

D 40783

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Name.....

Reg. No.....

**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
DECEMBER 2007**

EC 2K 704—COMPUTER COMMUNICATIONS AND NETWORKING

Time : Three Hours

Maximum : 100 Marks

1. (a) Describe the basic concept of fast Ethernet.
(b) What are the characteristics of Ethernet ?
(c) Explain the Nagle's algorithm to the silly window syndrome.
(d) Describe the features of circuit switched Networks.
(e) What are the applications of Markov chain ?
(f) What is meant by queue ? Is quasi reversible ?
(g) What are features of ATM Networks ?
(h) What is the significance of virtual channel identifier and virtual path identifier in ATM address field ?

(8 × 5 = 40 marks)

- II. (a) (i) Write the functions of FDDI. (7 marks)
(ii) Write short notes on network services. (8 marks)

Or

- (b) (i) Describe the concept of ARP and ICMP. (5 marks)
(ii) What is the significance of MAC address ? (5 marks)
(iii) Write short note on V.LAN. (5 marks)

- III. (a) (i) Describe the congestion control in GCP and also explain the implications on mobility. (8 marks)
(ii) Explain the wage of six 1-bit flags in GCP header. (7 marks)

Or

- (b) (i) Explain the SONET frame format. 7 (marks)
(ii) Explain the window adjustment in TCP. (8 marks)

- IV. (a) (i) Discuss the queueing models for data gram networks. (10 marks)
(ii) Define and derive the equation for Little's theorem. (5 marks)

Or

- (b) (i) Explain the applications of multidimensional Markov chain in circuit switching. (10 marks)
(ii) Explain the applications of Little's theorem with the help of an example. (5 marks)

Turn over

(15 marks)

V. (a) Describe IP over ATM.

Or

(b) (i) Differentiate between ATM virtual circuits and ATM permanent virtual circuits ?

(8 marks)

(7 marks)

(ii) Write the functions of ATM sublayers SAR and CS.

(4 × 15 = 60 marks)