



PAPER ID-411559

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MPHARM
(SEM II) THEORY EXAMINATION 2023-24
MEDICINAL PLANT BIOTECHNOLOGY

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 embryogenesis with example.
b.	Discuss cell signaling.
c.	Define immobilization techniques.
d.	What is central dogma
e.	Classify types of bioreactor used in plant tissue culture.
f.	Mention name of enzymes of pharmaceutical interest
g.	How are tools of molecular biology applied to pharmacognosy
h.	What is biotransformation?
i.	Enlist precursor and elicitor used for production of secondary metabolites.
j.	Suggest some disadvantages of plant cell cloning

SECTION B

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

a.	Define plant biotechnology. Illustrate its historical perspective and prospects for development of plant biotechnology as a source of medicinal agent.
b.	Discuss transgenic plant and methods used in gene identification, localization and sequencing of genes
c.	Classify immobilization techniques and discuss its application on production of secondary metabolites.

SECTION C

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

a.	Discuss the sterilization methods involved in tissue culture. Narrate the applications of gene transfer in plants
b.	Enumerate the different methods of cloning and its applications
c.	Classify immobilization techniques of plant cells. Discuss its application on secondary metabolites production
d.	Explain the application of PCR in plant genome analysis
e.	Explain in detail about production of ergot alkaloid by fermentation technology.
f.	Describe protoplast fusion, hairy root cultures and their applications.
g.	Write short notes on DNA recombinant technology