University of Mumbai

Examination 2020 under cluster ___ (Lead College Short name)

Program: Biotechnology Engineering
Curriculum Scheme: Rev2016
Examination: Third Year Semester V
Course Code: BTE5014 and Course Name: Pharmaceutical Technology
Time: 1 hour Max. Marks: 50

For the students:- All the Questions are compulsory and carry equal marks .

Q1.	Which of the following statements best describes a lead compound?
Option A:	A compound that contains the element lead
Option B:	A compound from the research laboratory that is chosen to go forward for pre-clinical and clinical trials
Option C:	A molecule that shows some activity or property of interest and serves as the starting point for the development of a drug.
Option D:	The first compound of a structural class of compounds to reach the market.
Q2.	Which part of Cinchona plant is used to obtained Quinine
Option A:	Bark
Option B:	Roots
Option C:	Flower
Option D:	Leaves
Q3.	The use of antibiotics that inhibit or inactivate cellular ribosomes will result directly in the loss of which of the following functions:
Option A:	DNA replication
Option B:	Protein synthesis
Option C:	ATP production
Option D:	Cell division
Q4.	What is the opioid of choice for intrathecal infusion for pain relief at the end of life?
Option A:	Morphine
Option B:	Fentanil

Option C:	Oxycodone
Option D:	Diamorphine
Q5.	The interaction between highly electron-deficient hydrogen and highly electro-negative atom is called
Option A:	Covalent bond
Option B:	Ionic bond
Option C:	Dipole-dipole interaction
Option D:	Hydrogen bond
Q6.	Primary organ involved in drug metabolism is
Option A:	Liver
Option B:	kidney
Option C:	plasma
Option D:	lungs
Q7.	Which of the following is true based on the strength of the bond?
Option A:	Ionic > Covalent > Vanderwaal > Hydrogen
Option B:	Covalent > Ionic > Vanderwaal > Hydrogen
Option C:	Covalent > Ionic > Hydrogen > Vanderwaal
Option D:	Covalent > Ionic > Hydrogen = Vanderwaal
Q8.	Among anticancer antibiotics: most toxic is
Option A:	plicamycin (Mithramycin)
Option B:	dactinomycin (Cosmegen)
Option C:	doxorubicin (Adriamycin)
Option D:	bleomycin (Blenoxane)

Q9.	What is the mechanism of Action of Methotrexate
Option A:	It block thymidine synthetase
Option B:	It block DHFR
Option C:	It block Topoisomerase
Option D:	It block DNA Polymerase
Q10.	What is meant by ADME in pharmacokinetics?
Option A:	Affinity, dosage, marketing, efficacy
Option B:	Absorption, distribution, metabolism, excretion
Option C:	Agonism, dependence, mobility, efficiency
Option D:	Antagonism, deficiency, mean, efflux
Q11.	Which is the major process of absorption for more than 90% of drugs?
Option A:	Facilitated diffusion
Option B:	Active transport
Option C:	Endocytosis
Option D:	Passive diffusion
Q12.	Which of the following protease inhibitors was developed by a hybridisation strategy?
Option A:	Ritonavir
Option B:	Indinavir
Option C:	Saquinavir
Option D:	Amprinavir
Q13.	What is bioequivalence?
Option A:	Comparison between 3-year-old drugs to the same new drug
Option B:	Comparison between drugs to another drug
Option C:	Comparison between a drug's specific characteristics to a defined set of standards

Option D:	Comparison between two or 3 characteristics of a drug to the same characteristics of a different drug
Q14.	Which of the following terms is used to describe the dose of a drug required to produce a measurable effect in 50% of the animals tested?
Option A:	LD 50
Option B:	LD 1
Option C:	ED 50
Option D:	ED 99
Q15.	What is total systemic clearance?
Option A:	Sum of clearance from kidney
Option B:	Sum of clearance from kidney and liver
Option C:	Sum of clearance form non-renal clearances
Option D:	Sum of renal and non-renal clearances
Q16.	What do you mean by a randomized design?
Option A:	The subjects do not know which study treatment they receive
Option B:	Patients injected with placebo and active doses
Option C:	Randomly assigning subjects either for placebo or active dose
Option D:	Signed document of the recruited patient for the clinical trial procedures
Q17.	Which one of the following is the last step of a clinical trial process?
Option A:	Investigator selection
Option B:	Patient recruitment
Option C:	Statistical Analysis
Option D:	Data filed and registration
Q18.	Which of the following statements best describes the role of proteins as therapeu-

	tic targets?
Option A:	Very few drugs exert their effects by interacting with proteins.
Option B:	Drugs targeting enzymes usually activate their target protein.
Option C:	Drugs often work by enhancing the binding of an enzyme's substrate.
Option D:	Drugs targeting proteins are often very specific and can be less likely to produce side effects.
Q19.	Which of the following statements is accurate in explaining why Gram negative bacteria are generally more resistant to penicillins than Gram positive bacteria
Option A:	Gram negative bacteria have a thicker cell wall
Option B:	Gram negative bacteria have an outer hydrophilic membrane that acts as an extra barrier
Option C:	Gram negative bacteria can concentrate β-lactamase enzymes in the periplasmic space
Option D:	Gram negative bacteria produce smaller quantities of transpeptidase enzyme
Q20.	What is the characteristic of delayed transit and continuous release systems?
Option A:	a) Release the drug along the entire length of GIT
Option B:	b) Prolonged their residence in the GIT and release
Option C:	c) Release only at a specific drug
Option D:	d) Release as soon as comes in contact to the saliva
Q21.	What is the mode of action of the anticancer agent calicheamicin
Option A:	Alkylating agent
Option B:	Antisense agent
Option C:	Chain cutter
Option D:	Topoisomerase poison
Q22.	What is the characteristic of encapsulation or coating dissolution-controlled release systems?
Option A:	a) Microencapsulation using slowly dissolving materials

Option B:	b) Prolonged their residence in the GIT and release
Option C:	c) Release only at a specific drug
Option D:	d) Employ waxes to control the rate of dissolution
Q23.	Which of the is a fat soluble hormone?
Option A:	a) Amine hormone
Option B:	b) Peptide hormone
Option C:	c) Thyroid hormone
Option D:	d) Protein hormone
Q24.	Which of the following statements is false regarding the characteristics of a good protein target for antiviral drugs?
Option A:	It should be important to the life cycle of the virus
Option B:	It should bear little resemblance to human proteins
Option C:	It should be common to different types of virus
Option D:	It should be important in the late stages of the virus life cycle
Q25.	Which of the following inhibits angiogenesis
Option A:	VEGF
Option B:	FGF-2
Option C:	Angiostatin
Option D:	IL-6