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 – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **15BT3003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BIOTECHNIQUES AND INSTRUMENTATION** | **Max. marks :** | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** | |
| 1. |  | Write a brief notes on Adsorption chromatography and Ion-exchange chromatography and also indicates its field of applications. | CO1 | 20 | |
| (OR) | | | | | |
| 2. |  | Describe the principle, procedure applications and advantages of affinity chromatography and size exclusion chromatography. | CO1 | | 20 |
|  | | | | | |
| 3. |  | Describe in detail the basic principles of centrifuge, with reference to RCF and sedimentation co efficient and instrumentation of centrifuge with a neat diagram. | CO1 | 20 | |
| (OR) | | | | | |
| 4. |  | Define isoelectric focusing and explain the principle theory applications of PAGE. | CO1 | 20 | |
|  | | | | | |
| 5. |  | Describe the principle and the components of NMR spectrometer with a neat labelled diagram. | CO2 | 20 | |
| (OR) | | | | | |
| 6. |  | What is meant by radioactive decay? Explain its types and add a note on commonly used methods of detecting and quantifying radioactivity. | CO2 | 20 | |
|  | | | | | |
| 7. |  | Give a detailed account on HPLC and its applications. | CO1 | 20 | |
| (OR) | | | | | |
| 8. |  | Describe the various methods in the isolation of cell organelles for any one biotechniques known to you. | CO1 | 20 | |
|  | | **Compulsory:** |  |  | |
| 9. |  | Briefly describe the working principle and applications of atomic absorption spectroscopy with a neat diagram. | CO2 | 20 | |

ALL THE BEST