

**B.TECH. DEGREE EXAMINATIONS: APRIL/MAY 2012**

Eighth Semester

**BIO TECHNOLOGY**

U07BTE18: Biopharmaceutical Technology

**Time: Three Hours**

**Maximum Marks: 100**

**Answer All Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Bhusmas used in  
(a) Ayurveda      (b) Unani      (c) Siddha      (d) Homeopathy
2. FDA was founded in the year  
(a) 1989      (b) 1930      (c) 1976      (d) 1943
3. In phase II reaction \_\_\_\_\_ conjugates will be formed.  
(a) Highly polar  
(b) Readily excretable  
(c) Pharmacologically inert  
(d) Highly polar, readily excretable & pharmacologically inert
4. Pharmacodynamics involves the study of following EXCEPT:  
(a) Biological and therapeutic effects of drugs  
(b) Absorption and distribution of drugs  
(c) Mechanisms of drug action  
(d) Drug interactions
5. Papaver somniferum produces  
(a) Quinine      (b) Reserpine      (c) Morphine      (d) Taxol
6. Which one of the following is a peptide antibiotic?  
(a) Bacitracin      (b) Tetracycline      (c) Cephalosporin      (d) Streptomycin
7. Drug capable of inhibiting cyclo oxygenase system  
(a) Aspirin      (b) Atropine      (c) Codeine      (d) Taxol
8. \_\_\_\_\_ was approved for use in the treatment of ovarian cancer by USFDA in 1992.  
(a) Reserpine      (b) Atropine      (c) Taxol      (d) Aminophylline
9. Most commonly used source for the production of recombinant therapeutic agents is  
(a) *E. coli*      (b) CHO cell lines      (c) Mammalian cells      (d) BHK cell lines
10. Which one of the following interleukin is known as T cell growth factor?  
(a) Interleukin-2      (b) Interleukin-3      (c) Interleukin-6      (d) Interleukin-8

**PART B (10 x 2 = 20 Marks)**

11. Define prodrug.
12. What are orphan drugs?
13. Why are mono oxygenases also called mixed function oxidases?
14. Mention the characteristics of moieties involve in real drug detoxification pathways.
15. Write any two major clinical uses of native prostaglandins.
16. List out the plants that produce aspirin.
17. Differentiate between ointments and creams.
18. List any four preservatives used in pharmaceutical preparations.
19. Delineate isophane insulin.
20. What are vaccines? Give any two examples for bacterial vaccine.

**PART C (5 x 14 = 70 Marks)**

21. a) Discuss the current scenario of various medicinal systems in India.  
(OR)  
b) Give a brief account on regulatory aspects of pharmaceutical industries.
  
22. a) (i) Describe the mechanisms of drug absorption. (7)  
(ii) Explain in detail the cytochrome P<sub>450</sub> system. (7)  
(OR)  
b) Elaborate on various conjugation reactions of drug metabolism.
  
23. a) Give a brief account on pharmaceuticals of plant and animal origin.  
(OR)  
b) How is sequencing of human genome and related developments impacted drug discovery? Discuss.
  
24. a) Discuss in detail the following:  
(i) Types of tablet coating (8)  
(ii) Wet granulation (6)  
(OR)  
b) Give a brief account on  
(i) Oral liquids (8)

(ii) Preservation of drugs (6)

25. a) Explain the production and purification of recombinant insulin.

**(OR)**

b) Discuss in detail:

(i) Difficulties associated with AIDS vaccine development (5)

(ii) Types, specific characteristics and mode of action of adjuvants (9)

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