Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[5252]-179

S.E. (Information Technology) (Second Semester)

EXAMINATION, 2017

FOUNDATION OF COMPUTER NETWORKS

(2012 PATTERN)

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

N.B. **:—** (*i*) Solve Q. No. **1** *or* Q. No. **2**, Q. No. **3** *or* Q. No. **4**, Q. No. **5** *or* Q. No. **6**, Q. No. **7** *or* Q. No. **8**.

(*ii*) Neat diagrams must be drawn wherever necessary.

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

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

1. (*a*) Explain the functions of various components in basic communication system with suitable diagram. [4]

(*b*) Explain Nyquist theorem with suitable example. [4]

(*c*) Explain the Manchester coding with suitable diagram. [4]

Or

2. (*a*) Explain the concept of multiplexing. Explain FDM and TDM techniques ? [6]

(*b*) List of various transmission medias. Explain any *two* guided media with help of the diagram. [6]

3. (*a*) Explain circuit switched network along with its advantages and disadvantages. [6]

P.T.O.

(*b*) Draw ISO-OSI Reference model. Explain functions of each layer in brief. [7]

Or

4. (*a*) Explain TCP/IP Reference model with help of suitable diagram. [5]

(*b*) Enlist various connecting devices used in network and explain any *two* in detail. [4]

(*c*) What is connection oriented and connectionless services ? [4]

5. (*a*) Explain CRC encoder and decoder with suitable example. [7]

(*b*) Explain internet checksum method with the help of an example. [6]

Or

6. (*a*) Explain stop and wait ARQ technique with suitable diagram. [7]

(*b*) Explain pure and slotted ALOHA. [6]

7. (*a*) Explain CSMA/CD technique in detail. [6]

(*b*) Explain Gigabit Ethernet briefly. [6]

Or

8. (*a*) Explain TDMA and FDMA technique. [8]

(*b*) Write a short note on HDLC protocol. [4]