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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**End Semester Examination – April/May – 2017**

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| **Code :** | **15BT2008** | **Duration :** | **3hrs** |
| **Sub. Name :** | **TISSUE ENGINEERING** | **Max. marks :** | **100** |

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

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| Q. No | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Draw a neat diagram and discuss the structural organization of the tissue. | CO1 | 10 |
|  | b. | Write a note on different types of tissues. | CO1 | 10 |
| (OR) | | | | |
| 2. |  | Enumerate in detail about vascularization and Wound healing mechanism. | CO1 | 20 |
| 3. |  | Explain in detail about current scope of development and therapeutic use of tissue engineering with examples. | CO2 | 20 |
| (OR) | | | | |
| 4. | a. | Discuss about the different types of biomaterials used in tissue engineering. | CO3 | 10 |
|  | b. | Give a note on the Transplant Immunology with necessary examples. | CO3 | 10 |
| 5. |  | Describe about 3D culturing system and discuss the substrates used with the required protocols. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Enumerate the importance of Bone tissue engineering and the replacement is done for bone, tendons and ligaments. | CO2 | 20 |
| 7. |  | Articulate the importance of Stem cells and its use in tissue engineering. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Discuss about the regulatory issues and the ethical issues in tissue engineering. | CO3 | 20 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Give a case study about cell transplantation for liver and musculoskeletal. | CO3 | 10 |
|  | b. | Elaborate the steps involved for cardiovascular tissue engineering. | CO3 | 10 |

ALL THE BEST