

72

Reg. No. :

Question Paper Code : 90805

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022

Sixth Semester

Information Technology

IT 8602 – MOBILE COMMUNICATION

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Illustrate Ad hoc Networks with pictorial representation.
2. "MAC protocol designed for infrastructure based wireless network may not work satisfactory in infrastructure-less environment". Justify.
3. Is 3G cellular wireless technology superior to 2G technology? Justify your answer.
4. What is the frequency range of uplink and downlink in GSM network?
5. Compare wired networks and adhoc wireless networks based on routing.
6. Differentiate between Wi-Fi and WiMAX.
7. Identify the issues that are addressed by routing protocol in MANET?
8. Distinguish Proactive and Reactive protocols.
9. Draw the time sequence chart for WSP/B session termination.
10. List the components in WAP.

PART B — (5 × 13 = 65 marks)

11. (a) (i) What is Mobile Computing? Explain its applications in the real world scenario. (7)
- (ii) Explain hidden and exposed terminal problem in infrastructureless network. (6)

Or

- (b) (i) What are the fixed assignment schemes of MAC protocol? Explain. (7)
- (ii) Differentiate between FDMA, TDMA and CDMA. (6)
12. (a) (i) Explain the protocol architecture for signaling in GSM. (6)
- (ii) Explain the functions of GPRS protocol stack with a diagram. (7)

Or

- (b) What do you mean by Virtual Home Environment (VHE)? Explain. how VHE is realized in 3G networks. (3+ 10)

13. (a) (i) Explain contention free access using polling mechanism in IEEE 802.11. (8)
- (ii) Explain the protocol stack of Bluetooth. (5)

Or

- (b) (i) Briefly explain about features and applications of ad-hoc networks. (7)
- (ii) Interpret the two MAC sublayers defined by IEEE 802.11 standard and explain. (6)
14. (a) (i) Explain about DHCP client initialization procedure. (6)
- (ii) What are reactive and proactive routing protocols? Specify its advantages and disadvantages. (7)

Or

- (b) (i) What are the security threats in a MANET? What are the factors responsible for limited security in MANETs? (6)
- (ii) For every layer of MANET protocol stack, show at least one type of security attack that exploits vulnerability at that layer. (7)

