Question Paper Code : 20741

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

Sixth Semester

Information Technology

IT 6601 — MOBILE COMPUTING

(Common to Computer Science and Engineering)

(Regulations 2013)

(Also common to PTIT 6601 – Mobile Computing for B.E. (Part-Time) Fifth Semester
– Computer Science and Engineering – Regulations –2014)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   What are the challenges in mobile communication?

2.   State the objectives of MAC protocols.

3.   What is the key mechanism in mobile IP?

4.   State the purpose of Home Location Register (HLR).

5.   List the subsystems of GSM.

6.   What is the function of Gateway GPRS support node (GGSN)?

7.   Mention two main design issues of MANET ?

8.   What are the important steps in Destination – Sequenced Distance – Vector Routing (DSDV)?

9.   What are the features of Blackberry operating system?

10. Write any two features of windows phone.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Describe the various random assignment schemes that are used in MAC protocol. (8)

    (ii) Discuss the various Reservation Based Schemes in MAC protocol. (5)

Or

(b) Explain in detail about hidden terminal problem and exposed terminal problem. (13)

12. (a) (i) Explain mobile IP requirement and terminologies. (8)

    (ii) Why the traditional IP cannot be used in the mobile network. In what way does mobile IP support mobile Hubs? (5)

Or

(b) Define I-TCP and explain indirect TCP (I-TCP) with the help of a suitable schematic diagram. (13)

13. (a) Describe about the system architecture of Global System for Mobile Communication. (13)

Or

(b) What is UMTS? Describe the function of HLR and VLR in call routing and roaming. (13)

14. (a) Illustrate DSR routing in detail and compare it with DSDV. (13)

Or

(b) Explain the architecture of VANET and various security attacks on VANET. (13)

15. (a) What are the features of mobile operating system? Explain in detail about android SDK. (13)

Or

(b) (i) Describe mobile payment system. Explain the different payment systems that are available. (8)

    (ii) What is M-commerce? Explain the advantages and disadvantages of M-commerce. (5)

PART C — (1 × 15 = 15 marks)

16. (a) What is the reaction of standard TCP in case of packet loss? In what situation does this reaction make sense and why is it quite often problematic in the case of wireless networks and mobility? (15)

Or

(b) Explain android software stack with neat diagram. (15)

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