Register Number:……..

KUMARAGURU college of technology
character is life

B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Fifth Semester

INFORMATION TECHNOLOGY

U18ITI5203: Mobile and Pervasive Computing

COURSE OUTCOMES

CO1: Outline the basic concepts and principles in mobile computing.

CO2: Explain GSM architecture and protocols.

CO3: Analyze characteristics of different types of wireless LAN network protocols.

CO4: Explain the principles of 4G networks.

CO5: Identify the pervasive and ubiquitous computing characteristics as well as context-aware computing and their applications.

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	List the advantages and disadvantages of cellular systems.	CO1	[K_1]
2.	What is dropped call? How is dropped call rate calculated?	CO1	[K_1]
3.	Identify the four possible handover scenarios in GSM.	CO2	[K_2]
4.	Recall the services offered by GPRS.	CO2	[K_1]
5.	Compare infrared and radio transmission in Wireless LAN.	CO3	[K_2]
6.	What do you mean by slow start in TCP?	CO3	[K_1]
7.	Infer the role of Radio Access Network in LTE.	CO4	[K_2]
8.	Summarize the advantages of OFDMA.	CO4	[K_2]
9.	Tell some important characteristics of pervasive computing.	CO5	[K_1]
10.	What are smart sensors?	CO5	[K_1]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Outline the channel assignment strategies in cellular systems.	6	CO1	[K_2]
	b)	Compare the functions of TDMA, FDMA and CDMA mechanisms.	10	CO1	[K_2]

12.	a)	Explain the architecture of GSM with a neat sketch.	10	CO2	[K_2]
	b)	Outline the GPRS attach and detach procedure.	6	CO2	[K_2]
13.	a)	Organize the procedure for packet delivery between mobile nodes with a neat sketch.	8	CO3	[K_3]
	b)	Develop the procedure for Dynamic Source Routing (DSR) algorithm.	8	CO3	[K_3]
14.	a)	Outline the tabulation of classical enhancements to TCP for mobility.	10	CO3	[K_2]
	b)	Summarize the advantages of OFDM over WCDMA.	6	CO4	[K_2]
15.	a)	Examine the requirements of LTE to release 8.	8	CO4	[K_4]
	b)	Analyze the function of SC-FDMA (Single Carrier-FDMA) signal processing chain.	8	CO4	[K_4]
16.	a)	List and explain the principles of pervasive computing.	8	CO5	[K_2]
	b)	Illustrate the various smart appliances with pervasive computing technology.	8	CO5	[K_2]

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