

# 2007 PUNJAB TECHNICAL UNIVERSITY M.C.A

MCA (Semester-2nd)

DATA COMMUNICATION & COMPUTER NETWORKS

(MCA - 203) (N2)

Time : 03 Hours

Maximum Marks : 60

**Roll No. ....**

Total No. of Questions : 09]

J-6415[N-0507/122] [Total No. of Pages : 02

[2957]

Instruction to Candidates:

- 1) Attempt any one question from each Section - A,B,C & D.
- 2) Section - E is compulsory
- 3) Use of Non-programmable Scientific Calculator is allowed.

Section – A

(1 \* 10 = 10)

Q1) Compare between Analog and Digital communication.

Q2) Briefly explain the various error corrections and error detection techniques.

Section - B

(1 \* 10 = 10)

Q3) What do you mean by switching? What are the main types of switching?  
Explain each.

Q4) Briefly chalk down the various tasks performed by the Physical Layer.

Section - C

(1 \* 10 = 10)

Q5) Explain the sliding window protocol with the algorithm used.

Q6) (a) Explain the reasons for congestion in networks.

(b) Describe briefly about leaky bucket technique of congestion control.

Section - D

(1 \* 10 = 10)

Q7) State the various design goals for TCP/IP reference model? Which are the various layers present in TCP/IP model? Briefly explain each layer.

Q8) Explain the role of transport layer briefly. Also explain the concept of flow control and buffering in this layer.

Section - E

(10 \* 2 = 20)

Q9) (a) Propagation time is ----- Proportional to distance and ----- proportional to propagation speed.

(b) Why is coaxial cable superior to twisted-pair cable?

(c) Name three types of transmission impairment

(d) In CRC, if data unit is 111111, the divisor is 1010, what are is the dividend at transmitter?

(e) Give the hamming code for the bit sequence 11011011.

(f) What is the purpose of flow control?

(g) An IP address is a ----- bit number.

(h) What do you mean by the ALOHA?

(i) Name four standard creating bodies in Computer Networking/Data communications.

(j) What is the difference between bit rate and baud rate?

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