Roll No. .....

Subject Code—655-X

M. Sc. EXAMINATION

(Third/Fourth Semester)

(Re-appear)

COMPUTER SCIENCE

MS-16

Computer Network

Time : 3 *Hours* *Maximum Marks :* 100

Note : Attempt any *Five* questions.

1. (a) How does information get passed from one layer to the next in the OSI model ? Also explain how headers are added and removed ? **10**

   (b) We measure the performance of a telephone line (4 kHz of bandwidth). When the signal is 20V the noise is 6 mV. What is the maximum data rate supported by this telephone line ? **10**

2. (a) List three different techniques in serial transmission and explain the differences. Also define characteristics of a self-synchronizing signal. **10**

(b) Explain different analog to analog conversion techniques. **10**

3. Differentiate between the following :

(a) Half duplex and full duplex

(b) Analog and digital transmission

(c) HDLC and SDLC. **20**

4. Explain the following multiple access techniques with diagram : **20**

(a) TDMA

(b) FDMA

(c) CDMA.

5. Draw and explain frame format of the following IEEE LAN standards : **20**

(a) 802·3

(b) 802·4

(c) 802·5

6. Explain different routing and flow control techniques at network layer (2 each). **20**

7. Explain ATM reference model and its relationship to B-ISDN. **20**

8. Write short notes on the following :

(a) X·25

(b) TCP/IP. **20**