

This question paper contains 2 printed pages]

3352

B.C.A. (Part III) EXAMINATION, 2007
COMPUTER NETWORKS AND MOBILE
COMPUTING

Twentieth Paper

Time allowed : Three Hours

Maximum Marks : 50

Attempt five questions in all. All questions carry equal marks.

1. Briefly differentiate between ISO-OSI reference model and TCP-IP model. According to you which model is better and why ? 10

2. (a) What is the relationship between data-rate and bandwidth of a signal ? Explain it with an example. 4

- (b) Differentiate among packet switching, message switching and circuit switching techniques. 6

3. Explain the basic difference in working of the following with suitable example :
 - (a) Gateways and Routers;
 - (b) Intranet and Internet. 5+5=10

500

P.T.O.

4. Briefly differentiate between TDMA and FDMA techniques. A cable T.V. system has 100 commercial channels, all of them have alternating programs with advertising. Is this more like TDM or like FDM ? 10
5. Briefly explain the AMPS, GSM and CDMA techniques in wireless mobile computing. 10
6. Differentiate between the following :
- (i) Uni-cast and multi-cast communication;
 - (ii) TCP and Wireless TCP. 5+5=10
7. Explain the following in IEEE 802.11 (Wireless LAN's) with suitable diagrams and examples :
- (i) BSS (Basic Service Set);
 - (ii) ESS (Extended Service Set);
 - (iii) DCF (Distributed Coordination Function)
 - (iv) PCF (Point Coordination Function). $2\frac{1}{2} \times 4 = 10$
8. Write short notes on the following :
- (i) Blue-Tooth Architecture;
 - (ii) Cordless Telephony. 5+5=10

This question paper contains 2 printed pages]

839

B.C.A. (Part III) EXAMINATION, 2008
COMPUTER NETWORKS AND MOBILE
COMPUTING

Twentieth Paper

Time allowed : Three Hours

Maximum Marks : 50

Attempt five questions in all. All questions carry equal marks.

1. What is meant by network topology ? Describe three commonly used network topologies with their relative advantages and disadvantages. 2+8
2. Describe the layering concepts in OSI model of network architecture with the function of each layer. 10
3. Explain how circuit switching method is used to link the sender and the receiver in a communication network. What are the advantages and disadvantages of this method of switching ? 4+6
4. List out the differences between FDMA and TDMA. Which method is suitable for communication between computers and why ? 4+6

1,000

P.T.O.

5. What do you mean by IEEE ? Define 'IEEE802.3' and IEEE802.11 briefly. 10
6. (a) What is token ? Explain its working in a ring topology.
- (b) Differentiate between narrow-band, voice-band and broad-band communication channels. Give a practical application of each. 4+6
7. What is 'Project 802' ? Who started this project ? Explain 802.15 (Bluetooth) in detail. 3+1+6
8. (a) Explain the term 'Security' and 'Privacy' in computer network. Also describe the layers of protection. 2+4
- (b) Write short notes on :
- (i) Satellite;
- (ii) Cordless telephony. 2+2
9. Describe all *three* divisions of multiple access (Channelization) with diagram. 10

This question paper contains 3 printed pages]

7136

B.C.A. (Part III) EXAMINATION, 2009

COMPUTER NETWORKS AND

MOBILE COMPUTING

Twentieth Paper

Time allowed : Three Hours

Maximum Marks : 50

Attempt five questions in all.

All questions carry equal marks.

1. What do you understand by protocols and protocol stack ? How are protocols combined in a stack ?

Explain. 2+2+6

2. What do you mean by inter-networking devices ? Explain the working of two inter-networking devices. 2+4+4

P.T.O.

3. Write short notes on the following :
- (a) Signal regenerating devices; 4
 - (b) Active Hub; 3
 - (c) Passive Hub. 3
4. How does an Ethernet LAN work ? Describe various implementations of Ethernet LAN. 4+6
5. Define DECT. Explain its working with cordless telephones. 3+7
6. What is orbit ? Describe the types of satellite orbits. Also write the application where satellites are used. 1+4+5
7. What is wireless LAN ? Define the services and standards of IEEE 802.11 family. 2+4+4

8. Differentiate the terms unicast, broadcast and multicast. 10
9. What is Land Mobile ? How is a PLMN different from a PSTN ? Describe. 4+6