Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code : 14CS3051** |  | **Duration :** | **3hrs** |
| **Sub. Name : WIRELESS SENSOR NETWORKS** |  | **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. | Describe the sensor node components of wireless sensor networks. | CO1 | 10 |
| b. | Distinguish category 1 WSN from category 2 WSN. | CO2 | 5 |
| c. | Brief the protocol stack of wireless sensor network. | CO1 | 5 |
| (OR) | | | | |
| 2. | a. | Explore any two application and its benefits of wireless sensor networks. | CO1 | 10 |
| b. | Enumerate all the properties or characteristics of wireless sensor network. | CO1 | 10 |
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| 3. | a. | Examine the reasons that causes the wireless signal propagation impairments. | CO2 | 10 |
| b. | Compare and contrast Bluetooth and WLAN technologies. | CO2 | 5 |
| c. | Discuss the significance of cognitive radios. | CO2 | 5 |
| (OR) | | | | |
| 4. | a. | Discover the two problems susceptible in wireless networks. Provide the solutions for the same. | CO2 | 15 |
| b. | Differentiate fixed-assignment protocols from demand assignment protocols. | CO2 | 5 |
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| 5. | a. | Describe the use of SPIN protocol in WSN. | CO2 | 8 |
| b. | Examine how PEGASIS extends the life time of the network & reduces the delay. | CO2 | 7 |
| c. | Compose the forwarding strategies of geographical routing. | CO2 | 5 |
| (OR) | | | | |
| 6. | a. | Discuss the feasibility of using TCP or UDP for wireless sensor networks. | CO2 | 5 |
| b. | Write notes on RMST & PSFQ transport protocols. | CO2 | 8 |
| c. | Evaluate the performance of transport protocols over wireless sensor networks. | CO3 | 7 |
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| 7. | a. | Explain the design principles of middleware architecture. | CO1 | 10 |
| b. | Write notes on MiLAN and IrisNet middleware. | CO1 | 10 |
| (OR) | | | | |
| 8. | a. | Describe the functions of MANNA management architecture. | CO3 | 10 |
| b. | Compose the details of tiny os and mate os. | CO3 | 10 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss the traffic models of WSN. | CO3 | 5 |
| b. | Compute the system life span of wireless sensor networks with the help of suitable assumptions. | CO3 | 15 |