anesthetic, which is used intravenously
- Propofol
 - Halothane
 - Desflurane
 - Nitrous oxide

2. Solve any seven.

**7x5=
35**

- i) Discuss in detail about source of drugs.
- ii) Define distribution and redistribution. Explain the factors that influence it.
- iii) Write about zero-order kinetics and importance of half life.
- iv) Explain the dose-response relationship with its clinical importance
- v) What is adverse drug reaction? Give its type
- vi) Write a note on Pharmacovigilance.
- vii) Discuss the various phases of clinical trials.
- viii) Write a short note on co-transmitter.
- ix) Describe in brief about pilocarpine.

3. Solve any two.

**2x10
=20**

- i) Classify α blockers. Explain the mechanism action, therapeutic uses and adverse effect of phenoxybenzamine.
- ii) Classify the skeletal – muscle relaxant with suitable examples. Explain the mechanism of action, therapeutic uses and the adverse effect of d-TTC.
- iii) Classify antipsychotic drugs. Give its pharmacological action, adverse effect and uses of chlorpromazine.
