Total No. of Questions—**8**] [Total No. of Printed Pages—**3**

Seat No.	

[5152]-579

S.E. (I.T.) (II Sem.) EXAMINATION, 2017

FOUNDATIONS OF COMMUNICATION & COMPUTER NETWORK

(2015 PATTERN)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Answer Question Nos. **1** *or* **2**, **3** *or* **4**, **5** *or* **6**, **7** *or* **8**.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if necessary.

1. (*a*) Explain with examples different addressing schemes used in TCP/IP. [6]

(*b*) Draw a neat waveform for amplitude modulation : [6]

(*i*) Modulating signal

(*ii*) Carrier signal

(*iii*) Amplitude modulated signal.

Or

2. (*a*) Calculate the maximum bit rate of Channel having bandwidth 1200 Hz if : [6]

(*i*) S/N ratio is 0 dB

(*ii*) S/N ratio is 20 dB.

P.T.O.

(*b*) Explain the difference between Phase modulation and frequency modulation. [6]

3. (*a*) Explain the following shift keying Techniques with suitable examples : [7]

(*i*) ASK

(*ii*) FSK

(*iii*) PSK.

(*b*) What is CRC ? Generate the CRC code for message 1101010101. Given generator Polynomial $g(x) = x^4 + x^2 + 1$. [6]

Or

4. (*a*) Draw and explain PCM and DM. [7]

(*b*) Explain in detail Go-Back-N and Selective Repeat ARQ System. [6]

5. (*a*) Explain CSMA and CSMA/CD. Also comment on the efficiency of each. [6]

(*b*) Explain FDMA, TDMA and CDMA in detail. [6]

Or

6. (*a*) Explain FDM and statistical TDM. [6]

(*b*) Discuss CSMA/CA random access technique. How collision avoidance is achieved in this technique ? [6]

7. (*a*) Discuss Fast Ethernet technology in brief. State its specification. [6]

(*b*) Compare and contrast circuit switched network with packet switched network. [7]

Or

8. (*a*) Explain circuit switched network with three phases. [6]

(*b*) Explain the frame format for IEEE 802.3. [7]