

**M. SC. (Microbiology) SEM-IV (C.B.C.S.) (2012 COURSE) : WINTER
- 2018**

SUBJECT : ELECTIVE : ADVANCED BIOTECHNOLOGY

Day : Friday
Date : 26/10/2018

W-2018-1032

Time : 03.00 PM TO 06.00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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- Q.1** Explain Plant tissue culture technique with reference to : **[15]**
- a) Lab design
 - b) Propagation methods
 - c) Applications

OR

Explain Animal tissue culture technique with reference to:

- a) Primary Cell Culture
- b) Subculture
- c) Secondary Cell Culture

- Q.2** a) What is assay? Explain metabolic assays. **[08]**

- b) Explain slow release drug delivery. **[07]**

- Q.3** Answer **ANY THREE** of the following: **[15]**

- a) Explain the term patent. Add a note on its importance.
- b) Schematically represent working of Gene gun.
- c) Explain role of Ti plasmids in development of GM crops.
- d) Role of regulatory authorities in monitoring Biotechnological products.

- Q.4** Write short notes on **ANY THREE** of the following: **[15]**

- a) Organ culture
- b) Cryopreservation of valuable germplasm
- c) Use of microinjection technique in development of transgenic fish
- d) Biosafety guidelines

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