END TERM EXAMINATION

FOURTH SEMESTER [MCA] MAY-JUNE 2012

Paper Code: MCA206	*Subject: Advance Computer Networks*

Time : 3 Hours   *Maximum Marks : 60*

Note: Attempt five questions including Q.no.1 Which is Compulsory. Select one question from each unit

Q1 (a) What is Hidden and Exposed problem?
    (b) Explain the advantages and disadvantages of Fiber Distributed Data Interface?
    (c) Explain the following term in respect to ATM technology:-
         Virtual Path, Virtual Connection, UNI, SVC, Octet
    (d) If the maximum effective bandwidth at which TCP is able to transmit over a particular path is B bytes per second then give the constraint that must be satisfied for error-free operation.
    (e) Differentiate between Wi Fi and Wimax.
    (f) How can reliable communication be implemented using unreliable Datagrams?
    (g) What is Route Optimization in MIPv6?
    (h) "In practice proper TCP implementations have demonstrated remarkable robustness in adapting to a wide range of network characteristics." Justify.
    (i) Explain briefly one-way Hash function.
    (j) Perform Encryption and Decryption using RSA alg. For the following P=7, q=11, e=17 and m=8.   **(2x10=20)**

UNIT-I

Q2 (a) Give the architecture of HIPPI Protocol. What are its limitations? Give their solution.   **(7)**
    (b) Identify and describe the problem areas for wireless MAC protocols.   **(3)**

OR

Q3 (a) Explain IEEE 802.6 Protocol. Comment on its fairness.   **(7)**
    (b) List the various types of Timers and Time Registers used in FIDDI.   **(3)**

UNIT-II

Q4 (a) Differentiate between Statefull and Stateless address assignment Protocols of IPv6.   **(6)**
    (b) Gives the Configuration Modes in OSPFv3.   **(4)**

OR

Q5 (a) Draw and explain the architecture and working of Cell Based Network.   **(7)**
    (b) Give the DNS configuration commands for IPv6.   **(3)**

UNIT-III

Q6 Explain Uni-cast and Multicast Addressing used in IPv6. Also, describe the format of IPv6 Multicast Address in detail.   **(10)**

OR

Q7 What are the new Security Threats that have been introduced in Mobile IPv6? Give there solutions.
                                                                                                      (10)

UNIT-IV

Q8 (a) Given 10 bit key=1010000010. By using SDES key generation method determine K1, K2 where P10=3 5 2 7 4 10 1 9 8 6, P8=6 3 7 4 8 5 10 9.   **(5)**
    (b) "S / MIME is not restricted to email" Justify, Write the functions provided by S / MIME.   **(5)**

OR

Q9 (a) Apply the MAC on the cryptographic checksum method to authenticate build confidentiality of the message where the authentication is tied to message M=8376, K1=4892, K2=53624071.   **(6)**
    (b) What is Authentication Header? How does it provide security?   **(4)**