Roll No. ..... **Exam Code : J-19**

Subject Code—0121

M. Sc. (CS)/M.C.A. EXAMINATION

(Main & Re-appear)

(Batch 2009 Onwards)

(Fourth Semester)

(MCA-3 Years)

COMPUTER NETWORKS

MS-16

Time : 3 *Hours* *Maximum Marks :* 70

Section A

1. Describe any seven of the following in **50** words each : **7×5=35**

(i) Connection Oriented Transmission

(ii) Wireless Transmission

(iii) Flow Control

(iv) CSMA/CD

(v) TDM

(vi) DQDB

(vii) UNI ATM Cell

(viii) Buffering

(ix) IPV_4

(x) IPV_6.

Section B

Note : Attempt all the questions.

2. If a binary signal is sent over a 3 kHz channel whose signal to noise ratio is 20 dB, what is the maximum achievable data rate ? Also discuss Nyquist and Shannon's theorem.

Or

Explain different types of topologies in computer network along with different guided and unguided medias. **12**

3. Draw and explain frame format and working of token ring, token bus and ethernet technology.

Or

Compare the following with examples :

(i) Half Duplex and Full Duplex

(ii) TCP and UDP

(iii) HDLC and SDLC. **12**

4. Write short notes on any *two* of the following :

(i) Packet Switching

(ii) X.25 protocol

(iii) ATM

(iv) ISDN. **11**