

U.G. 6th Semester Examination - 2021**BOTANY****Course Code : BBOTCCHC602****Course Title : Plant Biotechnology**

Full Marks : 30

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **ten** questions: 1×10=10
- What is totipotency?
 - What do you mean by batch culture?
 - Give an example of prokaryotic cloning vector.
 - What do you mean by cybrids?
 - What is cosmid?
 - What do you mean by restriction and modification of DNA?
 - What are isoschizomers?
 - What is shuttle vector?

- Write down the full form of YAC.
- What is polylinker? Give an example.
- Define colony hybridization.
- Which GM crop was first approved in India? What is Cry protein?
- Name the target enzyme for the production of herbicide resistant Round Up Ready soybean.
- What do you mean by banana vaccine?
- Define electroporation.

2. Answer any **five** questions: 2×5=10
- Define cryopreservation.
 - Mention the steps involved in rDNA technology.
 - Write down the features of a vector required to facilitate cloning.
 - What do you mean by shuttle vector?
 - What is RFLP?
 - What do you mean by cDNA library?
 - What is gene gun method?

h) What is Golden Rice 2? Mention the name of foreign genes in Golden Rice.

3. Answer any **two** questions: $5 \times 2 = 10$

a) What are embryoids? Explain the process of protoplast isolation, culture and fusion using suitable diagram. $1+4$

b) Write down the different steps of PCR. 5

c) Write down the important application of biotechnology. 5
