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53 (CS 712) MBCP

2016

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. Briefly answer the following : **(any ten)**
2×10=20
- (i) What is the difference between hard handover and soft handover ?
 - (ii) What is the need for agent advertisement ?
 - (iii) What is reverse tunneling ?
 - (iv) State the advantages and disadvantages of mobile IP.

Contd.

- (v) Mention the services provided by GSM.
 - (vi) What is fading ?
 - (vii) Write the relationships among frame, multiframe, superframe and hyperframe.
 - (viii) Calculate the frequency reuse distance for a 7-cell group with cell radius of 3 miles.
 - (ix) What is the significance of TMSI ?
 - (x) Compare infrared and radio transmission.
 - (xi) What is COA ?
 - (xii) What are the advantages of M-TCP ?
2. (a) Draw the functional architecture of GSM. Explain the entities of Operation and Maintenance subsystem. 5+5=10
- (b) Why do MAC schemes in wired network fail in wireless network ?

10

3. (a) Explain the basic scheme of CDMA system. What is the role of a pseudorandom sequence generator in the working of the CDMA system ?
8+2=10
- (b) Explain the steps involved in the process of registration with a foreign agent with necessary packet formats.
10
4. (a) Draw the bluetooth protocol stack and explain the core protocols. 10
- (b) Explain the WAP architecture with a neat diagram. 10
5. Describe the working principle of indirect TCP and snooping TCP. Discuss their advantages and disadvantages. 20
6. (a) Explain dynamic source routing (DSR) in MANET with a suitable example. How route caching is useful in DSR ?
8+3=11
- (b) What is mobile database system (MDS) ? What are the query types in MDS ? Give example for each.
3+6=9

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

(i) Localization and calling in GSM

(ii) Database hoarding

(iii) GSM TDMA frame structure

(iv) Handover.
