Question Paper Code	13057

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024

Third Semester

M.E. - Embedded Systems Technologies

20PESEL315 - WIRELESS AND MOBILE COMMUNICATION

Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks	K-Level	CO
1.	State the path loss expression for two ray ground reflection model.	2	K1	CO1
2.	What is multipath propagation?	2	K1	CO1
3.	Distinguish between narrowband and wideband systems.	2	K2	CO2
4.	Define Near and far terminals.	2	K1	CO2
5.	List the uses of Signaling System No. 7 (SS7) in GSM.	2	K1	CO3
6.	What are the number of sending and receiving slots available for GPRS class -10 service?	2	K1	CO3
7.	State the use of Clear Channel Assessment (CCA) signal.	2	K1	CO4
8.	List the three phases of operation in HIPERLAN1.	2	K1	CO4
9.	What is HAWAII?	2	K1	CO5
10.	State the registration codes for "denied by HA" in mobile IP.	2	K1	CO5

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11.	a)	Explain the four types of satellite orbits with its advantages and disadvantages.	13	K2	CO1
		OR			
	b)	Illustrate DSSS with relevant transmitter and receiver block diagrams and signal representations.	13	K2	CO1
12.	a)	Compare and contrast the various types of multiple access techniques.	13	K2	CO2
		OR			
	b)	Elaborate on Code Division Multiple Access (CDMA) with relevant diagrams.	13	K2	CO2
13.	a)	Explain the types of handover in detail.	13	K2	CO3
		OR			
	b)	Elaborate the localization and calling procedures of GSM in detail.	13	K2	CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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14.	a)	Explain the IEEE 802.11 system and protocol architecture in detail.	*13*	*K2*	*CO4*

<div align="center">**OR**</div>

	b)	Illustrate the functions of Bluetooth with its protocol architecture.	*13*	*K2*	*CO4*
15.	a)	Explain the encapsulation mechanisms and its types in detail.	*13*	*K2*	*CO5*

<div align="center">**OR**</div>

	b)	Elaborate on the DSR protocol with relevant diagrams.	*13*	*K2*	*CO5*

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PART - C (1 × 15 = 15 Marks)

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16.	a)	Explain Wireless Transport Layer Security in detail.	*15*	*K2*	*CO6*

<div align="center">**OR**</div>

	b)	Describe WML and WML scripts in detail.	*15*	*K2*	*CO6*