Subject Code: BP605T

Paper id: 250729

Roll No:

BPHARM
(SEM VI) THEORY EXAMINATION 2024-25
PHARMACEUTICAL BIOTECHNOLOGY– THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Explain role of catalase and peroxidase enzymes
b.	Explain ELISA
c.	What is recombinant DNA technology?
d.	Define cellular and humoral immunity.
e.	Write name of any two microorganisms used in production of citric acid.
f.	What is a biosensor? Name two applications in pharmaceuticals.
g.	List two methods of microbial gene transfer.
h.	Define enzyme immobilization.
i.	Mention any two applications of recombinant DNA technology.
j.	What are MHC molecules?

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Define Enzyme Biotechnology. Give methods of enzyme immobilization and its applications with reference to pharmaceutical sciences.
b.	Explain large-scale fermentation with emphasis on fermenter design and its control mechanisms.
c.	Explain in detail PCR and its applications.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain the working principle and applications of ELISA.
b.	Explain general method of preparation and storage of bacterial vaccines.
c.	How do you collect, process and store whole human blood?
d.	Describe the process and significance of microbial biotransformation.
e.	What are Cloning Vectors? Highlight their features and applications in r-DNA technology.
f.	Explain scope and application of pharmaceutical biotechnology.
g.	Differentiate between the western blotting and southern blotting techniques.