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 :** | **14EI3020** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Networks and Protocols for Instrumentation and Control** | **Max. marks :** | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Explain in brief about OSI model with neat diagram. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Describe the connection details of UART and its function as a Transmitter and receiver with necessary diagrams. | CO1 | 20 |
| 3. |  | Explain in detail about RS 232 the most widely used serial interface standard. | CO1 | 20 |
| (OR) | | | | |
| 4. | a. | What are the different types of wired transmission media?. Discuss about them in detail. | CO2 | 10 |
|  | b. | Differentiate between shielding, earthing and grounding. | CO2 | 3 |
|  | c. | Find the data rate for the co-axial cable whose operating band of frequency is upto 1Gbps and Signal to Noise ratio is 1000 dB. | CO2 | 3 |
|  | d. | Explain in detail about the IEEE 802 standard that is used in Wired LAN communication. | CO1 | 4 |
| 5. |  | Discuss in detail about Multiplexing techniques and statistical multiplexers. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Explain Radio modems in detail with neat diagrams. | CO3 | 20 |
| 7. |  | Describe the Architecture and communication model of the Profibus protocol. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Explain any three methods of error detection methods in detail and also hamming code method of error correction in detail. | CO2 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Discuss in detail about HART protocol. | CO3 | 20 |

ALL THE BEST