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BPHARM
(SEM VI) THEORY EXAMINATION 2025-26
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.	Define biosensors?
b.	What is protein engineering?
c.	Define PCR?
d.	Write any two industrial applications of enzymes?
e.	Define Humoral immunity.
f.	What is fermenter?
g.	Write the source of penicillin.
h.	Define monoclonal antibodies?
i.	What is conjugation in bacteria?
j.	Write any two uses of interferons?

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

a.	Explain recombinant DNA technology and discuss its applications in pharmacy.
b.	Describe the design and construction of a large-scale industrial fermenter.
c.	Explain the principle, steps, and application of PCR in pharmaceuticals biotechnology

SECTION C

3. Attempt any five parts of the following:

7 x 5 = 35

a.	Explain the scope and importance of pharmaceuticals biotechnology
b.	Describe the principle and applications of hybridoma technology.
c.	Explain the production of insulin by recombinant DNA technology.
d.	Write in details the methods of enzyme immobilization.
e.	Differentiate between prokaryotic and eukaryotic cells.
f.	Explain the production of vitamin B12 by fermentation.
g.	Discuss hypersensitivity reactions and classify them with examples.