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 :** | **14ME3005** | **Duration :** | **3hrs** |
| **Sub. Name :** | **COMPUTER INTEGRATE MANUFACTURING SYSTEMS** | **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. | Explain the components of a manufacturing system in detail. | CO1 | **10** |
| b. | Discuss briefly the parameters which play an important role in designing manufacturing system. | CO1 | **10** |
| **(OR)** | | | | |
| 2. | a. | What are the reasons for automation, discuss briefy | CO1 | **10** |
| b. | Eloborate the automation migration strategy. | CO1 | **10** |
| 3. | a. | Discuss various non-contact non-optical inspection methods used in manufacturing industries. | CO2 | **10** |
|  | b. | How RFID works? Describe the difference between RFID and Bar code. | CO2 | **10** |
| **(OR)** | | | | |
| 4. | a. | There are three basic functions of machine vision, discuss them with neat diagram in detail. | CO2 | **12** |
|  | b. | List few non-contact type inspection methods. | CO2 | **8** |
| 5. | a. | What is meant by shop floor control and discuss three phases in a shop floor control systems. | CO2 | **12** |
|  | b. | Discuss briefly the manual or clerical data input techniques. | CO2 | **8** |
| **(OR)** | | | | |
| 6. | a. | Describe in detail about automated storage systems. | CO2 | **12** |
|  | b. | Compare between AS/RS and carousel storage system. | CO2 | **8** |
| 7. | a. | Define Process planning. | CO3 | **5** |
|  | b. | List the many decisions and details usually included within the scope of process planning. | CO3 | **10** |
|  | c. | Discuss a typical sequence of processes required in a part fabrication. | CO3 | **5** |
| **(OR)** | | | | |
| 8. | a. | Describe various general principles and guidelines in DFM/A. | CO3 | **14** |
|  | b. | Draw the flow chart of advanced manufacturing planning cycle. | CO3 | **6** |
|  | | **Compulsory:** |  |  |
| 9. | a. | What do you mean by rapid prototyping. Discuss various techniques. | CO2 | **10** |
|  | b. | Distinguish between Expert system and Artificial Intelligence. | CO3 | **10** |

ALL THE BEST