END TERM EXAMINATION
THIRD SEMESTER [MCA] DECEMBER-2013

Paper Code: MCA 207   Subject: DATA
                                        COMMUNICATION   AND

Time : 3 Hours   Maximum Marks : 60

Note : Attempt any five questions including Q. no. 1 which is compulsory.
       Select one question from each Unit.

Q1   Answer the following briefly :-   **(2x10=20)**
      (a) Differentiate between half duplex and full duplex transmission mode.
      (b) Differentiate between port address, logical address and physical address.
      (c) Why do we need protocols. Which is the protocol of internet.
      (d) Explain Bluetooth technology.
      (e) How congestion can be prevented and removed.
      (f) Compare and contrast PCM and DM.
      (g) Define subnetting and supernetting.
      (h) Explain DNS system.
      (i) Differentiate between error correction and detection.
      (j) Compare and contrast PPP and HDLC.

UNIT-I

Q2   (a)categorize the four basic topologies in terms of line configuration?**(5)**
      (b)Explain Manchester and Differential Manchester scheme.draw the graph using the
         Following data streams-11111111,00001100,01010101.(5)
                                    OR
Q3   Explain the OSI model.How are OSI and ISO related to each other.Why TCP/IP
       protocol suite became the dominant commercial architecture.   **(10)**

UNIT-II

Q4   (a) How does single-bit error differ from burst error.**(2)**
      (b)What kind of error is undetectable by checksum.**(2)**
      (c)Explain GO-Back-N ARQ protocol.**(6)**
                                    OR

Q5   (a)Define framing and Why do we need it.**(3)**
      (b)Explain CSMA with collision detection.**(4)**
      (c)Define slotted ALOHA.**(3)**

UNIT-III

Q6   (a) Define IPv4 and IPv6.Compare and contrast the fields in headers of IPv4 and IPv6.Give
         the reason foe elimination of checksum from IPv6 header.**(8)**

      (b) Define tunneling.**(2)**

OR

Q7   (a) Define ARP and RARP.**(4)**

      (b) Give some adaptive and non-adaptive routing algorithms**.(6)**

UNIT-IV

Q8   (a) Short note on**(any 2)(3x2=6)**

        i.   E-mail
        ii.   WWW
        iii.   Multimedia

      (b)Explain RSA algorithm.**(4)**

OR

Q9   (a)which is a connectionless,unreliable protocol?Give some of its uses.Give its header format**.(5)**

      (b)Explain Digital signature technique.What all services are provided by Digital signature and
         Which service is not present. **(5)**

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