Number of printed page: 2

Semester VII (B.Tech.)

Er. No. 20183[illegible]

Academic Year: 2023-24

Jaypee University of Engineering & Technology, Guna

T-3(Odd Semester 2023)

18B14CI744-AD-HOC AND WIRELESS NETWORKS

Maximum Duration: 2 Hours

Maximum Marks: 35

Notes:

1. This question paper has seven questions.
2. Write relevant answers only.
3. Do not write anything on question paper except your enrollment no.

		Marks	CO No.
Q1.	What do you mean by vehicular ad-hoc networks? Describe how its architecture is divided into three categories of networks using the appropriate diagram.	[05]	CO3
Q2.	Explain the different types of deterministic deployment in detail. A network using CSMA/CD has a bandwidth of 10 Mbps. If the maximum propagation time (including the delays in the devices and ignoring the time needed to send a jamming signal) is 25.6μs, what is the minimum size of the frame?	[05]	CO2
Q3.	What is intended by "medium access"? Why is medium-access control necessary? Explain the Medium-Access Control classification using an appropriate diagram and relevant examples.	[05]	CO4
Q4.	How do the terms "token passing," "reservation," and "polling" relate to warless networks? Using a clear diagram, describe how pure and slotted ALOHA protocols work in a network channel.	[05]	CO4
Q5.	Describe the objective of the networking or telecommunication system based on the Open Systems Interconnection model. From the lowest layer (Layer 1) to the highest layer (Layer 7), thoroughly discuss each of the OSI model's seven layers.	[05]	CO5

Q6.	Draw the architecture of the IEEE 802.11 protocol. Describe the coordination function and provide an extended service set. List out various IEEE 802.11 services. Illustrate privacy, authentication, and reassociation.	**[05]**	**CO5**
Q7.	Discuss the requirements and difficulties associated with wireless sensor networks. Draw and describe the wireless sensor's architecture, along with the factors that influenced its design.	**[05]**	**CO4**