B.Sc (IT) Sem – I January – 2009
Sub:- Introduction Information

VT Oct 08-368

Con. 234–08.

TT–990

(3 Hours)   **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory**.
　　　(2) Attempt any **four** questions from remaining question Nos. **2** to **7**.

1. (a) Explain different modes of data transmission.　　　　　　　　10
    (b) Do the following conversion :—　　　　　　　　　　　　　　10
         (i)   Convert $(2AB)_{16}$ to Binary
         (ii) Convert $(101110)_2$ to Octal
         (iii) Convert $(12 \cdot 20)_{10}$ to Binary
         (iv) Convert $(337)_{10}$ to Hexa-decimal
         (v)   Convert $(1010110 \cdot 101)_2$ to Decimal.

2. (a) Explain concept of Virtual Memory and Cache Memory.　　　　6
    (b) Write difference between Analog and Digital Signal.　　　　　4
    (c) Explain Shannon's Theorem and channel capacity for sending data.　10

3. (a) Explain data transmission speed in detail.　　　　　　　　　10
    (b) What do you understand by modulation and demodulation.　　　10

4. (a) Define Topology. Explain different types of topology.　　　　10
    (b) Explain different Switching techniques and explain its advantages　10
         and disadvantages.

5. (a) Explain OSI model in detail.　　　　　　　　　　　　　　　10
    (b) Explain OCR, OMR and Joystick in detail.　　　　　　　　　10

6. (a) Explain the following transmission media :—　　　　　　　　10
         (i)   Co-axial Cable
         (ii) Fiber Optical Cable
         (iii) Twisted Pair Cable.
    (b) What is Protocol ? Explain transmission control protocol.　　　10

7. (a) Write a note on (any **two**) :—　　　　　　　　　　　　　10
         (i)   WAN
         (ii) HTTP
         (iii) Magnetic Tape.
    (b) Explain Secondary Memory in detail.　　　　　　　　　　　10

****