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 :** | **16EC2003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Recent Trends in Wireless Communications** | **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. | Define Wireless sensor network. | CO1 | **5** |
| b. | With a neat diagram explain the functional architecture of Sensor Network. | CO1 | **15** |
| **(OR)** | | | | |
| 2. | a. | What is medium access? | CO1 | **5** |
| b. | How Sensor MAC protocols are different from traditional MAC protocols? | CO1 | **15** |
| 3. | 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. How Adaptive Listening reduces the latency in S-MAC? | CO1 | **20** |
| **(OR)** | | | | |
| 4. | a. | State IoT vision. Discuss on key Internet of Things enablers for the success of IoT | CO2 | **20** |
| 5. | a. | Give an example for Smart city. | CO2 | **5** |
|  | b. | Illustrate the application of IoT in a shopping scenario. | CO2 | **15** |
| **(OR)** | | | | |
| 6. | a. | What are the types of RFID tags? | CO2 | **5** |
|  | b. | Explain the operation of SDR receiver. | CO3 | **15** |
| 7. | a. | Define Cognitive Radio. | CO3 | **5** |
|  | b. | What are the fuctions of Cognitive radio? | CO3 | **15** |
| **(OR)** | | | | |
| 8. | a. | What is the goal of Spectrum sensing? | CO3 | **5** |
|  | b. | State the benefits and applications of Cognitive radio. | CO3 | **15** |
|  | | **Compulsory:** |  |  |
| 9. | a. | What is Cooperative sensing? | CO3 | **5** |
|  | b. | Describe the three Spectrum Sensing Methods. | CO3 | **15** |

ALL THE BEST