

**H 1325**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Sixth Semester

Industrial Biotechnology

IB 042 — BIOPHARMACEUTICAL TECHNOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the differences between flocculated and deflocculated suspensions?
2. What is microencapsulation?
3. What is aseptic filling?
4. What are antitussives? Classify with examples.
5. What is creaming of an emulsion? How can it be controlled?
6. What are the steps involved in sugar coating of tablets?
7. What are the advantages of water-soluble ointment bases? Give some examples of this class of bases.
8. Give appropriate examples of :
  - (a) Carboxylation
  - (b) Esterification.
9. Classify laxatives — give examples of each class.
10. What is?
  - (a) Apparent volume of distribution
  - (b) Renal clearance.



(b) Discuss the following :

(i) Drug Bioequivalence

(ii) Drug Excretion

Given that a 400 mg dose of ampicillin was administered as IV injection. The following data was obtained :  $C_p$  2 hrs = 4.5 mg/l,  $C_p$  6 hrs = 3.7 mg/l. Calculate

(1)  $K_{el}$

(2)  $t_{1/2}$

(3)  $V_d$ .

15. (a) Define – sustained release, prolonged release, controlled release and targeted dosage forms. What are the various methods used to obtain sustained release.

Or

(b) Write briefly about :

(i) Transdermal preparations

(ii) Flouroquinolones

(iii) Sources of drugs

(iv) GMP.