

**Bachelor in Information Technology (BIT)**

**Term-End Examination**

**June, 2007**

**CSI-13 : NETWORKING**

*Time : 3 Hours*

*Maximum Marks : 75*

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**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. There are two types of domain controllers : primary and \_\_\_\_\_.
  - (a) secondary
  - (b) functional
  - (c) backup
  - (d) standalone
  
2. IEEE 802.5 standard defines the \_\_\_\_\_ network.
  - (a) Token bus
  - (b) Token ring
  - (c) LLC
  - (d) DQDB
  
3. Sliding Window is a technique for
  - (a) error control
  - (b) flow control
  - (c) session management
  - (d) line discipline

4. UDP is \_\_\_\_\_ protocol.
- (a) connection oriented
  - (b) connectionless
  - (c) both
  - (d) neither
5. DNS name space in the Internet is \_\_\_\_\_ .
- (a) flat and centralized
  - (b) hierarchical and centralized
  - (c) flat and distributed
  - (d) hierarchical and distributed
6. To interconnect two homogeneous wide area networks, we should use
- (a) Router
  - (b) Bridge
  - (c) Repeater
  - (d) None of the above
7. Virtual terminal protocol is an example of the \_\_\_\_\_ layer.
- (a) Presentation
  - (b) Application
  - (c) Session
  - (d) Transport

8. To automate the dial-up procedural in Windows NT 4.0, you should include some script in which one of the following files ?
- (a) SWITCH.INF
  - (b) DIALUP.INF
  - (c) AUTOMATE.INF
  - (d) DIALUP.SYS
9. ISDN is designed to provide circuit switched and packet switched connection at
- (a) 32 kbps
  - (b) 64 kbps
  - (c) 128 kbps
  - (d) 96 kbps
10. Which is **not** a benefit of computer network ?
- (a) Resource sharing
  - (b) Saving money
  - (c) High reliability
  - (d) Security
11. Assume you are designing a network for a hospital, which has four departments in the hospital building like administration, OPD, Lab, and Maintenance. Each department has 20 computers, 4 printers and 1 FAX machine, while Administration department is working as the Central department which maintains all databases and the main server. The main server is connected with the 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.
  - (ii) Justify the need of each hardware device you may use in the network at different locations.
  - (iii) Which cable is best suited for this company ? Compare merits and demerits of all the available cables to justify your answer.

- (iv) Which operating system is best for this company ? Justify your answer.
- (v) Explain the best hardwares and softwares you should use in the network to implement the security.

### SECTION B

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

12. (a) Explain any **two** functionalities of each of the following :
- (i) MAC layer
  - (ii) Internet layer of TCP/IP model
  - (iii) Presentation layer
  - (iv) Network layer of OSI Model
- (b) Explain, how DTE sets-up and clears call by exchanging signals with DCE using X.21 interface. Draw suitable diagram to show signal lines used in X.21.
13. Write three differences between each of the following pairs :
- (a) Datagram Subnet and Virtual Circuit
  - (b) Single mode and Multimode fiber optics
  - (c) Local and global groups in Windows NT
  - (d) Hubs and Routers
  - (e) Twisted pair and Fiber optics
14. (a) How does Microsoft solve the problem of administrating a large number of servers on a single server ? Explain different network configurations available in Windows NT, with the help of a suitable diagram for each configuration.
- (b) How does Internet work ? Write two advantages and two disadvantages of Internet.

15. (a) What do you understand by the term FDDI ? Why is it beneficial as compared to ethernet bus topology ? Explain the advantages and disadvantages of FDDI.
- (b) What is application level proxy server ? How does it help to provide security in network ? Explain the layered structure of proxy server with the help of a diagram.