

BACHELOR OF COMPUTER APPLICATION
Third Semester
COMPUTER NETWORKS
(BCA- 13)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive)=50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Answer the following questions (any five):

2 × 5 =10

- a) What are the advantages of using computer networks?
- b) Write down the working principle of ring topology.
- c) What is domain name addressing?
- d) Write about different types of Ethernet.
- e) List any two advantages of bus topology
- f) What is NIC?
- g) What is firewall?

2. Answer the following questions (any five):

3 × 5 =15

- a) Describe the components of fiber optic cable. Draw a picture.
- b) Differentiate between baseband and broadband.
- c) What are the different types of firewalls available?
- d) What is the need for network security?
- e) What is modem?
- f) Write about TELNET.
- g) Write short notes on HUB.

3. Answer the following questions (any five):

5 × 5 = 25

- a) What is network topology? Write down the advantages and disadvantages of star topology.
- b) Compare OSI/ISO and TCP/IP reference model.
- c) List out the advantages and drawbacks of tree topology.
- d) Briefly write functionalities of different TCP layers.
- e) Write short notes on: i) URL and ii) UDP.
- f) Write about IP addressing.
- g) Write down the limitations of firewall.

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(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes

Marks – 20

PART A- Objective Type

A. Choose the correct option from the following: 1×20=20

1. Computer network is
 - a) Collection of hardware components and computers
 - b) Interconnected by communication channels
 - c) Sharing of resources and information
 - d) All of the above
2. Which of the following layer is not in OSI model
 - a) Physical layer
 - b) Internet layer
 - c) Network layer
 - d) Transport layer
3. Copper wire is an example of
 - a) Guided transmission media
 - b) Unguided transmission media
 - c) Group media
 - d) None of the above
4. A computer circuit board installed in a computer so that it can be connected to a network
 - a) NIC
 - b) Switch
 - c) RJ45
 - d) Hub

5. Which of the following is unbound transmission media
- UTP
 - Fiber optics
 - Microwave
 - Co-axial
6. A form of wireless transmission in which signals are sent via pulses of infrared light?
- radio networking
 - infrared transmission
 - microwave transmission
 - none of above
7. _____ topology can be considered as an extension to BUS topology.
8. _____ provides a connection-oriented reliable service for sending messages
- TCP
 - IP
 - UDP
 - All of the above
9. In BUS topology, at each end of the bus is a _____, which absorbs any signal, removing it from the bus.
10. The two alternatives for the operation of the central node in STAR topology are:
_____ and _____.
11. A _____ is a computer connected to two networks?
- gateway
 - link
 - server
 - bridgeway
12. Which model is used by Internet applications?
- Login
 - Distributed server
 - Digital server
 - Client/server
13. In the client/server model, a client program
- Asks for information
 - Provide information and files
 - Servers software files to other computers
 - Distributes data files to other computers

14. Which of the following is required to communicate between two computers?
- a) Communication software
 - b) Protocol
 - c) Communication hardware
 - d) All of the above including access to transmission medium
15. What is a firewall in computer network?
- a) The physical boundary of network
 - b) An operating system of computer network
 - c) A system designed to prevent unauthorized access
 - d) A web browsing software
16. DNS is abbreviation of
- a) Dynamic name system
 - b) Dynamic network system
 - c) Domain name system
 - d) Dynamic network system
17. What is the use of bridge in network?
- a) To connect LANs
 - b) To separate LANs
 - c) To control network speed
 - d) All of the above
18. IPV4 address is
- a) 8 bit
 - b) 16 bit
 - c) 32 bit
 - d) 64 bit
19. A network architecture in which each workstation (or PC) within the network has equivalent responsibilities and capabilities is normally known as:
- a) a client-server network
 - b) a peer-to-peer network.
 - c) a wide area network (WAN).
 - d) a local area network (LAN).
20. Within a computer network, a router would perform which one of the following functions?
- a) Select network pathways/links within a network for the flow of data/information.
 - b) Forward data packets to their network destination.
 - c) Amplify and rebroadcast signals in a network.
 - d) Provide for communication within the network
