** D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Set-: II**

**Q. Paper Code:**

**KASABA BAWADA KOLHAPUR-416006**

**(An Autonomous Institute)**

T. Y. B. Tech

**END SEMESTER EXAMINATION (ESE), Nov. – 2022**

Course Name: Wireless Sensor Networks Course Code: 201CSL304

Seat No:

**Day and Date: Monday, 12/12/2022**

**Time: 2.00 PM to 4.00 PM Max. Marks- 50**

***Instructions:***

1. *All questions are compulsory; however internal choices are given in question number 2.*
2. *Write equations wherever necessary.*

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| **BT** | **CO’s** | | **Q. No.** | |  | **Marks** |
|  |  | | **Q.1** | | **All Questions are compulsory** | **20** |
| **1,2** | **CO1** | | **a** | | Mention any five design goals of MAC protocols. | **5M** |
| **1,2** | **CO1** | | **b** | | Explain following constrains in detail.   1. Limited hardware 2. Limited support for networking. | **8 M** |
| **1,2** | **CO2** | | **c** | | Explain S-MAC protocol in detail. | **7 M** |
|  | | | | | | |
|  | |  | | **Q.2** | **Attempt any one out of two questions** | **10** |
| **1,2** | | **CO2** | | **a** | Explain functional blocks of sensor node with neat diagram. | **10** |
| **1,2** | | **CO2** | | **b** | Explain energy and detection advantages in WSN with necessary equations. | **10** |
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|  | |  | | **Q.3** | **All Questions are compulsory.** | **10** |
| **1,2** | | **CO3** | | **a** | Explain CSMA protocol with schematic diagram. | **6** |
| **1,2** | | **CO3** | | **b** | List the features of IEEE802.15.4 MAC protocol | **4** |
|  | | | | | | |
|  | |  | | **Q.4** | **All Questions are compulsory.** | **10** |
| **1,2** | | **CO4** | | **a** | Explain the concept of clustering with neat diagram. | **4** |
| **1,2** | | **CO4** | | **b** | Explain clock phase difference with an example. | **6** |

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