

Register Number.....

B.TECH. DEGREE EXAMINATIONS: APRIL/MAY 2012

Sixth Semester

BIO TECHNOLOGY

BTY117: Biopharmaceutical Biotechnology

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 1 = 10 Marks)

1. Which of the following drugs is an antihypertensive agent?
a. Ketamine b. Diazoxide c. Cimetidine d. Acyclovir
2. Acetaminophine used as _____
a. Analgesic b. Antiulcer c. Anti-inflammatory d. antihypertensive
3. There are some drugs that are highly lipid-soluble, and they are transported in the aqueous solutions of the body on
a. Minerals b. RBCs c. carrier proteins d. vitamins
4. Very hydrophilic drugs are poorly absorbed because of their inability to
a. Chemical stability b. Cross the water channels in cell membranes
c. Cross through carrier mediated d. Cross the lipid-rich cell membranes
5. One of the following element contribute to the safe manufacture of quality in pharmaceutical industry
a. New regulatory frame work which assures the establishment & maintance
b. specific purified material utilized in the manufacturing process
c. the design and layout of the manufacturing facility
d. Not required training & commitment of personal
6. Biopharma manufacturing room, floors and walls can be coated with durable chemical resistant materials
a. PVC coating or polyester b. antibacterial & antifungal painting
c. a & b d. silver coating
7. The dissolution rate of drugs from tablets may be increased by:
a. Increasing the compression stress during tableting.
b. Increasing the concentration of lubricant.
c. Increasing the concentration of disintegrant.
d. Film-coating tablets with ethylcellulose

8. Effervescent granules are prepared by
a. dry or fusion method b. wet method c. fusion & wet method d. dry or wet method
9. Insulin and glucagon are antagonistic hormones because they increase and decrease:
a. calcium; b. potassium; c. glucose; d. cell metabolism
10. Which one of the following statements is correct regarding somatic gene therapy?
a. It is suitable for multi-gene diseases.
b. It involves inserting genes into gametes so that they are passed on to the next generation.
c. Genes are inserted into body cells, but the benefits do not transfer to the next generation.
d. It has generated serious ethical concerns.

PART B (10 x 2 = 20 Marks)

11. Name a few historical based drugs derived from plant sources
12. What are the points that are ensured by FDA during the clinical trial of the drug?
13. Define therapeutically equivalence
14. What are the four major receptor families?
15. What do you mean by good manufacturing practice?
16. What are the different sources of biopharmaceuticals with examples?
17. What are the advantages of liquid dosage forms?
18. Name different types of solid dosage forms.
19. Difference between polyclonal and monoclonal antibodies.
20. Write any four clinical uses of gene therapy

PART C (5 x 14 = 70 Marks)

21. a) (i) Write a detailed note on drug standards (United states pharmacopeia & Indian Pharmacopeia) (7)
- (ii) What are the regulatory aspects in the pharmaceutical industry? (7)
- (OR)**
- b) (i) What is the role of FDA? (3)
- (ii) Explain New drug application for approval process in detail. (11)

22. a) Write a detail account on pharmacokinetics (ADME) process.

(OR)

b) Write a note on principles of drug action. Describe the mechanism of drug action.

23. a) How the final products are produced in the biopharmaceutical industry and explain upstream and downstream in detail?

(OR)

b) What are the drug manufacturing process? Elaborate special manufacturing facilities.

24. a) Explain the different forms of capsule including capsule preparation methods.

(OR)

b) Write short note on semisolid dosage forms and explain the transdermal drug delivery system with its advantages and disadvantages.

25. a) (i) What is vaccine? (3)

(ii) Give a detailed account on attenuated, inactivated bacterial, viral vaccine and their clinical uses. (11)

(OR)

b) (i) Write short note on gene therapy. (2)

(ii) Basic approach, vectors used in gene therapy. (7)

(iii) Clinical uses of gene therapy. (5)
