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BICSE-006

00491

DIPLOMA IN COMPUTER SCIENCE ENGINEERING (BTCSVI)

Term-End Examination

December, 2012

BICSE-006 : ELECTIVE-COMPUTER NETWORKS

Time : 2 hours *Maximum Marks : 70*

Note : *Attempt **any five** questions. Question No.**1** is **compulsory.***

1. Choose the correct answer : **7x2=14**

(a) A 10 base-2 network is limited to

(i) 20 bytes per data field

(ii) 30 stations per segment

(iii) 40 segments

(iv) 500 feet of cable

(b) The address resolution protocol translates

(i) a physical address into a hardware address

(ii) an IP address into a logical address

(iii) a hardware address into a physical address

(iv) an IP address into a hardware address

(c) The network 198.78.41.0 is a

(i) Class A network

(ii) Class B network

(iii) Class C network

(iv) Class D network

(d) Which port is used by a TELNET communication session ?

(i) 21 (ii) 23

(iii) 25 (iv) 27

(e) Which topology requires a multipoint connection ?

(i) Mesh (ii) Star

(iii) Bus (iv) Ring

(f) Which LAN has the highest data rate ?

(i) 10 BASE 5

(ii) 10 BASE-T

(iii) Twisted pair token ring

(iv) FDDI

(g) Which of the following is a class A network address ?

(i) 128.4.5.6 (ii) 127.4.5.0

(iii) 127.0.0.0 (iv) 127 .8.0.0

2. (a) What is the difference between a physical address, a network address and a domain name ? And also discuss upward multiplexing. 7

(b) What are the IEEE standards ? Discuss the token format of IEEE 802.5. 7

3. (a) What are the options available with HDLC, discuss the frame format in detail. 7

(b) What are the reasons for using- layered protocol give OSI model and discuss the features of network layer in detail. 7

4. (a) What do you mean by network topology ? Discuss the problems and benefits of any three topologies. 7

(b) Find the transmitted frame, for a frame 1100101101 and $G(x) = x^4+x^2+1$ in CRC. 7

5. (a) Distinguish between packet switching and circuit switching and also discuss about virtual circuit switching. 7

(b) Explain the header format of IPv4 and IPv6. Compare each field. 7

6. (a) Discuss the various functions and responsibility of MAC sublayer of data link layer. 7

(b) How many layers are there in x.25 protocol ? Discuss functions of these layers. 7

7. (a) Define routing, in what way it is different from switching ? What are the various methods for Routing ? 7

(b) Explain TCP/IP model and compare it with OSI model. 7

8. Attempt *any four* parts from following. **3.5x4=14**

(a) ALOHA and Slotted ALOHA

(b) Sliding Window Protocol

(c) Mobile IP and Blue tooth

(d) DNS and DNS Server

(e) Unicast and Multicast routing

(f) FTP and TFTP