C 5448 (Pages : 2) Name.....

Reg. No.....

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SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2010

EC 04 704 – COMPUTER COMMUNICATION AND NETWORKING

(2004 Admissions)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

I. (a) Compare and contrast the communication technologies namely frame relay and DQDB.

(b) Differentiate between IPV_4 and IPV_6.

(c) Bring out the principle of CRC method of error detection with an example.

(d) What are the features, which make TCP a reliable protocol? What advantages does TCP have over UDP?

(e) Give the general form of notation used to specify queueing system.

(f) Discuss about discrete time Markov chain.

(g) Give the ATM cell format and justify it.

(h) How are the ATM cells multiplexed? Explain.

(8 × 5 = 40 marks)

II. (a) Explain the process of exchanging data units within a layer and between the layers of O and I model with a suitable diagram.

Or

(b) Describe the approaches by which packet loss is detected in Go-back-N ARQ protocol and selective reject protocol.

(15 marks)

III. (a) Explain in detail network management and protection architectures of SONET-SDH.

Or

(b) Explain the concepts of routing in :

(i) Datagram networks ; and

(ii) Circuit switched networks.

(15 marks)

Turn over

IV. (a) For H/M/I queueing systems, obtain the expressions for total waiting time and total number of customers. Also explain M/G/I queueing system.

Or

(b) Explain the significance of queueing model and derive the expressions for Little's formula and Poisson's statistics.

(15 marks)

V. (a) Describe about ATM adaptation layer, (AALI) process with a diagram and its PDU structure. Also explain the traffic management and congestion control in ATM.

Or

(b) What are the various types of services provided by ATM and explain briefly ATM protocol concepts used in Broad Band networks?

(15 marks)

[4 × 15 = 60 marks]