



HDY-003-1133005 Seat No. _____

M. Sc. (Biotech) (Sem. III) (CBCS) Examination

November / December – 2017

BT - 315 : Cell Culture

(Elective)

Faculty Code : 003

Subject Code : 1133005

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

[Total Marks : 70

1 Answer the following : (Any **Seven** out of Ten, each of **14** 02 marks)

- (1) What is meant by Totipotency?
- (2) What is cloning and what is it used for?
- (3) What is meant by protoplast culture?
- (4) What is callus culture?
- (5) Enlist applications of animal biotechnology.
- (6) How are stem cells used in research?
- (7) How do you create a transgenic organism?
- (8) What is cytotoxicity?
- (9) What are Germplasm?
- (10) What is pollen culture?

2 Answer the following : (Any **two** out of Three, each of **14** 07 marks)

- (a) Write a short note on "Culture media used in plant tissue culture"
- (b) Enlist criteria for selection of explant.
- (c) Write a short note on anther culture.

- 3** Answer the following : **14**
- (a) What is gene therapy? Describe.
 - (b) Write a note on "Germplasm conservation and its importance."

OR

- 3** Answer the following : **14**
- (a) Enlist various methods of gene transfer in plants and describe any one in detail.
 - (b) Write a note on "Expression of transgene in higher plants and animals for producing value based products".

- 4** Answer the following : **14**
- (a) What are different characteristics of stem cells?
 - (b) Write a short note on mammalian cell culture.

- 5** Answer the following : (Any **two** out of four, each of **07** marks) **14**
- (a) What are synthetic seeds? Discuss.
 - (b) Write a note on "cryopreservation of animal tissue and cell line"
 - (c) Write a note on "Edible vaccines".
 - (d) Write a note on "Recombinant proteins".
