

**M.Sc. BIOTECHNOLOGY
THIRD SEMESTER
PLANT & ANIMAL BIOTECHNOLOGY
MBT-302**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

(Objective)

Time: 15 mins.

Marks: 10

Choose the correct answer from the following:

$1 \times 10 = 10$

1. Opines are derived from:
a. Sugar
b. Amino acid
c. Fat
d. None of these
2. What is temperature is used in dry heat sterilization?
a. 165°C
b. 160°C
c. 163°C
d. All of these
3. Agropines are derived from:
a. Amino acid
b. Carbohydrates
c. Sugar
d. All of these
4. 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
5. Which of the following promote cell proliferation?
a. High cell density
b. High Ca^{2+} concentration
c. Low Ca^{2+} concentration
d. All of these
6. The entry of bacterium into the plant tissues is facilitated by:
a. Acetosyringone
b. Hydroxyacetosyringone
c. Both a & b
d. All of these
7. Which types of cells are most useful in cell culture applications?
a. Homogenous
b. Non homogenous
c. Heterogenous
d. All of these
8. Culture of Human tissue is started in:
a. 1950
b. 1951
c. 1960
d. All of these
9. 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

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(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 <i>Agrobacterium</i> mediated gene transfer and its applications? Give details on Organization and integration of T-DNA. | 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 Serum-Free media? Give characteristics of Serum Free media and add on development of Serum-free media. | 10 |

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