0400CST476042502

Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S8 (R,S) Exam (FT / PT) April 2025 (2019 Scheme)

Course Code: CST476
Course Name: MOBILE COMPUTING

Max. Marks: 100   **Duration: 3 Hours**

PART A
Answer all questions, each carries 3 marks.   Marks

1	Give examples for three mobile computing applications	(3)
2	Explain different types of middleware and gateways required in the architecture of mobile computing.	(3)
3	Why does the multiple access technologies are important in wireless communication system?	(3)
4	Compare GEO,LEO ,MEO of the satellite systems.	(3)
5	Discuss any three applications of Bluetooth.	(3)
6	Write a short note on WTLS(Wireless Transport Layer Security).	(3)
7	List out the sequence of events involved in DHCP service.	(3)
8	How does Wireless Transaction Protocol achieve reliability?	(3)
9	Mention the features of 5G Wireless Systems.	(3)
10	What are the major components of information security?	(3)

PART B
Answer any one full question from each module, each carries 14 marks.

Module I

11	a)	With a neat diagram discuss the functionalities of the three tiers of mobile computing architecture.	(7)
	b)	Explain the various functions of mobile computing.	(7)

OR

12	a)	What is a Ubiquitous network? List the main segments in Ubiquitous network	(7)
	b)	Explain any four design considerations of the mobile computing in detail.	(7)

Module II

13	a)	Explain FHSS and DSSS	(7)
	b)	Explain the functional architecture of GSM system with a suitable sketch.	(7)

OR

14 a) Discuss how routing is enabled in a satellite system.   (7)

    b) Describe the various handover mechanisms used in satellite systems.   (7)

Module III

15 a) Explain the design goals that has to be considered for designing the Wireless   (7)
      LAN.

    b) Explain with diagram the system architecture of IEEE 802.11.   (7)

OR

16 a) Describe the architecture of Bluetooth with a neat sketch.   (7)

    b) What are the security mechanisms provided by GSM.   (7)

Module IV

17 a) Explain in detail the role of several components and interfaces in the architecture   (7)
      of Wireless Application Protocol.

    b) Describe the following Terminologies used in Mobile IP   (7)

      a) Home Agent (HA) b) Foreign Agent (FA) c) Care-of Address (COA)

OR

18 a) Explain the working procedure of Dynamic Source Routing(DSR) Protocol with   (7)
      suitable example.

    b) Discuss the service enhancements in Wireless Datagram Protocol for the transfer   (7)
      of data?

Module V

19 a) Explain different security models in mobile computing.   (8)

    b) List and explain any 6 pillars of 5G.   (6)

OR

20 a) Explain the functioning of Orthogonal frequency division multiplexing.   (7)

    b) What is the purpose of Multi Protocol Label Switching? How is packet   (7)
      forwarding done using MPLS?

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