B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

Fifth Semester

Computer Science and Engineering

20CSPC503 - MOBILE COMPUTING

(Regulations 2020)

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

Marks, K-Level, CO

1.	List the differences between Wired and Wireless Network.	2,K1,CO1
2.	What are the advantages of Mobile computing?	2,K1,CO1
3.	What is the frequency range of uplink and downlink in GSM network?	2,K1,CO2
4.	List the Characteristics of LTE and 5G Technology.	2,K1,CO2
5.	Differentiate UMTS networks from 2G networks.	2,K2,CO3
6.	What are the main elements of UMTS?	2,K1,CO3
8.	Give the different layers of WAP.	2,K2,CO5
7.	Define WTP and list the classes of WTP.	2,K1,CO5
9.	Define microkernel operating system.	2,K1,CO6
10.	Justify whether security is an issue in Mobile Payment.	2,K2,CO6

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	What do you mean by spread spectrum? Explain DSSS & FHSS in detail.	13,K2,CO1
		OR	
	b)	Compare the various generations of Mobile Computing.	13,K2,CO1
12.	a)	Explain different Wireless MAC protocol issues in mobile computing.	13,K2,CO2
		OR	
	b)	Summarize the functions of Fixed assignment schemes in MAC protocols.	13,K2,CO2
13.	a)	Describe in detail the functional architecture of GSM with neat sketch along with services provided by the GSM.	13,K2,CO3
		OR	

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **11612**

b) Describe GPRS System architecture and protocol stack with a neat diagram.   *13,K2,CO3*

14. a) Identify the requirements of WAP and Explain its architectural components with neat diagram.   *13,K2,CO5*

OR

b) Interpret in detail about Indirect TCP, Snooping TCP and Mobile TCP.   *13,K2,CO5*

15. a) Illustrate the features, advantages and disadvantages of commercial operating systems for mobile computing with examples.   *13,K2,CO6*

OR

b) Explain in detail about the structure of M Commerce, its applications and Pros and Cons.   *13,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Explain the factors that make mobile ad-hoc networks more vulnerable to security attacks compared to the traditional networks. Also explain the major types of security attacks that are possible in a mobile ad-hoc network. How can each of these types of attacks be overcome?   *15,K2,CO4*

OR

b) (i) Differentiate VANET and MANET.   *5,K2,CO4*
   (ii) Explain DSR Routing Protocols in detail.   *10,K2,CO4*