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 :** | **16EC2003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **RECENT TRENDS IN WIRELESS COMMUNICATION** | **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. | With a neat diagram explain the functional architecture of Sensor Network. | CO1 | 10 |
| b. | How Sensor MAC protocols are different from traditional MAC protocols? | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Consider 3 nodes N1, N2, N3 in a virtual cluster. If N2 goes to sleep and N3 transmits data to N1, explain this co-ordinated sleeping scenario of S-MAC with proper illustration. | CO1 | 10 |
| b. | How Adaptive Listening reduces the latency in S-MAC? | CO1 | 10 |
| 3. | a. | Discuss on key Internet of Things enablers for the success of IoT. | CO2 | 10 |
|  | b. | List the features of “Things” in IoT. | CO2 | 10 |
| (OR) | | | | |
| 4. | a. | What is the role of RFID in Internet of Things? | CO2 | 10 |
|  | b. | Bring out the details of Smart Santander project. | CO2 | 10 |
| 5. | a. | With suitable block diagrams compare SDR receiver with Traditional Analog receiver. | CO3 | 15 |
|  | b. | State the advantages of SDR when compared with traditional radio. | CO3 | 5 |
| (OR) | | | | |
| 6. | a. | Name few SDR softwares. What is GNU Radio? | CO3 | 15 |
|  | b. | State the applications of SDR. | CO3 | 5 |
| 7. | a. | Define Cognitive radio. Discuss the motivation for Cognitive radio. | CO3 | 15 |
|  | b. | State the Cognitive functions. | CO3 | 5 |
| (OR) | | | | |
| 8. | a. | Give the signifance of Spectrum Hole in Cognitive Radio networks. | CO3 | 15 |
|  | b. | What is the goal of Spectrum sensing? | CO3 | 5 |
|  | | **Compulsory**: |  |  |
| 9. |  | With suitable diagram explain underlay, overlay and interwave methods of spectrum sharing. State few applications of Cognitive radio. | CO3 | 20 |

ALL THE BEST