

Section – C

19.11.19 / FN

SUB.CODE: 18PBC3C11

REG.NO:

--	--	--	--	--	--	--	--	--	--

ANSWER ANY THREE QUESTIONS

(3X10=30)

16. Explain the following
 - a) Synthetic seed preparation and
 - b) Composition of culture media?
17. Discuss the applications of plant engineering for the development of enriched food products?
18. Give a detailed account on cell culture, organ culture and tissue culture?
19. Explain the following
 - a) Somatic cell cloning and
 - b) Cryopreservation
20. Describe the production and applications of transgenic animals?



**DHANALAKSHMI SRINIVASAN COLLEGE OF
ARTS & SCIENCE FOR WOMEN
(AUTONOMOUS)**
(For Candidates admitted from 2018-2019 onwards)



P.G DEGREE EXAMINATIONS, NOVEMBER – 2019

Time : 3 hrs

Max. Marks: 75

M.Sc., BioChemistry

PLANT AND ANIMAL BIOTECHNOLOGY

Section– A

CHOOSE THE CORRECT ANSWER (10 X 1 = 10)

1. Which of the following is the main effect of cytokines in the tissue culture system?
 - a) Shoot elongation
 - b) Adventitious shoot formation
 - c) Induction of somatic embryos
 - d) Adventitious root formation
2. Name the term given to the ability of single cells to divide and produce all the differentiated cell in the organism?
 - a) Unipotent
 - b) Pluripotent
 - c) Multipotent
 - d) Totipotency
3. T_i plasmid vectors include
 - a) Binary vectors and cointegrate vector
 - b) Cointegrate vectors and multiple vectors
 - c) Multiple vectors and binary vector
 - d) T_i plasmid based vector

Section – B

4. Introduction of DNA into cells by exposing to high voltage electric pulse is

- a) Electro fusion b) Electro Fission
- c) Electrolysis d) Electro poration

5. What is a cell line?

- a) Multilayer culture b) Transformed cells
- c) Multiple growth of cells d) Sub culturing of primary culture

6. In monoclonal antibody technology, tumor cells that can replicate endlessly are fused with mammalian cells that produce an antibody.

The result of this cell fusion is a

- a) Hybridoma b) Myeloma
- c) Lymphoblast d) None of the above

7. Name the type of culture which is prepared by inoculating directly from the tissue of an organism to culture media

- a) Primary cell culture b) Secondary cell culture
- c) Cell lines d) Transformed cell culture

8. Apoptosis is classified as

- a) Programmed cell death b) Non-programmed cell death
- c) Accidental cell death d) Mitotic cell death

9. A mouse which is genetically modified by scientists by replacing its existing gene with artificial piece of DNA, called as

- a) Modified mouse b) Knock-out mouse
- c) Altered mouse d) Mutated gene

10. For carrying out gene manipulation, the use of cultured ----- transgenic organisms.

- a) Less reliable b) More reliable
- c) May be less or more reliable d) Is same reliable as

ANSWER ALL THE QUESTIONS

(5X7=35)

11.a) Explain the Importance of plant tissue culture?

(OR)

b) Write short notes on somatic embryogenesis?

12. a) Write a short notes on T_i plasmid vector?

(OR)

b) Explain any two methods of gene transfer to plants?

13. a) Explain briefly about hybridoma technique?

(OR)

b) Give an account on oral vaccines and DNA vaccines?

14.a) Write short notes on scaling up of animal cell culture?

(OR)

b) What is karyotyping? Explain its applications?

15.a) Bring out the importance of hematopoietic cells for gene therapy?

(OR)

b) Elaborate on GPI-anchored fusion proteins and its importance?