

M.TECH. DEGREE EXAMINATIONS: OCTOBER / NOVEMBER – 2008

Third Semester

BIOTECHNOLOGY

P07BTE33: Pharmaceutical Biotechnology

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions: -

PART A (20 x 1 = 20 Marks)

1. Who is the father of Pharmaceutical Biotechnology?
 - a) Rudolf Buchheim
 - b) Oswald Schmiedeberg
 - c) J. Langley
 - d) P. Ehrlich

2. The name assigned for a drug by the manufacturer is called as
 - a) Chemical name
 - b) Non proprietary name
 - c) Proprietary name
 - d) Official name

3. Science and activities relating to the detection, arrangement and prevention of adverse effects is defined as
 - a) Pharmacokinetics
 - b) Pharmacodynamics
 - c) Pharmacovigilance
 - d) Pharmacogenomics

4. A drug development based on genomics requires a minimum of _____ years
 - a) 10 years
 - b) 50 years
 - c) 20 years
 - d) 5 years

5. Systemic routes of a drug administration includes
 - a) Topical
 - b) Arterial supply
 - c) Oral
 - d) Deeper tissues

6. Which one of the following dilutes the drug and retards the absorption
 - a) Food
 - b) pH
 - c) Barriers
 - d) Temperature

7. Apparent volume of distribution of drugs (V) is equal to
 - a) Dose administered I.V / Plasma Concentration
 - b) Plasma concentration / Dose administered I.V
 - c) Dose administered I.V / Concentration of the drug
 - d) Concentration of the drug / Dose administered I.V

8. The most important channel of excretion of drug is through
 - a) Faeces
 - b) Kidney
 - c) Exhaled air
 - d) Saliva and sweat

9. Volatile liquids and gases are given by _____ for systemic action.
 - a) Parenteral
 - b) Cutaneous
 - c) Nasal
 - d) Dermoget

10. Which one of the following contain a number of other materials like diluents, stabilizers, binders etc.
- | | |
|-------------|-------------------------|
| a) Aerosols | b) Tablets and Capsules |
| c) Syrups | d) Emulsions |
11. Aerosols are the colloids of ----- materials.
- | | |
|--------------------|-------------------|
| a) Liquid – liquid | b) Solid – liquid |
| c) Solid – Gas | d) Liquid – Gas |
12. Pharmacokinetics deals with -----
- | | |
|------------------------------|----------------------------|
| a) Protein metabolism | b) Enzyme action |
| c) Protein end enzyme action | d) Carbohydrate catabolism |
13. Transdermal therapeutic systems use drugs in the form of
- | | |
|------------|--------------|
| a) Tablets | b) Ointments |
| c) Syrups | d) Aerosols |
14. Which one of the following drug can be administered by pellet implantation
- | | |
|-----------------|-------------------|
| a) Testosterone | b) Contraceptives |
| c) Antibiotics | d) Analgesics |
15. Liposomes are created by sonicating ----- in water.
- | | |
|------------------|-----------------|
| a) Phospholipids | b) Lipoproteins |
| c) Cholesterol | d) Glycolipids |
16. The most common drug targets of currently marketed one include
- | | |
|-----------------------|-----------------|
| a) DNA | b) Lipoproteins |
| c) Gated ion channels | d) mRNA |
17. An example for β -adrenergic blockers is
- | | |
|-----------------|--------------------|
| a) Thiocyanates | b) Corticosteroids |
| b) Perchlorates | d) Androgens |
18. The selective diminution of activity of specialized cells by drugs is called as
- | | |
|---------------------|---------------|
| a) Stimulation | b) Depression |
| c) Cytotoxic action | d) Irritation |
19. In a dose response curve, the upper limit is the index of
- | | |
|-----------------|------------------|
| a) Drug potency | b) Drug efficacy |
| c) Drug effect | d) Drug action |
20. Noscaphine used in the treatment for cough is
- | | |
|-------------------|--------------------|
| a) Nonopioids | b) Opioids |
| c) Antihistamines | d) Bronchodilators |

PART B (5 x 16 = 80 Marks)

- 21.(a) Write an essay on the development of drugs. Add a note on pharmaceutical industry in drug development.

(OR)

21.(b) What is GMP? Write in detail about GMP & the Quality management in pharmacy.

22.(a) How are drugs absorbed and distributed in the human body. Illustrate with neat sketch.

(OR)

22. (b) i. Elaborate the mechanism of excretion of drugs. (10)

ii. List out the various factors affecting the ADME process (6)

23. (a) Describe about the liquid dosage forms of drugs with suitable examples.

(OR)

23 (b) Describe about the solid dosage forms of drugs with suitable examples.

24.(a) Give a detailed account on transdermals and controlled release of drug delivery system.

(OR)

24.(b) i. What do you mean by drug targeting? (6)

ii. How are liposomes used for better drug delivery? (10)

25.(a) Define Pharmacodynamics. Explain in detail about drug action mediated by receptors.

(OR)

25.(b) Elaborate the role of antibiotics and hormones as therapeutics with suitable examples.

