53 (CS 712) MBCP

2018

MOBILE COMPUTING

Paper : CS 712

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1. *(a)* Briefly answer the following questions : 2×7=14

   (i) Why radio waves are most suitable for mobile communication ?

   (ii) What would be the minimum reuse distance between the centres of two cells with the same band of frequencies if cell radius is 1 *km* and the reuse factor is 12 ?

   (iii) What is the difference between hard handoff and soft handoff ?

(iv) What do you mean by frequency hopping?

(v) Why routing in MANET is different?

(vi) Can we simply use the traditional TCP over a wireless link? Justify your answer.

(vii) What is the difference between transparent and non-transparent bearer service?

(b) Discuss the limitations of wireless communications. 6

2. (a) Draw the GSM architecture and explain the entities of NSS. 10

(b) Explain the basic scheme of CDMA system with suitable example. 10

3. (a) Explain the steps involved in call delivery procedure in GSM network in the following cases :

(i) Mobile terminated call

(ii) Mobile originated call.

8+4=12

(b) Discuss the services provided in GSM for the subscribers. 8

4. (a) When do hidden and exposed terminals problem arise? Explain your answer with suitable examples. 7

(b) What is handover? What are the basic reasons of handover? 1+2=3

(c) What do you mean by agent advertisement and agent solicitation? Explain IP packet delivery to and from a mobile node. 4+6=10

5. (a) What are the drawbacks of Indirect TCP? Explain Snooping TCP. 3+7=10

(b) Explain Dynamic Source Routing in MANET with a suitable example. How route caching is useful in DSR? 7+3=10

6. (a) What is MDS? What are the query types in MDS? Give example for each. 3+5=8

(b) Draw and explain the WAP architecture. 7

(c) What are the uses of EIR and AUC ? 5

7. Write short notes on the following : ***(any two)*** 10×2=20

(i) GSM TDMA frame structure

(ii) Security in MANET

(iii) Database hoarding.