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 :** | **14NT2006** | **Duration :** | **3hrs** |
| **Sub. Name :** | **NANOCOMPOSITES** | **Max. marks :** | **100** |

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

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| Q. No. |  | Questions | Course outcome | Marks |
| 1. |  | Give an account on the general properties and features of nanocomposites. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Explain the following: (i) Fracture strength, (ii) Fracture,  (iii) Plasticity, and (iv) Role of statistics in materials | CO1 | 20 |
| 3. |  | Compare and contrast composites and nanocomposites. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Describe diffusion and permeability processing of nanocomposites. | CO2 | 20 |
| 5. |  | Describe any four methods of characterization of nanocomposites. | CO1 | 20 |
| (OR) | | | | |
| 6. |  | Give an account of applications of nanocomposites in industry. | CO2 | 20. |
| 7. |  | Elaborate the optical and structural applications of nanocomposites. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Explain (i) rubbery elasticity and viscoelesticity  (ii) metal-matrix nanocomposites. | CO3 | 20 |
|  |  | **Compulsory:** |  |  |
| 9. |  | Give a detailed account of biodegradable protein nanocomposites. | CO3 | 20 |

ALL THE BEST