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<b>Question Paper Code : 86586</b>
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B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Eighth Semester

Electronics and Communication Engineering

EC 1451 — MOBILE AND WIRELESS COMMUNICATION

(Regulations 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Why are linear modulation techniques attractive for wireless communication systems?
2. What are the special features of frequency hopping spread spectrum systems?
3. For the ALOHA Protocol, the vulnerable period is double the packet duration. Find the probability of no collision during the interval of  $2\tau$ .
4. Give the link layer characteristics of cellular Digital Packet Data (CDPD)?
5. What are the salient features of random way point model?
6. State the difference between proactive and reactive routing.
7. What is the need for Network Security?
8. Define Mobile IP.
9. Define simulation.
10. What are the merits and demerits of NS2 software?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Describe the different multiple access techniques and discuss their application in wireless networks. (12)
- (ii) Discuss the principle of frequency reuse. (4)

Or

- (b) (i) Explain the different handoff strategies for mobile cellular communication systems. (8)
- (ii) Describe the effect of fading and Doppler effect on the performance of wireless systems. (8)
12. (a) Explain in detail about protocols for 3G and 4G cellular networks. (16)

Or

- (b) Discuss in detail about
- (i) CSMA (8)
- (ii) Wireless LAN (8)
13. (a) Explain in detail about any two Mobile routing protocols with neat sketch. (16)

Or

- (b) Explain in detail about any two Mobility models used, in wireless networks. (16)
14. (a) Discuss the various issues and challenges of mobile network. (16)

Or

- (b) Describe the authentication algorithm adopted in mobile application. (16)
15. (a) Explain the features of Glomosim. (16)

Or

- (b) Explain the features of NS2. (16)
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