MCA.V/11.13. 708

MCA DEGREE V SEMESTER EXAMINATION NOVEMBER 2013

CAS 2501 NETWORKS AND DATA COMMUNICATIONS

Time : 3 Hours Maximum Marks : 50

PART A

(Answer *ALL* questions)

(15 x 2 = 30)

I. (a) Differentiate broadcast networks and point to point networks
(b) Explain the types of transmission impairments
(c) Differentiate circuit switching and packet switching

II. (a) What is flow control and error control?
(b) Explain GSM
(c) Represent the bit string 1 0 1 0 1 1 1 0 0 1 0 1 using manchester encoding and differential manchester encoding.

III. (a) State the optimality principle in routing
(b) What is Tunnelling?
(c) Explain CIDR

IV. (a) Explain three way handshake
(b) Draw the format of TCP header. Explain its contents
(c) Explain the structure of the ATM Adaptation layer

V. (a) Explain PEM
(b) Explain URL
(c) Explain Transposition Cipher

PART B

(5 x 4 = 20)

VI. A. Discuss the functions of each layer in the OSI reference model

OR

B. Explain communication satellites.

VII. A. Explain with example, the sliding window protocol.

OR

B. Explain ALOHA and CSMA protocols

VIII. A. Explain Link State routing

OR

B. Explain Congestion control at the network layer.

IX. A. Explain TCP connection management

OR

B. Write short notes on:
(i) Flow control & buffering in transport protocol
(ii) Multiplexing in Transport protocol.

X. A. Explain DNS

OR

B. What is public key cryptography? Explain RSA algorithm.

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