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 :** | **14BT2007** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BASIC INDUSTRIAL BIOTECHNOLOGY** | **Max. marks :** | **100** |

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

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| Q. No. |  | Questions | Course  Outcome | Marks |
| 1. |  | Give a detailed account on citric acid production technique and mention its uses. | CO3 | 20 |
| (OR) | | | | |
| 2. |  | Draw a neat sketch of different Bioreactor configurations and brief on their parts. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | What is upstream processing? Give an account on any three upstream processes. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Explain the overall procedure for wine production processes. | CO3 | 20 |
|  |  |  |  |  |
| 5. |  | Explain how vitamin B12 can be produced with a neat flow-sheet. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Explain the procedure for industrial production of ethanol. | CO1 | 20 |
|  |  |  |  |  |
| 7. |  | Describe and outline details of xanthan glum biosynthetic process. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Explain the large scale production process of streptomycin. | CO2 | 20 |
|  | |  |  |  |
|  | | **Compulsory:** |  |  |
| 9. |  | Describe the commercial production process of L - glutamic acid. | CO3 | 20 |