

## 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 \_\_\_\_\_.
- a. **First order kinetics to zero order kinetics**
  - b. Non-linear kinetics to linear kinetics
  - c. No effect on metabolism
  - d. Both a. and b.
10. \_\_\_\_\_ receptors transduces signals from release of serotonin
- a. Enzymatic-linked receptors
  - b. **Ligand-gated receptors**
  - c. G-protein coupled receptors
  - d. Intracellular receptors
11. By altering the dose of \_\_\_\_\_ in graded manner, it can be used as anesthetic, anxiolytic and sedative
- a. Lidocaine
  - b. **Diazepam**
  - c. Phenytoin
  - d. Both a. and b.
  - e. None of the above
12. All the statements are correct, except
- a. Hierarchical neuronal system has fast conducting fibers, because of neuron myelination
  - b. **Functionally metabotropic receptor belongs to diffused neuronal system**
  - c. Drugs that pharmacologically affects hierarchical/diffused system have greater effect on responsiveness and hunger etc.
  - d. None of the above
13. Therapeutic effect of morphine is mediated through activation of \_\_\_\_\_
- a. 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<sup>+</sup> 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<sup>+</sup> 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<sup>+</sup> channels (True/False)