

Paper Code : 21322

F-422

B.C.A. (Fifth Semester) Examination, 2022-23

(New Course)

Paper-BCA-502-N

COMPUTER NETWORK

Time : Three Hours | Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal i.e.14 marks. Symbols are used have their usual meanings.

1. (a) Differentiate LAN, MAN and WAN.
(b) How OSI reference model is different from TCP/IP model? Explain with the help of blok diagram.
2. (a) Explain the types of various transmission media.

- (b) Describe pacpot circuit switching with the help of suitable diagram.
3. (a) What are the ISDN services?
(b) Differentiate TDM and FDM.
4. (a) Explain the role of data-link layer. How sliding window protocol works?
(b) Define the following terms :
 - (i) ALOHA
 - (ii) ATM
5. (a) What are various types of topologies? Explain each with its proper structure. Also compare them on the basis of merits & demerits. <https://www.mjpruonline.com>
(b) How "Routing" is useful in networking? Explain the principle of shortest path routing in detail.
6. (a) Write clear difference among router and switch. What is the importance of repeater in any computer network.

- (b) What is the role of firewall? Illustrate in detail.
7. (a) Describe various services & protocols in the transport layer.
- (b) Summarize all the network security issues and challenges. How to handle with all such issues.
8. Write briefly about any **four** of the following :
- (i) CSMA protocol
 - (ii) X.25
 - (iii) Bridges
 - (iv) Tunneling
 - (v) E-mail protocols