

Bachelor in Information Technology (BIT)

Term-End Examination

December, 2007

CSI-13 : NETWORKING

Time : 3 Hours

Maximum Marks : 75

Note : *There are two sections in this paper. All questions from Section A are **compulsory**. Answer any **three** questions from Section B. Multiple choice questions carry one mark each.*

SECTION A

1. Which of the following is **not** a standard user group of Windows NT ? 1
 - (a) Power user
 - (b) Replicator
 - (c) Backup operators
 - (d) Primary operators

2. A universal thin server is an appliance that network-enables any device with a _____ communications port. 1
 - (a) parallel
 - (b) serial
 - (c) simplex
 - (d) half-duplex

3. Router operates at _____ layer under OSI model. 1
 - (a) Transport
 - (b) Network
 - (c) Neither
 - (d) Both

4. IEEE 802-2 is _____ protocol. 1
 - (a) Token Bus
 - (b) Token Ring
 - (c) LLC
 - (d) DQDB

5. _____ is the IP address in the B class. 1
- (a) 125.123.123.2
 - (b) 192.122.31.52
 - (c) 191.023.21.54
 - (d) 10.14.12.34
6. Which layer is called as "True end to end" layer ? 1
- (a) Physical
 - (b) Network
 - (c) Application
 - (d) Transport
7. Which of the following standards is for MAN ? 1
- (a) IEEE 802.2
 - (b) IEEE 802.5
 - (c) IEEE 802.6
 - (d) FDDI
8. Which of the following permissions may the owner of directory **not** grant to the users ? 1
- (a) List
 - (b) No Access
 - (c) Add & Read
 - (d) Encrypt
9. HDLC is a _____ protocol. 1
- (a) Bit-oriented
 - (b) Flow control
 - (c) IEEE 802.6
 - (d) Character-oriented

10. The following medium does **not** use metallic conductor for transmission : 1
- (a) Twisted pair
 - (b) Coaxial cable
 - (c) Optical fiber
 - (d) None of the above
11. Assume you are designing a network for a university, which has 25 Lecture rooms, Administration department, 20 Teachers rooms and one management department. Each Lecture room and Teacher room is having a computer, while administration and management department has 20 computers, 10 printers and 2 FAX machines each. Administration is working as the central office which maintains all databases and main server. The main server is connected to all computers and servers of other departments.
- Give answers of the following, based on the network defined above :
- (i) Draw and explain the best suited physical and logical topology for the network specification. 4
 - (ii) Justify the need of each hardware device you may use in the network at different locations. 4
 - (iii) Which cable is best suited for this company ? Compare merits and demerits of all the available cables to justify your answer. 5
 - (iv) Which operating system is best for this company ? Justify your answer. 4
 - (v) Explain the best hardwares and softwares that can be used in the network to implement the security. 3

SECTION B

Answer any **three** questions from this section.

- 12.** (a) Explain any **two** functionalities of each of the following : 6
- (i) Physical layer
 - (ii) Data link layer
 - (iii) Transport layer
- (b) What is Token Ring ? How does it work ? In what way is it different from Ethernet ? Explain the fields in a Token Ring frame header. 9
- 13.** Write three differences between each of the following pairs : 15
- (a) IEEE 802.6 and IEEE 802.4
 - (b) Iterative and Recursive name resolution
 - (c) Coaxial cable and Fiber optics
 - (d) Centralized computing and Distributed computing
 - (e) Internet and Intranet
- 14.** (a) How does Windows NT manage file system ? Explain different systems supported by Windows NT. Write two advantages and two disadvantages of each model. 11
- (b) Explain the 'flow control' and 'error control' mechanism in X.25 protocol. 4
- 15.** (a) What are print servers ? Why do we need them ? What do you understand by print queue management ? 9
- (b) Explain the "Resource Password Security Model". 6