Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

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(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – NOV/DEC – 2017**

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|  |  |  |  |
| **Code :** | **14BT3025** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ADVANCED PLANT BIOTECHNOLOGY AND TISSUE CULTURE** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
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| **Q. No.** |  | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Illustrate in detail about the different steps involved in micropropagation of plants and list its merits and demerits with suitable examples. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Outline in detail the stages involved in development somatic embryos under *in vitro* conditions with suitable diagrams. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Explain in detail *Agrobacterium* mediated gene transfer in plants with a neat diagram. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Illustrate with a neat diagram gene gun method of gene transfer in plants and list its advantages over other methods of gene transfer. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | Explain in detail pBR322 plant transformation vector and its importance in gene transfer in plant system. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | List the various steps involved in development of genetically modified BT cotton plants and its recent advancements. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Outline the steps involved in development of herbicide tolerant plants with necessary examples. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Elaborate in detail the different methods of molecular pharming of carbohydrates in GM crops. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Explain in detail about various steps involved in molecular pharming of Vitamins with suitable examples and state its merits. | CO2 | 20 |

ALL THE BEST