DATA COMMUNICATION
AND NETWORKING

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer any *five* questions.

1. (a) What are the different protocol used for networking ? Mention the features of the TCP/IP protocol. 7

   (b) Describe the CSMA/CD protocol for medium access. 7

2. (a) What is the function of a server in LAN ? 6

   (b) What is a network operating system ? Describe the features of a network operating system. 2+6=8

3. (a) Differentiate between broad-band and base-band communication. Mention their areas of application. 6

(b) Explain the RS-232 standard. Describe the signals used in RS-232. 8

4. (a) Describe with diagrams the different types of media used for data communication. 8

(b) Explain the structure of the Internet. 6

5. (a) What are the layers in ISO/OSI model in sequence and draw the diagram. 7

(b) Describe the function of each layers in details. 7

6. (a) Draw and explain the internal block diagram of 8251 USART. 8

(b) Explain the function of a MODEM used in serial communication. 6

7. Write short notes on any *two* : 7×2=14

(a) Bridges, repeaters and gateways.

(b) ATM switching.

(c) Frame format of IEEE 802·3.

(d) Synchronous and Asynchronous Communication.