

**(Bio-pharmaceutics & Pharmacokinetics Question Bank SEM-VI)**

**THIRD YEAR B.PHARM (SEM-VI) CBCS SYLLABUS**

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**Q.1** .....is defined as rate and extent of drug absorption.

- a. Bioavailability
- b. Bioequivalence
- c. drug disposition
- d. absorption

**Q.2.** The movement of drug from one compartment to other compartment is referred as...

- a. Bioavailability
- b. drug distribution
- c. drug disposition
- d. absorption

**Q.3.** Passive transport process involve all except.....

- a. Passive diffusion
- b. Pore transport
- c. ion-pair transport
- d. Antiport

**Q.4.** Facillated diffusion is also known as.....

- a. Active diffusion
- b. mediated diffusion
- c. ion-pair transport
- d. Symport

**Q.5.** ..... is active transport process

- a. Persorption
- b. Pinocytosis
- c. Phagocytosis
- d. ion-pair transport

**Q.6.** BCS Class III have....

- a. Low solubility & Low permeability
- b. High solubility & low permeability
- c. Low Solubility & High permeability
- d. High solubility & high permeability

**Q.7.** Equation for zero order half life is.....

- a.  $t_{1/2} = 0.5 A_0/k_0$
- b.  $t_{1/2} = 2A_0/k_0$
- c.  $t_{1/2} = 1.5 A_0/k_0$
- d.  $t_{1/2} = 0.693 A_0/k_0$

**Q.8.** Equation for first order half life is.....

- a.  $t_{1/2} = 0.5 A_0/k_0$
- b.  $t_{1/2} = 2A_0/k_0$
- c.  $t_{1/2} = 1.5 A_0/k_0$
- d.  $t_{1/2} = 0.693/k$

**Q.9.** In cell uptake studies use of peristaltic pump is required for.....

- a. Single pass perfusion
- b. Everted Sac Technique
- c. Doluisio method
- d. Everted Ring Technique

**Q.10.** Blood brain barrier consist of specialized cells except.....

- a. Astrocytes
- b. Endoblasts
- c. Pericytes
- d. Endothelial cells

**Q.11.** Formula for volume of distribution is.....

- a.  $V_d = C/X$
- b.  $V_d = X/C$
- c.  $V_d = K_e/X$
- d.  $V_d = K_e/C$

**Q.12.** Resident time for large intestine is.....

- a. 2 hrs
- b. 6-12 hrs
- c. 4 hrs
- d. 3 hrs

**Q.13.** Intestinal transit time for Duodenum is.....

- a. 0.5 to 1 hrs
- b. 3 to 6 hrs
- c. 2 hrs
- d. 5 minute

**Q.14.** Majority of drug that binds to extravascular tissues, the order of binding is

- a. Liver>Kidney>Lung>Muscles
- b. Lung>Liver>Kidney>Muscles
- c. Liver> Lung >Kidney >Muscles
- d. Liver>Kidney> Muscles>Lung

**Q.15.** Which of this is not phase II reaction

- a. Acetylation
- b. Methylation
- c. Hydrolysis of esters
- d. Conjugation of glucuronic acid

**Q.16.** Clearance is defined as the ration of.....

- a. Elimination rate/Plasma drug Concentration
- b. Plasma drug Concentration/ Elimination rate
- c.  $V_d/AUC$
- d.  $AUC/V_d$

**Q.17.** The beginning of pharmacological response is called as....

- a. Onset time
- b. Duration of action
- c. Onset of action
- d. Intensity of action

**Q.18.** Which of this is model independent approach of pharmacokinetics....

- a. Mammillary model
- b. Perfusion model
- c. Distributed parameter model
- d. Noncompartmental analysis

**Q.19.** Absorption rate constant can be calculated by ....

- a. Method of residuals
- b. Sigma minus method
- c. Model independent method
- d. Noncompartmental analysis

**Q.20.** First order pharmacokinetic model equation is ....

- a.  $\text{Log}C = \text{Log}C_0 - K_{Et}/2.303$
- b.  $\text{Log}C = \text{Log}C_0 - K_E/2.303$
- c.  $\text{Log}X = \text{Log}C_0 - K_{Et}/2.303$
- d.  $\text{Log}C_0 = \text{Log}C - 2.303/K_{Et}$

**Q.21.** Bioavailability is generally in the order of.....

- a. Oral > Parenteral > Rectal > Topical
- b. Parenteral > Oral > Topical > Rectal
- c. Oral > Parenteral > Topical > Rectal
- d. Parenteral > Oral > Rectal > Topical \

**Q.22.** Flow through cell belongs to which type of USP apparatus ....

- a. USP type 1
- b. USP type 2
- c. USP type 4
- d. USP type 3

**Q.23.** ..is used for molecular inclusion complexation for solubility enhancement of drugs

- a. Sodium Lauryl sulphate
- b. Cyclodextrine
- c. CMC
- d. HPMC

**Q.24.** IV bolus dose of 200 mg given by IV. Following one compartment kinetics described by equation  $C = e^{-0.91t}$ . Claculate CIT, Vd.

- a. 0.0173 ml/min, 1.44 ml
- b. 0.0273 ml/min, 2.5 ml
- c. 0.0785 ml/min, 3.22ml
- d. 0.0673 ml/min, 4.44 ml

**Q.25.** IV bolus dose of 25mg given by IV. Following one compartment kinetics having half life is 36 hrs and volume of distribution is 27000 lt. Claculate CIT, C<sub>0</sub>.

- a. 8640 ml/min, 0.00092 mg/lit
- b. 5220 ml/min, 0.92 mg/lit
- c. 8520 ml/min, 0.92 mg/lit
- d. 5220 ml/min, 0.092 mg/lit