

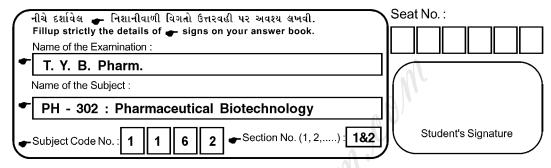
SB-1162

Third Year B. Pharm. Examination March/April - 2011

PH - 302: Pharmaceutical Biotechnology

Time: 3 Hours] [Total Marks: 70

Instruction:



SECTION - I

1 Answer any **five**:

10

- (i) What is Gene therapy?
- (ii) Differentiate between epitope and paratope.
- (iii) What is hybridoma technology?
- (iv) "What is central dogma of biology?
- (v) Differentiate fermenter and bioreactor.
- (vi) Write a brief note on carrier used for immobilization
- (vii) Draw labelled diagram of pBR322.
- 2 Discuss any four in detail:

16

- (i) RNA as a genetic material.
- (ii) Scope of biotechnology in pharmacy.
- (iii) Watson and Crick model of DNA double helix.
- (iv) Classes of Immunoglobulin and their properties
- (v) Retrovirus mediated gene delivery
- (vi) Compare and differentiate various fermentation processes.
- 3 Answer any three in brief:

9

- (i) Enumerate Ag-Ab reacton.
- (ii) Therapeutic application of animal cell culture.
- (iii) Single cell protein
- (iv) List out methods for immobilization
- (v) Production steps for Vit B12.

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SECTION - II

	 (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? 	
	(iii) What is targeted delivery?(iv) What are expression vectors?(v) What is site directed mutagenesis?	
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	(vi) What is antigon?	
	(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	
	(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
v	(i) Application of Recombinant DNA technology	
	(ii) DNA replication	
	(iii) What is microbial biotransformation? Explain in details	1
	with special reference to steroids.	
	with special reference to steroids.	