



*Hambal P*

## Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)

Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Arrear Examination – November 2025

IV Semester

Batch : 2023

Major : Computer Science

Time: 3 Hrs

Max. Marks: 100

### 23BCSC07 Computer Networks

Course outcomes:

CO1: Explain the reference model soft networks and fundamentals of networks

CO2: Describe the switching mechanisms

CO3: Analyse the Data Link Layer functions and the protocols associated with it

CO4: Analyse the Multiple Access protocols and the functions of the network layer

CO5: Outline the Transport Layer and Application Layer Functions and Protocols

#### Part A

#### Choose the Correct Answer

10 x 1 = 10

1. The transmission which has the highest transmission speed in a network is \_\_\_\_\_ CO1K1
  - a. Co-axial
  - b. Twisted-Pair
  - c. Optical fiber
  - d. Electrical cable
2. Bluetooth is an example of \_\_\_\_\_ CO1K1
  - a. Public
  - b. LAN
  - c. Personal
  - d. VPN
3. In TCP-IP model, when data is send from device A to Device B, the 5<sup>th</sup> layer to receive the data at B is \_\_\_\_\_ CO3K1
  - a. Application layer
  - b. Transport layer
  - c. Link Layer
  - d. Session layer
4. When the inter-mediate nodes receive a message before sending it on to the next node is called as \_\_\_\_\_ CO3K1
  - a. Packet switching
  - b. store and - forward switching
  - c. cut-through switching
  - d. All the above
5. The network layer concerns with \_\_\_\_\_ CO2 K1
  - a. Bits
  - b. frames
  - c. packets
  - d. router
6. Version 6 of IP address has how many bits CO5K1
  - a. 64 bits
  - b. 128 bits
  - c. 32 bits
  - d. 256 bits
7. Expand UDP CO4K1
  - a. User datagram protocol
  - b. Uni datagram protocol
  - c. Unique data protocol
  - d. User data protocol
8. The upper layers 5 to 7 are called CO3K1
  - a. Transport service provider
  - b. Transport service user
  - c. Transport service primitive
  - d. all of the above
9. Which of the following devices translates hostname into IP addresses ? CO5K1
  - a. DNS Server
  - b. Hub
  - c. DHCP Server
  - d. Firewall
10. An endpoint of an inter-process is called CO2K1
  - a. socket
  - b. pipe
  - c. port
  - d. hub

**Part B**

**5 x 6 = 30**

**Answer the following**

**Each answer should not exceed 400 words or two pages**

- 11 a. Briefly explain the connection oriented and connectionless services. CO1K2  
(or)
- 11 b. Write short notes on coaxial and fibre optic cable. CO1K1
12. a. Briefly explain the services provided by the data link layer to network layer. CO2K2  
(or)
12. b. Explain the working of One bit sliding window protocol in brief. CO2K1
13. a. Write short notes on: (i) Baud rate (ii) Bandwidth CO3K1  
(iii) Data Transmission modes.  
(or)
13. b. Explain briefly on framing methods and frame structure in detail. CO3K2
14. a. Explain in brief the Internet Control Message Protocol. CO4K2  
(or)
14. b. Write short notes on count to infinity problem in distance vector routing. CO4K1
15. a. Briefly explain the services provided by transport layer to other upper layers. CO5K2  
(or)
15. b. Write short notes on World Wide Web. CO5K1

**Part C**

**5 x 12 = 60**

**Answer the following**

**Each answer should not exceed 800 words or four pages**

- 16.a. Explain elaborately the different layers of OSI Reference Model with an eat diagram. CO1K2  
(or)
16. b. Explain elaborately the different layers of TCP/IP Reference Model with an eat diagram. CO1K2
- 17.a. Explain in detail the Error Detection and Error Correcting Codes. CO2K2  
(or)
- 17.b. Explain in detail about Cable TV for Data Transfer. CO2K2
- 18.a. Elaborate on Error Recovery protocol. CO3K2  
(or)
- 18.b. Explain the concept on i) Stop and wait ARQ and ii) Point to Point Protocol. CO3K2
19. a. Explain in detail any three routing algorithms in network layer. CO4K2  
(or)
- 19.a. Describe in detail on : i) Repeaters ii) Hubs iii) Bridges CO4K2
- 20.a. Explain in detail the concept off low control buffering in transport layer. CO5K2  
(or)
- 20.b. Elaborate the working of DNS with diagram. CO5K2

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