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GIET UNIVERSITY, GUNUPUR – 765022  
M. Sc (Third Semester) Examinations, December' 2020  
**BTPC 304 – PLANT BIOTECHNOLOGY**

(Biotechnology)

Time: 2 hrs

Maximum: 50 Marks

(The figures in the right hand margin indicate marks.)

- Q.1. Answer **ALL** the questions (2 x10 = 20)
- Define plant tissue culture media.
  - What do you mean by somatic embryogenesis.
  - Name the viral vectors used for plant transformation.
  - What is acetosyringone?
  - What is golden rice?
  - Define Marker Assisted Selection.
  - Define RFLP.
  - Give two examples of plant secondary metabolites.
  - What are 'cry' genes?
  - What are symmetric hybrids?

**PART – B (6 x 5 = 30 Marks)**Answer ANY FIVE questions

Marks

- Briefly explain haploid production by anther culture technique and its application. (6)
- Describe the different methods of protoplast isolation and fusion. (6)
- Give an account on particle gun bombardment gene transformation method. (6)
- Describe the *Agrobacterium* mediated gene transformation in plants. (6)
- How can you develop herbicide tolerance transgenic plant? And write its advantages. (6)
- Write the role of Thionins in plant protection. (6)
- Give an account on chloroplast transformation. (6)
- Write the application of molecular markers in plant breeding. (6)

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