Name : ……………………………………………………………

Roll No. : ……………………………………………………

Invigilator's Signature : …………………………………….

CS/BMS(H)/SEM-3/MMS-305/2012-13
2012
INFORMATION & COMPUTER TECHNOLOGY

Time Allotted : 3 Hours   *Full Marks* : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A
(Multiple Choice Type Questions)

1.   Choose the correct alternatives of the following :   10 × 1 = 10

   i)   In half Duplex mode data is send in

      a)   one direction

      b)   both directions simultaneously

      c)   one direction at a time

      d)   none of these.

   ii)   AM and FM are examples of ……………… conversion.

      a)   digital-to-digital   b)   analog-to-analog

      c)   digital-to-analog   d)   analog-to-digital.

   iii) Which of the following is not a guided medium ?

      a)   Fibre optic cable   b)   Radio waves

      c)   Coaxial cables   d)   Fibre optics.

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iv) UTP stands for

    a)   Unguided Twisted Pair

    b)   Unshielded Twisted Pair

    c)   Unknown Twisted Pair

    d)   Unprotected Twisted Pair.

v) What is the name of the data in the data link layer of OSI ?

    a)   Segment   b)   Packet

    c)   Frame   d)   Fragment.

vi) The slowest transmission speeds are those of

    a)   twisted pair   b)   coaxial

    c)   fibre optic   d)   none of these.

vii) Which multiplexing technique transmits digital signals ?

    a)   FDM   b)   WDM

    c)   TDM   d)   None of these.

viii) Which topology requires a central controller hub ?

    a)   Mesh   b)   Star

    c)   Bus   d)   Ring.

ix) Every web page has a unique address, called a

    a)   Hyperlink   b)   Map

    c)   HTTP   d)   URL.

x) Which of the following transmissions uses start and stop bits ?

    a)   Baseband   b)   Broadband

    c)   Synchronous   d)   Asynchronous.

GROUP – B
(Short Answer Type Questions)
Answer any *three* of the following.   3 × 5 = 15

2. What is serial and parallel transmission ?

3. What do you mean by multiplexing ? Describe it with a suitable diagram.

4. Differentiate between analog and digital data. Write five components of a data transmission system.   3 + 2

5. What is line encoding ? Explain the different types of line encoding.   1 + 4

6. How is communication satellites used ?   What are the possible advantages and disadvantages of using communication satellites ?   2 + 3

GROUP – C
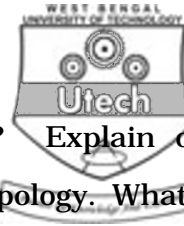### (Long Answer Type Questions)
Answer any *three* of the following.   3 × 15 = 45

7. Describe the OSI model. Write down the difference between guided media and unguided media.   10 + 5

8. What is advantage of fibre optic cable over twisted pair and coaxial cable ? What are AM, FM, ASK, FSK, PSK ?

9. What are the major advantage and disadvantage of radio wave transmission ? Describe analog-to-analog conversion.

      5 + 10

10. What do you mean by Network topology ? Explain one advantage and one disadvantage of each topology. What is cyber crime ? 2 + 10 + 3

11. Write short notes on any *three* of the following : 3 × 5

    a) Virtual channel

    b) Firewal

    c) FTP

    d) Synchronous time division multiplexing

    e) Proxy server.

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