Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/M.Tech (MCNT)/SEM-1/MCE-105A/2011-12
2011
COMPUTER COMMUNICATION AND NETWORKING

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.

Answer any *five* questions.   5 × 14 = 70

1. What is FDM ? Describe the working of FDM system. What is cross talk ?   2 + 10 + 2

2. a) Briefly describe the elements of a circuit switched mode.   3

   b) What are the advantages of circuit switching ?   2

   c) Compare circuit switching and packet switching.   3

   d) How packet switching works ?   6

3. a) Compare ALOHA and slotted ALOHA.   4

   b) Describe a system implementing CSMA/CD.   8

   c) What are the drawbacks of ALOHA ?   2

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4. a) What is HDLC and where is it used ? 4

   b) Explain initialization and data transfer in HDLC. 10

5. a) What is SIP protocol and state its use. 2

   b) Write name of any 3 SIP methods with description. 2

   c) Consider the case when Client *A* and Client *B* want to do an audio conferencing.

   Briefly describe the following scenario in the context of SIP.

   i) Client *A* is attempting to establish a session with Client *B*, but *B* is not signed in.

   ii) Client *A* subscribed a notification service. 5 + 5

6. a) Briefly describe RSVP architecture. 5

   b) What is meant by reservation merging ? 2

   c) What are the possible reservation styles ? 2

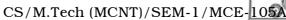   d) Discuss SE style reservation with example. 5

7. Write short notes on any *two* of the following :   2 × 7

   a)   TCP connection establishment

   b)   UDP

   c)   Leaky bucket algorithm

   d)   DES algorithm.

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