



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BPHARMA
(SEM VIII) THEORY EXAMINATION 2021-22
PHARMACEUTICS-X PHARMACEUTICAL BIOTECHNOLOGY

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 7 = 14**

a.	Mention two advantages and limitations of enzyme immobilization.
b.	How will you store a cholera vaccine?
c.	What is protoplast fusion?
d.	What are the roles of various types of spargers.?
e.	What are the uses of galactosidase enzyme?
f.	Define antigen and haptan.
g.	What are the differences between vaccine and sera?

SECTION B**2. Attempt any three of the following:****7 x 3 = 21**

a.	Discuss cellular and humoral immunity.
b.	Explain the use of hybridoma technology in the production of monoclonal antibodies.
c.	How will you control foam formation during fermentation?
d.	Explain the various types of enzyme immobilization.
e.	Narrate the steps you will take to isolate and purify an extracellular enzyme

SECTION C**3. Attempt any one part of the following:****7 x 1 = 7**

(a)	Enumerate the various types of antigen antibody reactions along with their applications
(b)	Write short note on immunological tolerance

4. Attempt any one part of the following:**7 x 1 = 7**

(a)	Explain the production of insulin by recombinant DNA technology.
(b)	Suggest the role of various factors influencing mutation.

5. Attempt any one part of the following:**7 x 1 = 7**

(a)	How will you screen the soil for microbes producing antibiotics?
(b)	Layout the design of a fermenter along with its accessories stating their uses.

6. Attempt any one part of the following:**7 x 1 = 7**

(a)	Write short notes on methodology of microbial biotransformation.
(b)	Suggest the different types of reactions mediated by microbes. How will you select such microbes which can initiate such reactions?

7. Attempt any one part of the following:**7 x 1 = 7**

(a)	Explain with the flow chart the steps involved in the production and purification of amylase
(b)	Explain with the flow chart the steps involved in the production and purification of penicillinase