

**M.Sc. BIOTECHNOLOGY
THIRD SEMESTER [SPECIAL REPEAT]
PLANT & ANIMAL BIOTECHNOLOGY
MBT-302**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

(Objective)

Marks: 10

Choose the correct answer from the following:

1×10=10

- Opines are derived from:
a. Sugar
b. Amino acid
c. Fat
d. None of these
- What is temperature is used in dry heat sterilization?
a. 165°C
b. 160°C
c. 163°C
d. All of these
- Agropines are derived from:
a. Amino acid
b. Carbohydrates
c. Sugar
d. All of these
- The most suitable pH for animal cell growth:
a. 7.0-7.4
b. 7.1-7.3
c. 7.2-7.4
d. All of these
- Which of the following promote cell proliferation?
a. High cell density
b. High Ca²⁺ concentration
c. Low Ca²⁺ concentration
d. All of these
- The entry of bacterium into the plant tissues is facilitated by:
a. Acetosyringone
b. Hydroxyacetosyringone
c. Both a & b
d. All of these
- Which types of cells are most useful in cell culture applications?
a. Homogenous
b. Non homogenous
c. Heterogenous
d. All of these
- Culture of Human tissue is started in:
a. 1950
b. 1951
c. 1960
d. All of these
- The culture of native tissue is known as:
a. Organ culture
b. Cell culture
c. Primary culture
d. None of these

10. Which proteins are involved in the production of ss T-DNA?
- a. Vir B
 - b. Vir D1/D2
 - c. Vir A
 - d. None of these

(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

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| 1. Discuss about Electroporation with appropriate diagrammatic presentation. | 5 |
| 2. What is Serum-Free media? Give characteristics of Serum Free media and add on development of Serum-free media. | 10 |
| 3. What is Animal cell culture? Address different facilities as well as Applications of Animal cell cultures. | 10 |
| 4. Discuss details on Somatic Hybridization and their applications. | 10 |
| 5. What is <i>Agrobacterium</i> mediated gene transfer and its applications? Give details on Organization and integration of T-DNA. | 10 |

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