



SB-1162

Third Year B. Pharm. Examination

March / April – 2011

PH - 302 : Pharmaceutical Biotechnology

Time : 3 Hours]

[Total Marks : 70

Instruction :

नीचे दृशविले निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="T. Y. B. Pharm."/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="PH - 302 : Pharmaceutical Biotechnology"/>	<input type="text"/>
Subject Code No. : <input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="2"/>	Section No. (1, 2,.....) : <input type="text" value="1&2"/>
	<input type="text" value="Student's Signature"/>

SECTION - I

- 1 Answer any **five** : 10
- What is Gene therapy ?
 - Differentiate between epitope and paratope.
 - What is hybridoma technology ?
 - “What is central dogma of biology ?
 - Differentiate fermenter and bioreactor.
 - Write a brief note on carrier used for immobilization
 - Draw labelled diagram of pBR322.
- 2 Discuss any **four** in detail : 16
- RNA as a genetic material.
 - Scope of biotechnology in pharmacy.
 - Watson and Crick model of DNA double helix.
 - Classes of Immunoglobulin and their properties
 - Retrovirus mediated gene delivery
 - Compare and differentiate various fermentation processes.
- 3 Answer any **three** in brief : 9
- Enumerate Ag-Ab reacton.
 - Therapeutic application of animal cell culture.
 - Single cell protein
 - List out methods for immobilization
 - Production steps for Vit B12.

SECTION - II

- 4 Answer any **eleven** in short : 11
- (i) Define Biotechnology
 - (ii) What is Chelation ?
 - (iii) What is targeted delivery ?
 - (iv) What are expression vectors ?
 - (v) What is site directed mutagenesis ?
 - (vi) What is antigen ?
 - (vii) Define gene.
 - (viii) Define cloning vectors.
 - (ix) What is MHC ?
 - (x) What are haptens ?
 - (xi) What is Okazaki fragment ?
 - (xii) What is SSB ?
 - (xiii) Expand Fish
 - (xiv) Define Mutation
- 5 Explain any **three** in brief : 12
- (i) Merits and demerits of gene therapy
 - (ii) Macrophage
 - (iii) Scale up of fermentation process.
 - (iv) Liposomes mediated drug delivery system
 - (v) Production steps for monoclonal antibody.
- 6 Answer any **two** in details : 12
- (i) Application of Recombinant DNA technology
 - (ii) DNA replication
 - (iii) What is microbial biotransformation ? Explain in details with special reference to steroids.
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