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M.Pharmacy (Pharmacognosy) (2017 & Onwards) (Sem.-2)**MEDICINAL PLANT BIOTECHNOLOGY****Subject Code : MPG-201****M.Code : 74949****Time : 3 Hrs.****Max. Marks : 75****INSTRUCTIONS TO CANDIDATES :**

1. Attempt any FIVE questions out of SIX questions.
2. Each question carries FIFTEEN marks.

- Q.1. (a) Discuss various sterilization methods involved in tissue culture and gene transfer in plants. (8)
- (b) Plant biotechnology plays an imperative role in pharmaceutical sciences. Justify the statement and elaborate. (7)
- Q.2. Write a note on the following (Any Three) :
- (a) DNA replication (5)
- (b) Synthetic seeds (5)
- (c) Elicitors in production of secondary metabolites (5)
- (d) Biotransformations (5)
- Q.3. (a) Elaborate on the production of ergot alkaloids through fermentation technology. (7)
- (b) What are bioreactors? Explain types of bioreactors used in plant tissue culturing. (8)
- Q.4. What do you understand by plant cell cloning? What are various methods used for plant cell cloning? Also elaborate on applications, advantages and disadvantages. (15)
- Q.5. Write a note on following :
- (a) Micropropagation of medicinal plants (6)
- (b) DNA recombinant technology (5)
- (c) Monoclonal variations. (4)
- Q.6. Discuss in detail the commercial role of plant tissue culture techniques in the production of plant secondary metabolites. (15)

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.