Code: P18ECO11

R18

HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
IV B.TECH I SEMESTER END REGULAR EXAMINATIONS, NOV-2022
INTRODUCTION TO WIRELESS SENSOR NETWORKS
(IT Branch)

Time: 3 hours   Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Answer **all** the questions in Part-A (**5X2=10M**)

Q.No.		Questions	Marks	CO	KL
1.	a)	Mention the unique constraints of WSNs.	[2M]	1	1
	b)	Give the list of the appropriate transceivers for WSNs.	[2M]	2	1
	c)	Write other MAC protocols.	[2M]	3	1
	d)	What are the design issues of MAC protocol for Ad hoc wireless networks?	[2M]	4	1
	e)	Why does TCP not work well in ad hoc networks?	[2M]	5	1

PART-B

Answer One Question from each UNIT (5X10=50M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
2.	a)	Explain the energy consumption of sensor nodes.	[5M]	1	2
	b)	Discuss the operating systems and execution environments of sensor nodes	[5M]	1	6
		OR			
3.	a)	Discuss the enabling technologies for wireless sensor networks.	[5M]	1	6
	b)	Explain about optimization goals and figure of merit.	[5M]	1	2
		UNIT-II			
4.	a)	Explain the MANETs with a neat sketch	[5M]	2	2
	b)	Explain the Topologies of PANs, MANETs, and WANETs.	[5M]	2	2
		OR			
5.	a)	Discuss the design considerations of physical layer	[5M]	2	6
	b)	Explain the Personal area networks (PANs)	[5M]	2	2
		UNIT-III			
6.	a)	Generalize the concepts on important classes of MAC protocol.	[5M]	3	2
	b)	Explain about efficient flooding routing protocols.	[5M]	3	2
		OR			
7.	a)	What are the design goals of a MAC Protocol for Ad Hoc Wireless Networks?	[5M]	3	6
	b)	Explain scheduling-based MAC protocols.	[5M]	3	2
		UNIT-IV			
8.	a)	Explain the Design Goals of a Transport Layer Protocol for Ad Hoc Wireless Networks	[5M]	4	2
	b)	Explain the classification of transport layer solutions.	[5M]	4	2

		OR			
9.	a)	With any five major reasons, analyze why TCP is exposed to significant throughput degradation in ad hoc networks.	[5M]	4	4
	b)	Explain the security protocols in the transport layer	[5M]	4	4
		UNIT-V			
10.	a)	Explain how the security provisioning in an Ad hoc network differs from	[5M]	5	2
	b)	Discuss about Node level software Platforms.	[5M]	5	6
		OR			
11.	a)	Discuss the Issues and Challenges in Security Provisioning	[5M]	5	6
	b)	Write short notes on home automation	[5M]	5	3

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