

S.C.No.—D/19/2004306

B. Sc. EXAMINATION, Dec. 2019

(Third Semester) (Main/Re-appear)

COMPUTER SCIENCE

3.1

Data Communication and Networking

Time : 3 Hours

Maximum Marks : 40

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) Define Bus Topology. 2
- (b) What do you mean by Bandwidth ? 2
- (c) Define Ethernet. 2
- (d) What do you mean by Domain Name System ? 2

Unit I

2. Explain OSI reference model. 8
3. Explain the following :
 - (i) Ring Topology
 - (ii) MAN
 - (iii) Bridge
 - (iv) HUB. 4×2=8

Unit II

4. What do you mean by Transmission media ? Explain the various guided media along with advantages and disadvantages. 8
5. What do you mean by Multiplexing ? Explain the various types of multiplexing in detail. 8

Unit III

6. What do you mean by Routing algorithm ? Explain any *three* routing algorithms.

7. (a) Explain wireless LANs along with architecture, advantages and disadvantages. **5**
- (b) What do you mean by Framing ? Explain any *two* framing methods. **3**

Unit IV

8. Explain the following : **4×2=8**
- (i) World Wide Web
 - (ii) UDP
 - (iii) Remote Procedure Call
 - (iv) Flow Control by Transport Layer.
9. Explain the following : **2×4=8**
- (i) Transport Protocol
 - (ii) Electronic Mail along with advantages and disadvantages.