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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**Supplementary Examination – June – 2017**

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| **Code :** | **14BT2016** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **ENZYME 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. |  | Discuss the classes of enzymes as described by IUB & MB. | CO1 | 20 |
| (OR) | | | | |
| 2. | a. | Write notes on endoenzymes with an example. | CO1 | 7 |
| b. | Write notes on exoenzymes with an example. | CO1 | 7 |
| c. | Write notes on isoenzymes with an example. | CO1 | 6 |
| 3. |  | Derive the Michaelis-Menten equation for an enzyme that catalyses the reaction for a single substrate. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Explain the types of enzyme inhibition. | CO2 | 20 |
| 5. |  | Describe the methods for the extraction of enzymes from plant, animal and microbial sources. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Illustrate about the affinity chromatography that used in enzyme purification. | CO2 | 20 |
| 7. |  | Discuss about the mechanism of enzyme immobilization through covalent binding. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Describe the appliations of any two industrially important immobilized enzymes. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Describe about the immunosensors in detail. | CO3 | 10 |
|  | b. | Write short notes on the applications of various biosensors. | CO3 | 10 |

ALL THE BEST