



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd.
u/s 3 of UGC Act 1956) Re-accredited with 'A+' Grade by
NAAC. Recognised by UGC Under Section 12B Coimbatore -
641 043, Tamil Nadu, India
Continuous Internal Assessment - I February 2025
Semester I

Class : II UG

Time: 2 hours

Major: Computer Science

Max.Marks:60

23BCSC07 –Computer Networks

Course Outcomes:

CO1: Explain the reference models of 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

(6x1 = 6)

Answer all questions

Circle the correct answer

1. In the _____ transmission mode, communication is unidirectional. CO1K2
(a) Simplex (b) Half-duplex (c) Full-duplex (d) Fulllex
2. Three or more devices share a link in _____ connection. CO1K2
(a) Unipoint (b) Multipoint (c) Point to point (d) Zero point
3. This device in the physical layer is used to boost the signal. CO2K2
(a) Repeater (b) Router (c) Gateway (d) Switch
4. MAC addresses represented in _____ format. CO2K2
(a) Hexadecimal (b) Decimal (c) Octal (d) Binary
5. In which type of frame, does the framing boundary need to be indicated? CO2K2
(a) Variable-size (b) Fixed-size (c) Uni-Size (d) Bi-Size
6. Telephone network uses _____ switching technique CO3K2
(a) Circuit (b) Packet (c) Message (d) Segment

Part B

Answer all questions

(3 x 6 = 18)

7. a. Describe (i) network topologies and (ii) the Classification of networks. CO1K2
(Or)
b. Identify the advantages of optical fibre over traditional copper cables. CO1K2
8. a. Explain multiplexing techniques in detail. CO1K2
(Or)
b. Explain Pulse Code Modulation in detail. CO1K2
- 9.a. Describe the following: (i) Baud rate (ii) Bandwidth (iii) Data Transmission modes CO1K2
(Or)
b. Explain framing methods and frame structure in detail. CO3K2

Part C

Answer all Questions

(3 x 12 = 36)

10. a. Elaborate on the functionalities of the seven layers of OSI. CO1K2
(Or)
b. Explain the TCP/IP architecture and compare it with the OSI model. CO1K2
- 11.a. Explain Digital Line Encoding methods in detail. CO1K2
(Or)
b Explain the Datagram and Virtual Circuit Switching networks in detail with diagrams and compare. CO2K2
- 12.a. Discuss error recovery protocols in detail. CO3K2
(Or)
b. Discuss about error correction methods in detail. CO3_K2

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