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 :** | **14BI2007** | **Duration :** | **3hrs** |
| **Sub. Name :** | **IMMUNOINFORMATICS** | **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. | Describe the chemical basis ofantigen-antibody reactions. | CO1 | **10** |
| b. | Describe in detail processes of agglutination and precipitation reactions. | CO1 | **10** |
| **(OR)** | | | | |
| 2. | a. | Describe the components of innate immunity and differentiate innate immunity from adaptive immunity. | CO1 | **10** |
|  | b. | Describe the role of innate immunity in defending the body from antigens. | CO1 | **10** |
| 3. |  | Discuss the steps of T-cell maturation. | CO1 | **20** |
| **(OR)** | | | | |
| 4. |  | Describe how the Classical Complement Pathway is activated. | CO1 | **20** |
| 5. |  | Differentiate the types of Immunoglobulins based on structure and functions. | CO2 | **20** |
| **(OR)** | | | | |
| 6. |  | Depict the process of antigen processing and presentation to immune cells. | CO2 | **20** |
| 7. |  | Illustrate the role Major Histocompatibility Complex (MHC) proteins in the immune system. | CO2 | **20** |
| **(OR)** | | | | |
| 8. |  | Depict the use of tools and databases for peptide binding prediction to MHC class I and MHC class II. | CO2 | **20** |
|  | | **Compulsory:** |  |  |
| 9. |  | Elucidate the steps for epitope prediction using Immunoinformatics procedures. | CO2 | **20** |

ALL THE BEST