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

Seat No.	

[4657]-586

S.E. (Information Technology)

(Second Semester) EXAMINATION, 2014

FOUNDATION OF COMPUTER NETWORKS

(2012 PATTERN)

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

N.B. **:—** (*i*) Answer 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*) Figures to the right indicate full marks.

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

1. (*a*) Write short note on Analog Signals and Digital Signals with the help of waveforms. [6]

(*b*) How is the bandwidth of a signal related to its spectrum ? [6]

Or

2. (*a*) Explain various transmission impairments present in Data Communication. [6]

(*b*) Draw and explain PCM and DM. [6]

P.T.O.

3. (*a*) Explain Circuit switched network with three phases. [7]

(*b*) Explain in detail backbone networks. [6]

Or

4. (*a*) Explain various types of Unguided media in detail. [7]

(*b*) Explain different addressing schemes in TCP/IP model. [6]

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

(*b*) Explain in detail Stop and Wait and Selective Repeat ARQ System. [6]

Or

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

(*b*) Explain Error Detection and Correction in Block coding. [6]

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

(*b*) Discuss CSMA/CA random access technique. How is collision avoidance achieved in this technique ? [7]

Or

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

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