

Dec.-22-0308

CS-702 (Wireless and Mobile Computing)

B.Tech. 7th (CBCS)

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt Five questions in all, selecting one question from each section A, B, C and D. Question no. 9 is compulsory.

SECTION - A

1. (a) What are the limitations / challenges of mobile computing?
(b) Explain about call forwarding in GSM. (5+5=10)
2. Explain the structure of Mobile computing? Compare 2G, 3G and 4G GSM generations on various parameters. (10)

SECTION - B

3. Why the traditional IP cannot be used in a mobile network? What are the main differences between the traditional IP and the mobile IP? How does mobile IP support mobile hubs? (10)
4. What is simple channel borrowing scheme? What are the specific advantages of static channel allocation over dynamic channel allocation strategies? (10)

SECTION - C

5. (a) What is Hidden and Exposed Terminal problem?
(b) What are the features / objectives of MAC protocols? (5+5=10)
6. Describe in detail about TDMA, FDMA, and CDMA and tabulate the differences among them. (10)

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SECTION - D

7. State DSR algorithm. With proper example, illustrate the DSR process of route discovery, route repair, data delivery and route caching. (10)
8. Comment on the scaling properties of source-initiated and receiver-initiated multicast protocols with respect to the number of sources and receivers in the group. Which of them would be suitable for (a) a teacher multicasting his lectures to a set of students (assume the student do not interact with one another) and (b) a distributed file sharing system? (10)

SECTION - E

9. Answer following questions in brief:
 - (a) Define DSSS.
 - (b) Define CSMA.
 - (c) What is cell sectoring?
 - (d) List the advantages of spread spectrum.
 - (e) What are the advantages of micro cell zone concept?
 - (i) Define Frequency reuse.
 - (g) What are IMSI and TMSI?
 - (h) Write down the functions of physical layer in IEEE 802.11.
 - (i) Write down the phases in HiperLAN.
 - (j) State two difference between AODV and DSDV. (10×2=20)