

Total No. of Questions - 9]
(1113)

Total Pages : 3

1841

Bachelor of Pharmacy VIIth Semester Examination

HBP-401 : PHARMACEUTICAL BIO-TECHNOLOGY

Time : Three Hours]

[Maximum Marks : 80

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *five* questions in all, selecting *one* question each from Sections A, B, C and D. Section E is compulsory.

SECTION-A

1. (a) How Typhoid vaccine prepared, standardized and stored ?
(b) Highlight production and standardization of Small-pox vaccines. 8+8

2. Write short notes on :
 - (a) Cellular humoral immunity.
 - (b) Passive immunization.
 - (c) Toxins. 6+6+4

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SECTION-B

3. Enumerate the production of Humulin by recombinant DNA technology. 16
4. Explain the techniques of gene cloning with their applications. 16

SECTION-C

5. (a) Highlight the design and control of an ideal fermenter.
- (b) Soil is a rich source of antibiotics producing organisms. Explain. 8+8
6. (a) Enumerate the methods used for the estimation of antibiotic spectrum.
- (b) How tetracyclines isolated from fermentation ? 8+8

SECTION-D

7. (a) Enumerate factors effecting enzyme kinetics.
- (b) Explain amylase immobilization methods. 8+8
8. (a) Highlight design of biotransformation process.
- (b) Explain the role of steroids in the improvement of biotransformation process. 8+8

SECTION-E

(Compulsory Question)

9. Briefly discuss the following :
- (a) Immobilization of Plant cells.
- (b) Hyaluronidase.
- (c) Antigens.
- (d) Immune system.
- (e) Monoclonal antibodies.
- (f) Humulin.
- (g) Diphtheria vaccine.
- (h) Sterility test for vaccines. 2×8=16