

**2016**

**M.Sc. 1st Semester Examination**

**COMPUTER SCIENCE**

**PAPER—COS-103**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

**( Computer Network )**

Answer any *four* questions.

1. (a) What are the differences between simplex, half duplex and full duplex ?
- (b) Write down the different types of topology with examples.
- (c) Compare and contrast between OSI and TCP/IP reference model.

3+4+3

*(Turn Over)*

2. (a) What is ARQ ? Describe Go-Back-N and Selective-Reject ARQ technique ?
- (b) State the differences between Packet switching and Circuit switching ?
- (c) Differentiate between virtual circuit and datagram technique.

5+3+2

3. (a) Describe three-way handshaker in TCP.
- (b) What is port address and what are their utility ?
- (c) What is congestion in network ? Describe any one congestion control algorithm.

3+(1+2)+4

4. (a) Write any one shortest path routing algorithm.
- (b) Describe the structure of three frames of HDLC protocol.

5+5

5. (a) Describe CSMA/CD technique with the help of flowchart.
- (b) Write down the differences between pure ALOHA and slotted ALOHA.
- (c) What is piggy backing ?

5+3+2

6. Write short notes on (any four) :

$4 \times 2\frac{1}{2}$

- (a) CRC ;
- (b) Remote Procedure Call ;
- (c) DNS ;
- (d) FTP ;
- (e) www ;
- (f) Physical Network Address.

**[ Internal Assessment — 10 ]**

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