End Semester Theory Examination MCQs- PCE-BP604T

* This form will record your name, please fill your name.

[   ]

1. In one compartment open model the term **open** indicates input and output is :
(1 Point)

◯ Bidirectional

◯ Unidirectional

◯ None of the above

◯ Non-directional

2. Unit for tissue perfusion rate is ......
(1 Point)

◯ 2. Volume/ volume

◯ 3. Volume/ weight/ time

◯ 1. Volume/ time

◯ 4. Volume/ time/ volume

3. Rate of drug excretion by kidney is calculated as ....
(1 Point)

    ○ 2. Rate of filtration + Rate of secretion – Rate of reabsorption

    ○ 1. Rate of filtration – Rate of secretion – Rate of reabsorption

    ○ 4. Rate of filtration – Rate of secretion + Rate of reabsorption

    ○ 3. Rate of filtration + Rate of secretion + Rate of reabsorption

4. Time required to reach steady state is determined by
(1 Point)

    ○ Absorptionrate constant

    ○ Elimination rate constant

    ○ All

    ○ Distribution rate constant

5. Non linear Pharmacokinetics is also callled as
(1 Point)

    ○ All of the above

    ○ Capacity limited

    ○ Mixed order

    ○ Saturated kinetics

6. In Michaelis- Menten equation,when the value of Km = C
   (1 Point)

   ○ The rate of process is half the maximum rate

   ○ The rate of process is double the maximum rate

   ○ The elimination of most drugs follows first order kinetics

   ○ The elimination of most drugs follows zero order kinetics

7. Thebioavailability of a drug from various dosage forms increases in the following order:

   (1 Point)

   ○ 1. Capsules - Coated tablets -Enteric coated tablets - Sustained release tablets

   ○ 2. Coated tablets - Solutions - Sustained release tablets - Capsules -

   ○ 3. Tablets - Capsules – Suspensions - Solutions

   ○ 4. Solutions - Emulsions - Suspensions - Capsules

8. When the parent compound and/or its metabolites induce physiological changes in the
   animal that can alter thebioavailability of the product administered in Period 2, the
   bioequivalence study design to be followed is ------------
   (1 Point)

   ○ 3. Parallel study design

   ○ 1. Crossover study design

   ○ 4. Sequential study design

   ○ 2. Replicate study design

9. Chemical equivalence is defined as ....
   (1 Point)

   ○ 4. Two or more drug products contain the same labelled chemical substance giving a different therapeutic effect

   ○ 3. Two or more drug products contain different labelled chemical substance giving the same therapeutic effect

   ○ 1. Two or more drug products contain the same labelled chemicalsubstance in the same amount

   ○ 2. Two or more drug products contain the same labelled chemical substance in different quantity

10. Nature of absorption for acidic drugs with pKa >8 in GI tractis as follows; ----------
    (1 Point)

    ○ 1. Poor absorption

    ○ 3. Absorption only in intestine

    ○ 4. Rapid and independent of GI pH

    ○ 2. Absorption only in stomach

11. In a two compartment model which organ comprises the central compartment?
    (1 Point)

    ○ Adipose

    ○ Liver

    ○ Skin

    ○ Muscles

12. In Fick's law equation for diffusion, $dQ/dt = [DA \, K \, m/w(CGIT - C)]/ \, h$, A represents ………
(1 Point)

○ 4. Surface area of the dissolving solid

○ 2. Surface area of the absorbing membrane

○ 1. Surface area of the drug particle

○ 3. Surface area of the stagnant layer

13. Drugs having------half-lives take a shorter time to reach steady state plasma concentration
(1 Point)

○ Intermediate

○ Shorter

○ None of the above

○ Longer

14. Which of the following is a correct statementabout Non linear Pharmacokinetics?
(1 Point)

○ The plasma drug concentration changes either more or less than would be expected from a change in dose rate.

○ The pharmacokinetic parameters of a drug willnot change when multiple doses of drug are administered.

○ All of the above

○ The graph of the relationship between dose and blood plasma concentration gives a straight line

15. The in vitro dissolutionrate constant is compared with in vivo absorption rate constant indicates -----------in vitro in vivo correlation level.
(1 Point)

○ 4. Level B

○ 2. Level D

○ 1. Level C

○ 3. Level A

16. Which approach is based on the Statistical Moment Theory?
(1 Point)

○ Two Compartment

○ One Compartment

○ Non Compartment

○ Multi Compartment

17. Cyclodextrins improve the solubility of hydrophobic drugs byformation of ....
(1 Point)

○ 2. Molecular dispersion

○ 1. Inclusion complexes

○ 3. Micelle with hydrophobic core

○ 4. In situ salt

18. BCS class _____ drugs show poor absorption in GI tract
(1 Point)

○ 3. Class IV

○ 1. Class II

○ 2. Class I

○ 4. Class III

19. In a two compartment model $C = Ae^{-at} + Be^{-bt}$, the term 'a' represents
(1 Point)

○ None

○ Distribution phase

○ Elimination phase

○ Absorption phase

20. Reason for caking in cortisone acetate suspension during storageperiod is ......
(1 Point)

○ 4. Change from low to high energy state

○ 3. Change of amorphous to crystalline form

○ 1. Polymorphic change

○ 2. Change in crystallinity

Microsoft Forms

BPharm Semester VI End Semester Examination July 2021

PCE-BP604T: Biopharmaceutics and Pharmacokinetics (Theory)

Date:30.07.2021	Duration: 2 hrs	Max. Marks 50

Instructions: Answer ALL questions.

II Short Answers	**6 Q × 5 marks = 30 marks**

Question	Evaluation by
1. Briefly explain carrier mediated absorption and its characteristics. Name two types of carrier mediated absorption process and mention the major difference between them.	MLR
2. Write short note on measurement of bioavailability by urinary excretion studies.	MLR
3. What is the importance of the pharmacokinetic parameters (i) half- life (ii) volume of distribution and (iii)AUC?	SL
4. Write two differences between one compartment and two compartment open model. Highlight the advantages and disadvantages of physiological pharmacokinetic model.(2+3)	SL
5. Explain the measures taken for scheduling of multiple dosage regimen.	SL
6. Describe the importance of non-linear pharmacokinetics with suitable examples.	SL