Question Paper Code	12799

M.E. / M.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Second Semester

M.E. - Computer Science and Engineering (with Specialization in Networks)
20PCNEL209 - MOBILE AND PERVASIVE COMPUTING

Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

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

		Marks	K-Level	CO
1.	Define the main elements of the GSM system architecture.	2	K1	CO1
2.	Draw the different generations of mobile telecommunication systems.	2	K2	CO1
3.	What is Peak data rate?	2	K1	CO2
4.	Distinguish Uplink vs Downlink.	2	K2	CO2
5.	What is Pervasive computing?	2	K1	CO3
6.	What are the limitations of accessing pervasive computing via WAP?	2	K1	CO3
7.	What are the operating systems for pervasive computing?	2	K1	CO2
8.	Give the requirements for HCI within a pervasive environment.	2	K1	CO4
9.	What do you mean by embedded control?	2	K1	CO5
10.	Define pervasive transaction.	2	K1	CO5

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

			Marks	K-Level	CO
11.	a)	Draw the Bluetooth Protocol and explain.	13	K2	CO1
		OR			
	b)	Which types of different services does GSM offer? Give some examplesand reasons why these services have been separated.	13	K2	CO1
12.	a)	Explain the general problems of mobile IP regarding security and support of quality of service.	13	K2	CO2
		OR			
	b)	Explain the Data management in WAE.	13	K2	CO2
13.	a)	Explain the various state-of-the-art technology of pervasive Computing.	13	K2	CO3
		OR			

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

b) i) Explain Pervasive Computing: Concepts.	7	K2	CO3
ii) List and explain the pervasive computing enablers.	6	K2	CO3

14. a) Describe in details about the various possible scenarios for multimodal and multiplatform HCI under a pervasive computing circumstance.   *13*   *K2*   *CO4*

OR

    b) i) Why the concept of interaction migration has not been implemented in practical applications?   *7*   *K2*   *CO4*

      ii) How to solve the interaction migration problem?   *6*   *K2*   *CO4*

15. a) Describe and how pervasive transaction management has adaptively adjust execution policies during transaction processing.   *13*   *K2*   *CO5*

OR

    b) i) Draw and explain the scenario of pervasive transactions.   *7*   *K2*   *CO5*

      ii) Different execution models of pervasive transaction.   *6*   *K2*   *CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Describe model for the medical treatment reservation scenario.   *15*   *K2*   *CO6*

OR

    b) Describe the reachability of the Petri net and then validate the correctness of the coordination algorithm by the reachable tree analysis technology of Petri nets.   *15*   *K2*   *CO6*