Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

# Q 2326

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Fifth Semester

Information Technology

IF 352 — COMPUTER NETWORKS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the different types of transmission media used for data communication.

2. What is the function of Modem? List some common Modem standards ... give their data rates.

3. Name the policies that can prevent congestion.

4. What is the main function of Data link protocols?

5. How does frame relay differ from X.25?

6. What services are provided by AAL?

7. List some common topologies for LAN.

8. Define the application areas for wireless LAN.

9. What is Virtual Terminal?

10. What are the tasks performed by the Presentation Layer?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the basic encoding techniques used for converting digital data to analog signals. (10)

    (ii) Compare various Switching techniques. (6)

Or

(b) (i) Explain Cyclic Redundancy Check (CRC) algorithm for error detection which can be described in three different ways. (10)

(ii) Compare the features of Time Division Multiplexing (TDM) and Frequency Division Multiplexing (FDM). (6)

12. (a) (i) Explain about HDLC frame structure. (10)

(ii) Briefly explain about Inter networking devices. (6)

Or

(b) (i) With an example show how routing table is updated in link state routing and Distance vector routing. (8)

(ii) Explain the functions of the layers in OSI Model. (8)

13. (a) (i) Describe two methods for transmitting ATM cells. (8)

(ii) Briefly explain the various categories of services provided by ATM. (8)

Or

(b) Explain in detail the Frame relay protocol architecture. Also describe how traffic control is implemented in Frame relay network. (16)

14. (a) Explain in detail ALOHA and Slotted ALOHA. (16)

Or

(b) Write short notes on the following .

(i) Token Bus (5)

(ii) IEEE 802 standard (5)

(iii) Key requirements for Wireless LAN. (6)

15. (a) (i) List and describe various approaches to Message authentication. (8)

(ii) Explain the functions of Session Layer. (8)

Or

(b) (i) Explain with an example RSA public key encryption algorithm. (10)

(ii) Discuss the issues related to Transport Layer. (6)