**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 the given questions

1. A drug X is a large protein molecule. Its action on cholinergic transmission depends on an intracellular action within nerve endings. Which one of the following processes is best suited for permeation of very large protein molecules into cells?
2. Aqueous diffusion
3. Endocytosis
4. First-pass effect
5. Lipid diffusion
6. Special carrier transport
7. Which of the following cytochrome isoforms is responsible for metabolizing the largest number of drugs?
8. CYP1A2
9. CYP2C9
10. CYP2C19
11. CYP2D6
12. CYP3A4
13. Drug metabolism in humans usually results in a product that is
14. Less lipid soluble than the original drug
15. More likely to distribute intracellularly
16. More likely to be reabsorbed by kidney tubules
17. More lipid soluble than the original drug
18. Less water soluble than the original drug
19. All the statements are correct, Except
20. PK determines the beginning, extent, and strength of a drug’s effect
21. Interaction of drug and receptor effect is studied in PD
22. Idiosyncratic reactions sometimes occurs due to genetic changes
23. Various doses, dosage form and frequency is adjusted in pharmacogenomics
24. By considering the properties passive diffusion, which one is not correct
25. Aqueous soluble drugs cannot move easily across cell membrane
26. Drug move inside body by sensing the concertation change
27. Transporter overload is sometimes involve
28. No specific drug structure is necessary
29. A patient is administered with drug A started toxic reaction but that drug is slowly metabolized by enzymes, what should be administered to reduce the toxicity
30. Cimetidine
31. Phenobarbital
32. Grapefruit juice
33. None of the above
34. In enterohepatic circulation, reactivated metabolites after metabolism belongs to
35. Phase I
36. Phase II
37. Both phases
38. Enzymes other than CYP P450
39. Drugs can be effectively distributed to an organ when it have properties like
40. Highly perfused capillaries
41. High plasma proteins binding
42. Hydrophobicity of drugs
43. Both a. and c.
44. All of the above
45. A patient has some hypersensitivity to the drug A, for avoiding any adverse reaction he administered Drug B with same desired properties, both of the drugs are \_\_\_\_\_\_\_\_\_\_\_\_\_\_
46. Bioequivalent
47. Therapeutic equivalent
48. Bio-inequivalent
49. None of the above
50. There are two dosage forms of same therapeutic class of drug, one is simple tablet and other is enteric coated, the later one will affect the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ drug
51. Half-life
52. Elimination
53. Bioavailability
54. All of the above
55. Alteration in biological function is always secondary step to\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
56. Drug action
57. Drug effect
58. Both a. and b.
59. The above statement is incorrect
60. Which of the following statement is not true
61. Mechanistically, every drug can illicit its action via enzymes, ion channels, transporters, receptors
62. Majority of drugs show its effects by interacting with its target biomolecules
63. The targeted biomolecules for initiating drug action are proteins in nature
64. Mechanism of drug action always depends on its selectivity
65. Which of the following is linked directly/ indirectly to the flow of ions across cell membrane
66. Enzyme linked receptors
67. Ligand-gated ion channels
68. Intracellular receptors
69. G-protein coupled receptors
70. Both b. and d.
71. Signals to the skeletal muscles are controlled by
72. G-protein receptors
73. Second messenger system only
74. Nicotinic receptors
75. None of the above
76. Which receptor require preliminary formation of ligand bonding that lead to moveable complex
77. Enzyme linked receptors
78. Ligand-gated ion channels
79. Intracellular receptors
80. G-protein coupled receptors

Q2. Select and highlight Ture/False for given statements

1. Clinical pharmacology includes the investigation, in terms of pharmacokinetic and pharmacodynamic parameters in various form of subjects (True/False)
2. Drugs having lipophilicity with greater extend will circulate for long period of time inside the body, hence will have prolong half-life (True/False)
3. In metabolism process, introducing the polar functional group into drug molecule may decrease its pharmacological activity (True/False)
4. Despite of lipid solubility of ligand the slowest signal transmission and processing occur through intracellular receptors (True/False)
5. Drugs having limited aqueous solubility and poor membrane permeability are mostly preferred to be administered via intravascular route (True/False)
6. Passive diffusion is the most common mechanism for drug absorption because of concentration gradient, no carrier transportation and saturability, along with appropriate drug structure (True/False)
7. It is not necessary that every drug will follow the same path for metabolism, it is only determined by the type of drug or chemical nature (True/False)
8. After efficient metabolism, drugs can be equally eliminated from body through urine and feases (True/False)
9. Bioavailability of a drug administered via oral route is the ratio of the AUC for oral administration compared with the AUC for IV injection (True/False)
10. In every scenario and class of drug, when the plasma concentration is declined to half then its effect will also be demolished according to plasma concentration (True/False)
11. Distribution of drug into body compartment is determined in terms of drug nature, molecular weight and plasma proteins binding (True/False)
12. All drugs that are used for treatment of any type of disease do not impart new function to our body (True/False)
13. In case of transporters, substrate can be facilitated across cell membrane in/against the direction of concentration gradient (True/False)
14. As compared to other receptors, intracellular receptors take long for initiating its effect (True/False)
15. Depending upon the nature of ligand, majority of drugs interact with receptors that are present across the cell membrane (True/False)