Paper / Subject Code: 89283 / Mobile Computing

T.E. SEM VI / COMP / DEC 2023 / C SCHEME / 15.12.2023

207 0 00HEME 7 10.12.2020



Time:3Hrs

Instructions:

- 1. Question No 1 is Compulsory, Attempt any Three from Q no 2 to Q No. 6
- 2. Describe your answers with neat sketches and examples wherever necessary
- 3. Assume Suitable Data if required and mention the same in your Answer.
- Q1 a) What are various Mobile Communication and Application Environments for the Following:
 - i) Business
 - ii) Location Based Services.
 - iii) Banking Services
 - iv) Vehicles
 - b) Explain Various Types of antennas along with their Radiation Pattern.
- Q2 a) What is Spread Spectrum? What are the various advantages for the same? 5
 - b) What are Various Advantages and Disadvantages of Small Cells in Cellular system 5
 - c) Explain DSSS and FHSS in detail.
- Q3 a) What do you mean by hidden & Exposed station Problem? How they can be avoided.
 - b) Explain GSM System Architecture in Detail 10
- Q4 a) Why it is necessary to have Handover Mechanism in GSM? Explain possible handover scenarios in short.
- b) List various Security services offered by GSM. Explain A3 A5 and A8 Algorithm in brief.
- Q5 a) Explain Packet Delivery Mechanism "To and From Mobile Node" with the help of Mobile IP Network Diagram.
- b) Explain Tunnelling and Encapsulation in brief. What are the various types of Encapsulation techniques.
- Q6. Write a Short Note on the Following. (ANY FOUR).
 - a) Bluetooth
 - b) HIPERLAN
 - c) IPV6
 - d) CDMA
 - e) Snooping TCP

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