



RB-1343-44
Third Year B. Pharm Examination
April / May – 2010
PH-302 - Pharmaceutical biotechnology

Time : 3 Hours]

[Total Marks : 70

RB-1343

Instruction :

<p>नीचे दशावेक निशानीवाणी विगतो उत्तरवकी पर अवश्य लखवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : T. Y. B. Pharm.</p> <p>Name of the Subject : Pharmaceutical biotechnology - PH-302</p> <p>Subject Code No. : 1 3 4 3 Section No. (1, 2,.....): 1</p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; height: 80px; width: 100%; display: flex; align-items: center; justify-content: center; margin-top: 10px;">Student's Signature</div>
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- 1 Answer the following questions in short : (any **five**) **10**
 - (i) Define monoclonal antibodies and hybridoma technology
 - (ii) What is gene therapy?
 - (iii) Enumerate any four properties of antigen
 - (iv) What do you mean by gene manipulation?
 - (v) Explain chargaff's rule.
 - (vi) Differentiat between Ig G and Ig M.
 - (vii) What are single cell proteins?

- 2 Discuss in detail : (any **four**) **16**
 - (i) Write a note on DNA replication
 - (ii) Describe about fermenter design
 - (iii) Explain : Production of monoclonal antibodies
 - (iv) Adenovirus mediated gene delivery
 - (v) Write a note : GMP and biotechnology
 - (vi) Discuss about RNA and its role.

- 3 Answer the following questions in brief : (any **three**) **9**
 - (i) Write in brief about humoral immunity.
 - (ii) Electroporation for gene delivery.
 - (iii) Techniques used for immobilization.
 - (iv) Enumerate Ag-Ab Reactions
 - (v) Scale up of fermentation process.

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Name of the Examination :
T. Y. B. Pharm.

Name of the Subject :
Pharmaceutical biotechnology - PH-302

Subject Code No. : 1 3 4 4 Section No. (1, 2,.....): 2

Seat No. :

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- 4 Answer the following in short :(any **eleven**) 11
- Define biotechnological products.
 - What do you mean by r-DNA technology?
 - What are bioreactors?
 - Define vectors.
 - What are antigens?
 - Define vaccines.
 - What is the role of reverse transcriptase?
 - What are aquasomes?
 - What is animal cell culture?
 - What do you mean by mutagenesis?
 - Give any two examples of monoclonal antibodies.
 - What are immobilized enzymes?
 - What are epitopes?
 - Give any two examples of viral vaccine.
 - What do you mean by translation?
- 5 Explain the following questions in brief : (any **three**) 12
- Buccal drug delivery system.
 - T cell subtypes.
 - Gene amplification
 - Polio vaccine
 - Applications of monoclonal antibodies.
- 6 Answer in detail : (any **two**) 12
- Recombinant DNA technology
 - Immune response and host defense.
 - Applications of fermentation.