**MLT 2nd**

**Course Title: General pharmacology I**

**Student Name:**

**Student ID:**

**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**

Q1. Select and highlight appropriate option for given questions

* In the process of metabolism introducing the polar functional group into molecule may \_\_\_\_\_\_\_\_\_\_\_\_ the pharmacological activity of drug
* increase
* Decrease
* No change
* All of the above
* Drugs having the properties of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ may have prolong half life
* Hydrophobic
* Pass from enterohepatic circulation
* Both a. and b.

. none of above

* Rapid signal transmission and processing occur through
* G-protein coupled receptor
* Ligand-gated receptor
* Enzyme linked receptor
* Intracellular receptor

.Which of the following statement is not true

* Mechanistically, every drug can illicit its action via enzymes, ion channels, transporters, receptors
* Majority of drugs show its effects by interacting with its target biomolecules
* The targeted biomolecules for initiating drug action are proteins in nature
* Mechanism of drug action always depends on its selectivity
* The therapeutic index represents an estimate of the\_\_\_\_\_\_\_\_\_\_ of a drug, because a very safe drug might be expected to have a very large toxic dose and a much smaller effective dose.
* Efficacy
* Safety
* Toxicity
* Both a. and b.
* Which of the following statement is incorrect
* Oral drug administration is easy to self-administer
* In emergency situation best choice of drug administration is I/M
* Drugs with poor penetrability is usually administered through I/V
* Inhalation means administration through mouth in small, atomized droplets form
* Signals to the skeletal muscles are controlled by
* G-protein receptors
* Second messenger system only
* Nicotinic receptors
* None of the above
* Every drug follows same path/phases of metabolism such as
* Only one phase at a time
* Phase I followed by Phase II
* Phase II followed by Phase I
* Depending upon chemical nature of drug
* Both a. and d.
* Which of the following statement is the false one
* Majority of drugs are equally eliminated via urine and feases
* Nephron is the structural and functional unit of kidney
* Only appropriately metabolized can be eliminated efficiently by kidneys
* If kidneys failed to eliminate then workload is eased by intestinal route.
* Degradative enzymes of GI tract cause drugs to denature which in turn lower its
* Absorption
* Distribution
* Bioavailability
* Both a. and c.
* All of the above
* Which receptor require preliminary formation of ligand bonding that lead to moveable complex
* Enzyme linked receptors
* Ligand-gated ion channels
* Intracellular receptors
* G-protein coupled receptors
* A patient having certain type of infections showed altered \_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Biological half-life
* Biological effect half-life
* Plasma half-life
* All of the above
* Drug distribution of any class of drug can be determined in terms of \_\_\_\_\_\_\_\_\_\_\_\_
* Hydrophilicity
* Molecular weight
* Hydrophobicity
* Plasma proteins binding
* All of the above
* Which of the following statement is not related to exact principle of drug action
* Treatment of low heart rate by giving adrenaline
* Treatment of acidity with omeprazole
* Treatment of diabetes by giving insulin as external hormone
* Treatment cancer by giving them genetic therapy
* All are true
* Which of the following directly alter membrane potential
* Enzymes
* Transporters
* Ion-linked channels
* All of the above

Q2. Select and highlight true and false for the given statements

* Clinical pharmacology includes the investigation of drug’s efficacy and safety in various form of subjects (True/False)
* Drug X shows its action by releasing cholinergic neurotransmitter, due to large particulate nature its release will occur through endocytosis (True/False)
* Drug metabolism in humans usually results in a product that is more lipid soluble than the original drug (True/False)
* Various doses, dosage form and frequency is adjusted in pharmacotherapeutics (True/False)
* In passive diffusion, aqueous soluble drugs cannot move easily across cell membrane (True/false)
* A patient is administered with drug A started toxic reaction but that drug is slowly metabolized by enzymes, he/she should be treated with cimetidine to overcome toxicity (True/False)
* In enterohepatic circulation, reactivated metabolites comes from the metabolism via enzymes other than CYP P450 (True/False)
* Drug A is hydrophobic in nature and having high plasma proteins binding are likely to distributed effectively to the target organ (True/False)
* A patient has some allergic reactions to the drug A, for avoiding any adverse reaction he administered Drug B with same desired properties, both of the drugs are therapeutically equivalent (True/False)
* Different dosage forms of same therapeutic class of drug will always effect the time to achieve peak plasma concentration (True/False)
* In case of drug action, preliminary bonding of drug with specified receptor will always lead to alteration of receptor’s structure (True/False)
* Mechanistically, every drug can illicit its action via enzymes, ion channels, transporters, receptors (True/False)
* As compared to other receptors, intracellular receptors take long for initiating its effect (True/False)
* Depending upon the nature of ligand, majority of drugs interact with receptors that are present across the cell membrane (True/False)
* Various subunits of second messenger system of G-proteins is always linked other receptors i.e. intracellular receptors, enzymes or ion linked channels (True/False)