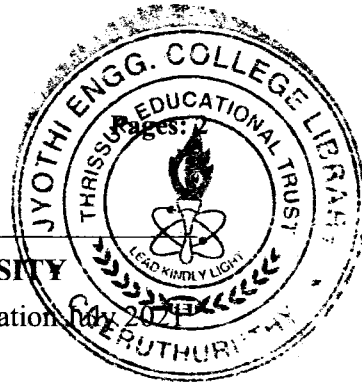Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Sixth Semester B.Tech Degree Regular and Supplementary Examination May 2021

Course Code: CS364
Course Name: MOBILE COMPUTING

Max. Marks: 100   Duration: 3 Hours

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

1   List any three characteristics of mobile computing.   (3)

2   Define middleware in mobile computing with example.   (3)

3   List the characteristics of different types of satellites (based on orbit).   (3)

4   Differentiate the use of HLR and VLR in GSM network.   (3)

PART B
Answer any two full questions, each carries 9 marks.

5   a)   Explain Three-tier architecture for mobile communication with neat diagram.   (6)

    b)   Draw the flowchart of Internet Content Adaptation Protocol (ICAP).   (3)

6   a)   Differentiate SDMA, FDMA, TDMA Medium Access techniques.   (6)

    b)   List the design considerations for mobile computing.   (3)

7   a)   Illustrate the working of GSM (Global System for Mobile) with suitable diagrams.   (6)

    b)   List the features of DECT system.   (3)

PART C
Answer all questions, each carries 3 marks.

8   Justify why the CSMA/CD protocol is difficult to implement in wireless networks.   (3)

9   Differentiate Ad-hoc and Infrastructure based wireless networks.   (3)

10   Explain the requirements for a Mobile IP protocol.   (3)

11   List the steps involved in DHCP to obtain IP Address in a LAN with the help of neat diagrams.   (3)

PART D
Answer any two full questions, each carries 9 marks.

12   Draw and explain about IEEE 802.11 MAC layer frame format.   (9)

13 a) Explain in detail the working of the following protocols: (6)

   i) Indirect TCP   ii) Snooping TCP

   b) Differentiate between proactive and reactive routing in networks. (3)

14   Illustrate the working of Mobile IP with the help of neat diagrams. (9)

PART E

Answer any four full questions, each carries 10 marks.

15   Discuss the following mobile transport layer protocols: (10)

   (i) Transaction Oriented TCP   (iii) Mobile TCP

16   Explain the architecture of Wireless Access Protocol (WAP) with suitable (10)
        diagrams.

17   Explain the architecture of IEEE 802.15 Bluetooth networks with suitable (10)
        diagrams.

18   Write down the features of the following mobile operating systems: (10)

   i) Android   ii) PalmOS

19 a) Discuss LiFi and its applications. (4)

   b) Explain the following concepts in 5G networking with required diagrams: (6)

   i) MIMO   ii) Supercore

20   List the features of following mobile application development tools: (10)

   (i) XML   (ii) J2ME   (iii) Java Card

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