

DPT 4th

Course Title: Pharmacology I

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Note:

- Paper is divided into two questions, Q1 includes 15 MCQs and Q2 includes 15 True/False statements
 - Each MCQ or T/F carry one mark with grand total of 30 marks
 - **Highlight** or underline the appropriate option
 - Before marking, read every statement carefully to understand the actual sense of question
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Q1. Select and highlight the most appropriate option for the following questions

1. Which of the following statement is not true
 - a. Oral administration has lower chances of systemic infection
 - b. Activated charcoal easily advert the toxic effects occurred through oral route
 - c. **Oral administration has comparatively good absorption**
 - d. No specially trained personnel is required for oral administration

2. General anesthesia is characterized by _____
 - a. Revocable loss of senses and conscious
 - b. Temporary loss of memory
 - c. Reduced muscle contraction
 - d. **All of the above**

3. Which one of the following routes provides long term release of drugs/medicine
 - a. Subcutaneous
 - b. Intravascular
 - c. Sublingual
 - d. **Intramuscular**

4. All of given statements are correct, except
 - a. Active diffusion is the most common mechanism of absorption

- b. Carrier saturation is always involved in active diffusion
 - c. **Active transportation involves the utility of adenosine triphosphate**
 - d. Specific proteins are require for carrying drug to the target
5. Bioavailability of insulin is negligible through oral administration because of
- a. Instability in gastric pH
 - b. Degradation by stomach enzymes
 - c. First-pass hepatic metabolism
 - d. **All of the above**
6. Which stage of anesthesia is the most desired for any procedure
- a. Stage I
 - b. Stage II
 - c. Stage III
 - d. **Stage IV**
7. Due to tight junction of capillaries in brain, only those drugs can be moved that are
- a. Facilitated by carriers
 - b. Appropriately charged
 - c. Hydrophobic in nature
 - d. Both b. and c.
 - e. **Both a. and c.** ‘
8. In a healthy adult individual, aminoglycosides; with properties of low molecular weight and lyophobic nature, has the distribution of almost
- a. 20%
 - b. 6%
 - c. 60%
 - d. **None of the above**

9. When the plasma concentration of drug reaches to 100 after 70, metabolism of drug turns from _____ to _____.
- First order kinetics to zero order kinetics
 - Non-linear kinetics to linear kinetics**
 - No effect on metabolism
 - Both a. and b.
10. _____ receptors transduces signals from release of serotonin
- Enzymatic-linked receptors
 - Ligand-gated receptors
 - G-protein coupled receptors**
 - Intracellular receptors
11. By altering the dose of _____ in graded manner, it can be used as anesthetic, anxiolytic and sedative
- Lidocaine
 - Diazepam
 - Phenytoin**
 - Both a. and b.
 - None of the above
12. All the statements are correct, except
- Hierarchical neuronal system has fast conducting fibers, because of neuron myelination
 - Functionally metabotropic receptor belongs to diffused neuronal system
 - Drugs that pharmacologically affects hierarchical/diffused system have greater effect on responsiveness and hunger etc.**
 - None of the above
13. Therapeutic effect of morphine is mediated through activation of _____
- Endorphin, dynorphin etc.

- b. **GABA receptors**
 - c. Serotonin receptors
 - d. Both a. and b.
 - e. None of the above
14. Depending on subtype, all neurotransmitters can produce both excitation and inhibition of neuron, Except
- a. Serotonin
 - b. Dopamine
 - c. **Glutamic acid**
 - d. None of the above
15. Which of the following drug have impact on patient weight
- a. Phenobarbitone
 - b. Lorazepam
 - c. **Valproic acid**
 - d. Oxcarbazepine

Q2: For the following questions, highlight/underline True or False.

1. Respiratory and cardiovascular support must provide at anesthesia i.e. stage of medullary paralysis (True/False)
2. Hydrophobic drugs usually cannot move through passive diffusion (True/False)
3. If the bond length between drug and receptor is small than it will lead to strengthening of their interaction (True/False)
4. Drug solubility increases in diarrheal condition due to increase water content, hence increasing the absorption (True/False)
5. Generally, neuronal excitatory signal are transduced by opening of interconnected ion channels i.e. K⁺ ion channels (True/False)
6. Distal tubular reabsorption is very crucial to reabsorb vital nutrients that are eliminated from body (True/False)
7. Drugs that are bioequivalent can be switched with one another in time of need (True/False)
8. Reason of various stages of metabolism is that, hydrophobic drugs cannot be efficiently eliminated by kidneys (True/False)
9. In the anesthesia procedure, flumazenil is mostly used in premedication (True/False)
10. Carbamazepine as an inducing agent increase the biotransformation of drug that ultimately lead to low level of plasma concentration (True/False)
11. According to therapeutic uses, lignocaine can be used both as surface and injectable anesthetic (True/False)
12. Benzodiazepines and barbiturates illicit the response after binding between an $\alpha 1$ and the $\gamma 2$ subunit in GABA receptor (True/False)
13. Mostly phenytoin and sometimes Valproic acid exert its effects via inhibiting Na⁺ channels into rapidly firing neurons (True/False)
14. Status epilepticus the most serious, life-threatening condition characterized by convulsion and is generalized form of epilepsy (True/False)
15. Local anesthetics block the nerve impulse by blocking the ion channels at nerve terminals i.e. K⁺ channels (True/False)