TE/Comp/ V CBSGS 28/5/2012
Computer Network.

Con. 4430-12. GN-8240

(3 Hours) [Total Marks : 100

N.B. :(1)Question No. 1 is compulsory.
(2)Solve any four questions out of the remaining.
(3)Marks assigned to the sub-questions as indicated.

1. a) With a neat diagram compare the uses and functions of different hardware components/devices used in an internetwork. (10)

   b) Compare virtual circuits and datagram subnets and show their diagrammatic representation during congestion control. (10)

2. a) What are the advantages of a variable length frame over fixed length frames. Explain the different framing methods. (10)

   b) Explain FDMA, TDMA and CDMA (10)

3. a) Derive the efficiency of Pure Aloha protocol (10)

   b) A receiver receives the code **11001100111.** When it applies the Hamming code algorithm the result is **0101.** Which bit has the error? What is the correct Hamming code? (10)

4. a) Describe the IPv4 header format in detail. (10)

   b) Explain the three protocol scenarios for establishing a connection using a 3-way handshake in TCP (10)

5. a) Explain DVR routing algorithm and mention the drawbacks of the algorithm when put into practice (10)
   b) Explain the working of Transactional TCP (10)

6. a) List the design features to be taken care of as congestion prevention policies in the different layers of network (10)

   b) Draw the layered structures and compare the two network reference models – OSI and TCP/IP (10)

7. Write notes on: (any two) (20)
   a) SONET
   b) Ethernet frame formats
   c) ADSL
   d) Satellite Communication