53 (IT 815) MBCP

2019

MOBILE COMPUTING

Paper : IT 815

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 questions : ***(any ten)*** 2×10=20

   (i) What is the need for agent advertisement ?

   (ii) What is the difference between hard handover and soft handover ?

   (iii) What is COA ?

(iv) What are the advantages of M-TCP?

(v) What is reverse tunneling?

(vi) Compare infrared and radio transmission.

(vii) What is piconet and scatternet in Bluetooth?

(viii) State the advantages and disadvantages of mobile IP.

(ix) What is the difference between transport and non-transport bearer services?

(x) What do you mean by horizontal handoff and vertical handoff?

(xi) What is fading?

(xii) What is the relationship among frame, multiframe, superframe and hyperframe?

(xiii) What is the significance of TMSI?

2. (a) Calculate the frequency reuse distance for a 7-cell group with cell radius of 3 miles. 4

(b) Draw a functional architecture of GSM and explain entities of different sub-systems. 16

3. (a) Why do MAC schemes in wired network fail in wireless network? 10

(b) Explain the basic scheme of CDMA system. What is the role of pseudorandom sequence generator in the working of CDMA system? 8+2=10

4. Describe the working principel of indirect TCP and snooping TCP. Discuss their advantages and disadvantages. 20

5. (a) Draw the Bluetooth protocol stack and explain the Core protocols. 10

(b) Explain WAP architecture with a neat diagram. 10

6. (a) Explain Dynamic Source Routing (DSR) with a suitable example. How route caching is useful in DSR? 8+3=11

(b) What is Mobile database system ? 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) Adaptive clustering for Mobile wireless network

(iii) Mobile agents computing

(iv) QoS in ad hoc network.