

Faculty of Engineering & Technology

Sixth Semester B.E. (Computer Science Engineering)

(C.B.S.) Examination

COMPUTER NETWORKS

Time—Three Hours]

[Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

- (1) All questions carry marks as indicated.
- (2) Solve Question No. 1 OR Question No. 2.
- (3) Solve Question No. 3 OR Question No. 4.
- (4) Solve Question No. 5 OR Question No. 6.
- (5) Solve Question No. 7 OR Question No. 8.
- (6) Solve Question No. 9 OR Question No. 10.
- (7) Solve Question No. 11 OR Question No. 12.
- (8) Due credit will be given to neatness and adequate dimensions.
- (9) Illustrate your answers wherever necessary with the help of neat sketches.

Q. (a) Identify the TCP/IP model layer that perform following action :

- (i) Processes requests from hosts to make sure a connection is made to the appropriate port.
 - (ii) Defines the types of connection established between hosts.
 - (iii) Defines protocols used for addressing.
 - (iv) Defines how host connects to network. 4
- (b) Discuss similarities and differences in TCP/IP and OSI model. 9

OR

2. (a) What are different directions of data flow in network ? Explain each and provide a real time example for each. 7
- (b) Explain various categories of Network. 6
3. (a) What is error detection and error correction ? Discuss two methods of error correction. 10
- (b) Explain stop and wait ARQ protocol. 4

OR

- Q. (a) What do you mean by framing ? Discuss framing methods. 8

- (b) Explain selective repeat ARQ. 6
5. (a) Discuss the channel allocation issue. How is it resolved ? 7
- (b) Write notes on :
- (i) Traditional Ethernet
- (ii) Fast Ethernet. 6

OR

- ✓6. (a) Explain point to point protocol and LCP. 7
- (b) Explain pure ALOHA and slotted ALOHA. 6
7. (a) What do you mean by routing ? Discuss static vs. dynamic routing. 7
- (b) Explain what is distance vector routing ? 6

OR

- ✓8. (a) What routing technique is applied in flooding ? How flooding affect network performance ? 7
- (b) Explain what is link state routing ? 6
9. (a) Explain the protocol used for mapping logical address to physical address. 7
- (B) Compare and contrast IPv₄ vs IPv₆. 7

OR

10. (a) What do you mean by congestion ? How choke packet algorithm helps congestion control ?

7

(b) Write notes on :

(i) Leaky bucket algorithm

(ii) Token bucket algorithm.

7

11. (a) How TCP is different from UDP ? Why both are required in transport layer ?

7

(b) What do you mean by Quality of Services ? Discuss technique to improve QoS.

6

OR

12. (a) What is ISDN ? Explain ISDN services.

7

(b) Write notes on :

(i) IEEE 802.11

(ii) Bluetooth.

6