



HAD-003-001621

Seat No. _____

B. Sc. (Sem. VI) (CBCS) Examination

June / July - 2017

**BT - 601 : Principles of Biotechnology Applied to
Plants & Animals**

Faculty Code : 003

Subject Code : 001621

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Section-I covers compulsory one mark questions of 20 marks
(2) Figures in the right indicate marks.

SECTION - I

- 1 Answer the following : **20**
1. Who first attempted to culture isolated plant cells invitro on artificial medium ?
 2. _____ chemical is responsible for fruit ripening.
 3. Enderogenesis is the process for production of _____ plants.
 4. What are the stages of somatic embryo development ?
 5. _____ carbon source is most widely used in PTC media.
 6. Give the example of fusogen.
 7. Give the name of any two elicitors used in PTC.
 8. Which enzyme is used for the production of protoplast ?
 9. Where Auxin is located in Natural plant ?
 10. BSS stands for _____.
 11. Name the techniques used in animal cell culture to achieve high plating efficiency ?
 12. Which biological fluid is most widely used in ATC ?

13. Which medium is used in animal cell cloning ?
14. Cells shown to require Attachment for growth are said to be _____.
15. Which treatment is used for isolation of single cell from tissue ?
16. O₂ and CO₂ ratio should not be maintained in Animal Tissue Culture. TRUE/FALSE
17. Which vector based method is used for plant transformation ?
18. Who first time used tissue and embryo extract as a culture media ?
19. In _____ technique the DNA is subjected to high voltage electrical pulse for introducing it in a cell.
20. Give the examples of secondary metabolites.

SECTION - II

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| 2 | <p>[A] Answer the following (Any three) 6</p> <ol style="list-style-type: none"> 1. Define Pluripotency. 2. Enlist the major element required in medium for plant tissue culture. 3. What is the composition of MS media ? 4. Define : Transgenic plants. 5. What are Plantibodies ? 6. What is Microinjection ? |
| | <p>[B] Answer the following : (Any three) 9</p> <ol style="list-style-type: none"> 1. What is callus ? 2. Discuss the herbicide tolerant plant as an application of PTC. 3. Define and give the types of Natural media. 4. What is ex-plant ? 5. What is the Mode of action of Bt-toxin ? 6. Explain Callus culture. |
| | <p>[C] Answer the following : (any two) 10</p> <ol style="list-style-type: none"> 1. Write about characteristic of Explants. 2. Write a note on Gibberellin. 3. Explain the Enzymatic disaggregation by trypsin. 4. Write a note on Edible vaccines. 5. Explain Protoplast culture. |

SECTION - III

- 3** [A] Answer the following : (any three) **6**
1. Define: Animal Tissue Culture.
 2. What are the use of antibiotics in PTC ?
 3. What is cloning ?
 4. Define : Transgenic animals.
 5. Name the methods for transferring the gene.
 6. Enlist the examples of Transgenic animals.
- [B] Answer the following : (Any three) **9**
1. Explain cell line selection.
 2. Describe multistage bioreactor.
 3. Explain protoplast application in plant research.
 4. Explain transgenic sheep.
 5. Explain the Serum free medium.
 6. Explain surface sterilization.
- [C] Answer the following : (any two) **10**
1. Write a note on BT cotton.
 2. Explain transformation methods in animals.
 3. Write about the laboratory requirement and aseptic techniques for animal tissue culture ?
 4. Explain chemical method for DNA transfer in animal.
 5. Give the application of transgenic animals.
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