

1. Which IEEE project standardizes LAN technologies such as Ethernet, Token bus, Token ring, and FDDI?

- a) IEEE 802.11
- b) IEEE 802.3
- c) IEEE 802.5
- d) IEEE 802.15

Answer: b) IEEE 802.3

Explanation: IEEE 802.3 is the standard for Ethernet, which is the most widely used LAN technology. Additionally, it also encompasses other LAN technologies like Token bus, Token ring, and Fiber Distributed Data Interface (FDDI).

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2. Which IEEE standard defines the Metropolitan Area Network (MAN) technology known as Distributed Queue Dual Bus (DQDB)?

- a) IEEE 802.6
- b) IEEE 802.11
- c) IEEE 802.16
- d) IEEE 802.15

Answer: a) IEEE 802.6

Explanation: IEEE 802.6 standardizes Metropolitan Area Network (MAN) technologies, with

Distributed Queue Dual Bus (DQDB) being one of the key technologies specified under this standard.

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3. Which technology is based on the X.25 standard and provides packet-switched communication over public data networks?

- a) Ethernet
- b) Frame Relay
- c) Token ring
- d) ATM

Answer: b) Frame Relay

Explanation: Frame Relay is a packet-switching technology based on the X.25 standard. It operates over Wide Area Networks (WANs) and provides fast and efficient data transmission.

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4. What does ATM stand for in the context of networking?

- a) Automatic Teller Machine
- b) Asynchronous Transfer Mode
- c) Advanced Technology Module
- d) Automated Transfer Mechanism

Answer: b) Asynchronous Transfer Mode

Explanation: ATM (Asynchronous Transfer Mode) is a networking technology that transmits data in fixed-size packets called cells. It's widely used in both LAN and WAN environments for its efficiency and high-speed data transmission capabilities.

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5. SONET and SDH are technologies used in telecommunications networks primarily for what purpose?

- a) Packet switching
- b) Circuit switching
- c) Frequency modulation
- d) Optical amplification

Answer: b) Circuit switching

Explanation: SONET (Synchronous Optical Networking) and SDH (Synchronous Digital Hierarchy) are standardized protocols used for transmitting digital signals over optical fiber networks. They primarily facilitate circuit-switched connections, ensuring reliable and efficient data transmission for voice, data, and video services.

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6. What is the full form of SDH in telecommunications networking?

- a) Synchronous Digital Hierarchy
- b) Synchronous Data Handling
- c) Serial Data Highway
- d) Secure Data Hub

Answer: a) Synchronous Digital Hierarchy

Explanation: SDH stands for Synchronous Digital Hierarchy, a standardized protocol used in telecommunications networks for transmitting digital signals synchronously over optical fiber networks.

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7. Which networking technology is characterized by fixed-sized cells and is commonly used in both LAN and WAN environments?

- a) Ethernet
- b) Token ring
- c) Frame Relay
- d) ATM

Answer: d) ATM

Explanation: ATM (Asynchronous Transfer Mode) is characterized by fixed-sized cells and is commonly used in both LAN and WAN environments due to its efficiency in handling various types of traffic, including voice, video, and data.

8. Which IEEE standard specifies the protocol for wireless LANs?

- a) IEEE 802.11
- b) IEEE 802.3
- c) IEEE 802.15
- d) IEEE 802.16

Answer: a) IEEE 802.11

Explanation: IEEE 802.11 standardizes the protocol for wireless LANs, commonly known as Wi-Fi. It specifies the physical and data link layer protocols for wireless communication.

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9. Which technology provides reliable and efficient transmission of data over leased lines, utilizing virtual circuits?

- a) Ethernet
- b) Frame Relay
- c) Token ring
- d) SONET

Answer: b) Frame Relay

Explanation: Frame Relay is a WAN technology that provides reliable and efficient transmission of data over leased lines by utilizing virtual circuits. It's particularly suitable for bursty data traffic.

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10. Which protocol is commonly used for transmitting data over public packet-switched networks, providing connection-oriented communication?

- a) Ethernet
- b) X.25
- c) Token ring
- d) ATM

Answer: b) X.25

Explanation: X.25 is a widely used protocol for transmitting data over public packet-switched networks, offering connection-oriented communication services. It's often utilized in older WAN implementations.