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Roll No. 0111 E 07 MED 7

**MEDC-204(A)**

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**M. Tech. (Second Semester)**  
**EXAMINATION, August, 2008**

**(Digital Communication)**

**NETWORK DESIGN TECHNOLOGY**

**(Elective-II)**

**[MEDC-204(A)]**

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Explain the various functionalities of layered model :
  - (i) TCP/IP /
  - (ii) OSI /
- (b) What are the actual bit sequences transmitted over a link with a protocol supporting bit stuffing when the bit sequences are :

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- (b) What are the advantages and disadvantages of ICMP time stamp requests and reply messages ?

3. (a) Draw and explain TCP state transition diagram.

- (b)- Draw and briefly explain format of UDP message. Write the advantages and disadvantages of preassigned UDP port numbers.

4. (a) Briefly discuss an exterior gateway protocol. Also write BGP characteristics.

- (b) What traffic congestion control functions have been defined for ATM network ? What do they perform ?

5. (a) Briefly discuss the parameters on which performance of LAN can be evaluated.

- (b) Explain B-ISDN UNI reference configuration and physical realization.

6. (a) What ATM features do the ITU-T signaling capability sets support ? What additional signaling function do the ATM forum specifications provide ?

- (b) Briefly discuss the basic principles of multiprotocol over ATM.

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7. Write short notes on any three of the following :

- (a) X.25
- (b) IPV4 & IPV6
- (c) AAL
- (d) OSPF