

Activity Code:- 1903015021

**B.Sc 6<sup>th</sup> SEMESTER (Honours) EXAMINATION, October-2020**

Subject: BOTANY

Course ID: 61312

Course Code: SH/BOT/601/C-14

Course Title: Plant Biotechnology

Full Marks: 15

Time: 1 hour

The figures in the margin indicate full marks

Answer all the questions.

**UNIT I**

1. Answer any five of the following questions: (1x5=5)

- a) Mention the specific role of IAA in morphogenesis in vitro ?
- b) Why restriction endonuclease is called as "Molecular scissors"?
- c) Name one chemical fusagen in protoplast culture.
- d) Cite an example of one shuttle vectors in genetic engineering process.
- e) What is the function of PCR?
- f) State the significance of reporter genes.
- g) What is Ti- plasmid?
- h) Give one example of transgenic crop .
- i) What is the function of luciferase?
- j) What is humulin?

**UNIT II**

2. Answer any two of the following questions: (2x5=10)

- a) Write a short note on role of vitamins and hormones in tissue culture. 2.5+2.5=5
- b) What is Taq polymerase? Write down the different requirements for PCR. 1+4=5
- c) What do you mean by cDNA library? Add a short note on colony hybridization. 1+4=5
- d) State the nomenclature of pBR322. Write some characteristic features of it. 2+3=5
- e) Write short note about the application of tissue culture. =5