**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, APRIL 2023**

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|  | **1BC2149** | Roll No. | Total Printed Pages: 1 |
| **1BC2149** |  |
| BCA I Year II Semester (Main/Back) End Semester Examination, April 2023  **(Cloud)** | |
| **BCTCCA2105 : Mobile & Wireless Network** | | | |

# Time: **3** Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | What is the main reason for the failure of many MAC schemes known from wired networks? What is done in wired networks to avoid this effect? | **(6)** | **Remember** |
|  |  |  |  |  |
|  | **(b)** | Differentiate between SDMA, FDMA, TDMA, CDMA techniques. | **(6)** | **Remember** |
|  |  | **OR** |  |  |
| **Q.2** | **(a)** | What are key issues for contention based multiple access protocols? How it is different from contention free multiple access techniques? | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | What happens in the case of hidden and exposed terminal if ALOHA, Slotted ALOHA, Reservation ALOHA or MACA is used? | **(6)** | **Apply** |
|  |  | **UNIT-II (CO2)** |  |  |
| **Q.3** | **(a)** | Explain difference & characteristics of DSDV,WRP,DSR | **(6)** | **Remember** |
|  |  |  |  |  |
|  | **(b)** | Compare forwarding schemes (n = number of nodes) | **(6)** | **Remember** |
|  |  | **OR** |  |  |
| **Q.4** | **(a)** | Write short note on:  (i) DHCP (ii) DSR | **(6)** | **Remember** |
|  |  |  |  |  |
|  | **(b)** | Explain different phases of TORA. | **(6)** | **Apply** |
|  |  | **UNIT-III (CO3)** |  |  |
| **Q.5** | **(a)** | What are the issues in designing a transport layer protocol for ad hoc wireless networks? | **(6)** | **Apply** |
|  |  |  |  |  |
|  | **(b)** | What do you understand by ad hoc network? Explain with example | **(6)** | **Understand** |
|  |  | **OR** |  |  |
| **Q.6** | **(a)** | What are the design conditions of transport layer protocols for ad hoc wireless networks? | **(6)** | **Apply** |
|  |  |  |  |  |
|  | **(b)** | Classify transport layer solutions. | **(6)** | **Apply** |
|  |  | **UNIT-IV (CO4)** |  |  |
| **Q.7** | **(a)** | What do you understand by wireless sensor network (WSN)? Describe the sensor network architecture. | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Briefly describe the important sensor network protocols. | **(6)** | **Remember** |
|  |  | **OR** |  |  |
| **Q.8** | **(a)** | Define data storage and manipulation in sensor network. | **(6)** | **Remember** |
|  |  |  |  |  |
|  | **(b)** | Define localization and management in sensor network? | **(6)** | **Remember** |
|  |  | **UNIT V (CO5)** |  |  |
| **Q.9** | **(a)** | Describe the properties of networked robots and build network robotic system. | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Describe cloud robotics and its’ application. | **(6)** | **Remember** |
|  |  | **OR** |  |  |
| **Q.10** | **(a)** | Describe Big Data and importance in of it in cloud robotics. | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Define cloud computing and its’ concept. | **(6)** | **Remember** |