Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 70758

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Sixth Semester

Computer Science And Engineering

IT 6601 — MOBILE COMPUTING

(Common to Information Technology)

(Regulations 2013)

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

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What are the limitations of Mobile computing?

2. What are the different Random Assignment Scheme in MAC?

3. What is the purpose of DHCP?

4. What is the purpose of agent solicitation message?

5. List the subsystems of GSM.

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

7. Why is routing in MANET so complex task?

8. Compare MANET versus VANET.

9. What are the special constrains and requirements of Mobile O/S.

10. Explain the Pros and Cons of M-commerce.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Discuss in detail the structure of a mobile computing application. (6)

(ii) Apply mobile computing to design Taxi dispatcher and monitoring service. Explain the components in detail. (7)

Or

(b) (i) List the characteristics of mobile systems. (6)

(ii) What is CSMA? What are the categories of CSMA? Explain their working with advantages and disadvantages. (7)

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) (i) What are the functions of authentication and encryption in GSM? How is system security maintained? (7)

(ii) Explain in detail about the handovers of GSM. (6)

Or

(b) (i) Explain the functions of GPRS protocol stack with a diagram. (7)

(ii) Explain in detail about UMTS architecture. (6)

14. (a) Describe the characteristics and applications of Mobile Ad hoc networks.

Or

(b) Summarize the two important classes of routing protocols for traditional networks.

15. (a) Explain various operating systems for mobile computing. (13)

Or

(b) Write detailed notes on mobile commerce. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Organize the steps involved in operation of Destination-Sequenced Distance-vector Routing protocol. Illustrate with an example.

Or

(b) Discuss in detail about the mobile IP working principle with a neat diagram. Explain the tunneling operation with a encapsulated format message. (15)

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