MCA DEGREE V SEMESTER EXAMINATION DECEMBER 2014

CAS 2501 NETWORK AND DATA COMMUNICATIONS
(Regular & Supplementary)

Time: 3 Hours   Maximum Marks: 50

PART A
(Answer *ALL* questions)

$(15 \times 2 = 30)$

I.   (a)   Explain the various uses of computer networks.
     (b)   Write about frequency division multiplexing.
     (c)   Explain wireless transmission.

II. (a)   Write notes on cyclic redundancy check.
     (b)   Explain CSMA/CD.
     (c)   Write notes on wireless lams.

III. (a)   Explain link state routing.
     (b)   Differentiate between virtual circuit and datagrams.
     (c)   What is flooding?

IV. (a)   Explain TCP congestion control.
     (b)   Describe UDP header.
     (c)   Explain TCP segment structure.

V.   (a)   Explain DNS.
     (b)   Explain HTTP protocol
     (c)   Differentiate between symmetric key algorithms and asymmetric key algorithms. Give
           one example for each.

PART B

$(5 \times 4 = 20)$

VI.   Explain ISO/OSI reference model.
OR
VII.   Explain various guided transmission medias.

VIII. Explain the various services provided by the data link layer.
OR
IX.   Explain sliding window protocol.

X.   What is congestion? Explain any two congestion control algorithms.
OR
XI.   Explain the various techniques to achieve good QoS.

XII.   Explain TCP connection management. Draw the state diagram.
OR
XIII. Explain transport layer services.

XIV.   Explain RSA algorithm.
OR
XV.   Explain the e-mail system in detail.

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