

N

(Printed Pages 7)

(201217)

Roll No.....

B.C.A. - V Sem.

18023

B.C.A. Examination, Dec. 2017

Computer Network

(BCA-503)

(New Course)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt all the **five** questions. Each question carries **3** marks. Select the correct option from the given multiple choices for the following questions. $3 \times 5 = 15$

P.T.O.

1. Repeater operates in which layer of OSI model? 3
- (a) Application layer
 - (b) Presentation layer
 - (c) Physical layer
 - (d) Transport layer
2. A networking device that forwards data packets along networks and acts as a central point of network is called- 3
- (a) Repeater
 - (b) Router
 - (c) Bridge
 - (d) Hub
3. Multiplexing technique that shifts each signal to a different carrier frequency. 3
- (a) FDM

- (b) TDM
- (c) Either a or b
- (d) Both a and b

4. A local telephone network is an example of a _____ network. 3

- (a) Packet switched
- (b) Circuit switched
- (c) Both of the mentioned
- (d) None of the mentioned

5. Which one of the following task is not done by data link layer? 3

- (a) Framing
- (b) error control
- (c) flow control
- (d) Channel coding

Section-B

(Short Answer Questions)

Note : Answer any **two** questions out of the following **three** questions. Each question carries $7\frac{1}{2}$ marks. $7\frac{1}{2} \times 2 = 15$

6. (a) Explain how the packets are transmitted by using TCP approach. Explain in detail with neat sketch. 4
- (b) Difference between circuit switching and packet switching. $3\frac{1}{2}$
7. (a) During the communication, how various layers of OSI model exchange information to establish a connection? Describe with the help of a suitable diagram. 4
- (b) List and explain the components and topologies of the network design. $3\frac{1}{2}$

8. (a) What is multiplexing? Why multiplexing is required? What are the differences between upward multiplexing and downward multiplexing? 4

(b) Discuss in detail about the role of DNS. 3½

Section-C

(Detailed Answer Questions)

Note : Answer any **three** questions out of the following **five** questions. Each question carries **15** marks. $15 \times 3 = 45$

9. (a) Write short notes on internetworking issues. 8

(b) Explain why routing is very important in networking. Illustrate any one of the routing algorithm used in networks. 7

10. (a) Describe the connection establishment and connection release in TCP and explain how TCP provides reliability using error control. 8
- (b) Differentiate LAN, MAN and WAN network topologies. 7
11. (a) Compare OSI reference model with the TCP/IP model. 8
- (b) Describe the services provided by PPP protocol. Also list some services which PPP does not provide? 7
12. (a) Discuss the user datagram protocol in brief. 8
- (b) Explain how connections are established at the transport layer. 7

13. (a) Mention any three special cases of IP addresses and their roles in networking. 8

(b) Explain about the key role of WWW and URL in Internet with suitable tracing. 7