



قائمة الاسئلة

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- اتصالات-
- 1) What is the primary advantage of wireless communication over wired communication?
 - 1) - Higher bandwidth
 - 2) - Lower latency
 - 3) + Mobility and flexibility
 - 4) - Increased security
 - 2) Which wireless technology operates at 2.4 GHz and 5 GHz frequency bands?
 - 1) - LTE
 - 2) + Wi-Fi
 - 3) - Bluetooth
 - 4) - Zigbee
 - 3) Which of the following is NOT an example of a cellular network technology?
 - 1) - 3G
 - 2) - 4G
 - 3) - 5G
 - 4) + Wi-Fi
 - 4) What is the typical frequency range of 5G millimeter wave (mmWave)?
 - 1) - 300 MHz – 1 GHz
 - 2) - 3 GHz – 6 GHz
 - 3) + 24 GHz – 100 GHz
 - 4) - 100 GHz – 300 GHz
 - 5) Which wireless technology is best suited for IoT applications with low power consumption?
 - 1) - Wi-Fi
 - 2) - Bluetooth
 - 3) + LoRaWAN
 - 4) - 5G
 - 6) What is the primary goal of Software-Defined Radio (SDR)?
 - 1) - To improve audio transmission
 - 2) + To allow reconfigurable wireless communication
 - 3) - To replace hardware-based transceivers
 - 4) - To increase transmission power
 - 7) Which technology enables ultra-reliable and low-latency communication (URLLC) in 5G?
 - 1) - OFDMA
 - 2) - MIMO
 - 3) + Network slicing
 - 4) - Beamforming
 - 8) What is the key benefit of Massive MIMO in 5G?
 - 1) - Increases the power consumption
 - 2) - Reduces network interference
 - 3) + Enhances spectral efficiency
 - 4) - Eliminates the need for base stations
 - 9) Which wireless standard is widely used for short-range communication in industrial applications?
 - 1) - NFC
 - 2) + Zigbee
 - 3) - Li-Fi
 - 4) - Wi-Fi 6
 - 10) What is the main advantage of Li-Fi over Wi-Fi?





- 1) Higher security
 - 2) Longer range
 - 3) Works better in outdoor environments
 - 4) Lower latency
- 11) What is the primary objective of RF planning?
- 1) Reduce energy consumption
 - 2) Minimize interference and maximize coverage
 - 3) Improve device compatibility
 - 4) Increase data rates
- 12) What does link budget analysis in RF planning determine?
- 1) The total available bandwidth
 - 2) The signal strength at the receiver
 - 3) The frequency allocation
 - 4) The number of required base stations
- 13) Which factor most significantly affects radio wave propagation in urban environments?
- 1) Frequency reuse
 - 2) Atmospheric absorption
 - 3) Multipath fading
 - 4) Line-of-sight communication
- 14) What technique can be used to minimize interference in cellular networks?
- 1) Increasing transmission power
 - 2) Frequency reuse
 - 3) Reducing the number of base stations
 - 4) Using omnidirectional antennas
- 15) What is a key technique for improving wireless network capacity?
- 1) Reducing the number of base stations
 - 2) Increasing the number of users per cell
 - 3) Implementing small cells
 - 4) Using higher transmission power
- 16) What is the main advantage of Terahertz (THz) communication?
- 1) Longer range
 - 2) High data rates
 - 3) Lower power consumption
 - 4) No interference
- 17) Which emerging technology is expected to improve indoor positioning accuracy?
- 1) 6G
 - 2) Ultra-Wideband (UWB)
 - 3) LTE-Advanced
 - 4) Bluetooth Classic
- 18) What role does AI play in wireless networks?
- 1) Replacing base stations
 - 2) Optimizing network performance
 - 3) Eliminating interference completely
 - 4) Reducing hardware requirements
- 19) What is a key feature of 6G technology?
- 1) Reduced data rates
 - 2) AI-driven communication
 - 3) Exclusive reliance on fiber optics
 - 4) Lower latency than 5G but with lower capacity





- 20) What is the primary advantage of satellite communication?
- 1) - Lower cost than fiber-optic networks
 - 2) - No need for ground-based infrastructure
 - 3) - Instantaneous data transmission
 - 4) + Wide-area coverage
- 21) What type of orbit do Starlink satellites use?
- 1) - Geostationary Orbit (GEO)
 - 2) - Medium Earth Orbit (MEO)
 - 3) - Highly Elliptical Orbit (HEO)
 - 4) + Low Earth Orbit (LEO)
- 22) What is the primary challenge of Low Earth Orbit (LEO) satellite networks?
- 1) - High latency
 - 2) + Frequent handovers between satellites
 - 3) - Low power transmission
 - 4) - Limited global coverage
- 23) Which frequency band is commonly used by Starlink for communication?
- 1) - L-band
 - 2) - S-band
 - 3) + Ku-band
 - 4) - C-band
- 24) How does Starlink achieve lower latency compared to traditional satellite internet?
- 1) - Using geostationary satellites
 - 2) - Increasing satellite power
 - 3) + Operating in LEO, reducing signal travel distance
 - 4) - Expanding ground station networks.
- 25) What is the approximate altitude range of Starlink satellites?
- 1) - 10,000–12,000 km
 - 2) + 340–550 km
 - 3) - 2,000–3,500 km
 - 4) - 36,000 km
- 26) Which company operates the Starlink satellite constellation?
- 1) - Amazon
 - 2) - OneWeb
 - 3) - NASA
 - 4) + SpaceX
- 27) What type of network is commonly used for IoT applications?
- 1) - Local Area Network (LAN)
 - 2) - Wide Area Network (WAN)
 - 3) + Low Power Wide Area Network (LPWAN)
 - 4) - Virtual Private Network (VPN)
- 28) . Which of the following is an example of an IoT application?
- 1) - Video streaming service
 - 2) - Cloud computing storage
 - 3) - Online shopping website
 - 4) + Smart home automation
- 29) What is the role of sensors in IoT?
- 1) - Store data
 - 2) - Process data
 - 3) + Collect and transmit data





- 4) - Secure data
- 30) Which wireless technology is commonly used for IoT applications?
- 1) - HDMI
 - 2) Bluetooth Low Energy (BLE)
 - 3) - USB
 - 4) - Ethernet
- 31) Which of the following is a type of spread spectrum technique?
- 1) - Frequency Modulation (FM)
 - 2) - Time-Division Multiplexing (TDM)
 - 3) Frequency Hopping Spread Spectrum (FHSS)
 - 4) - Amplitude Modulation (AM)
- 32) How does Direct Sequence Spread Spectrum (DSSS) work?
- 1) - By switching between multiple frequency channels rapidly
 - 2) By spreading the signal over a wide frequency band using a pseudo-random code
 - 3) - By compressing data before transmission
 - 4) - By increasing the transmission power
- 33) Which wireless technology commonly uses spread spectrum techniques?
- 1) - LTE
 - 2) Wi-Fi (802.11b)
 - 3) - Fiber-optic networks
 - 4) - Ethernet
- 34) What is Bluetooth primarily used for?
- 1) - Long-distance data transmission
 - 2) - Wired communication between devices
 - 3) Short-range wireless communication
 - 4) - High-speed fiber-optic networking
- 35) What is the typical range of Bluetooth Class 2 devices?
- 1) - 100 meters
 - 2) - 1 kilometer
 - 3) 10 meters
 - 4) - 500 meters
- 36) Wireless LANs (WLANs) use only wired connections to connect devices
- 1) - true.
 - 2) false.
- 37) IEEE 802.11 is the standard for wireless LAN technology.
- 1) true.
 - 2) - false.
- 38) WLANs can operate in both the 2.4 GHz and 5 GHz frequency bands
- 1) true.
 - 2) - false.
- 39) Wireless LANs are always more secure than wired LANs
- 1) - true.
 - 2) false.
- 40) Access points (APs) are required for all WLAN connections
- 1) - true.
 - 2) false.
- 41) Wireless WANs (WWANs) use cellular networks for communication
- 1) true.
 - 2) - false.





- 42) WWANs are limited to short-range communication like Wi-Fi.
- 1) - true.
 - 2) false.
- 43) Wireless WANs can be used for mobile internet access
- 1) true.
 - 2) - false.
- 44) CDMA allows multiple users to share the same frequency band simultaneously
- 1) true.
 - 2) - false.
- 45) CDMA assigns a unique frequency to each user for communication
- 1) - true.
 - 2) false.
- 46) In CDMA, each user is assigned a unique spreading code for communication
- 1) true.
 - 2) - false.
- 47) 5G networks provide faster data speeds and lower latency than 4G.
- 1) true.
 - 2) - false.
- 48) Li-Fi technology uses light waves instead of radio waves for communication
- 1) true.
 - 2) - false.
- 49) Wi-Fi 6 offers slower speeds and higher latency compared to Wi-Fi 5
- 1) - true.
 - 2) false.
- 50) 6G technology is already widely deployed and commercially available as of 2023
- 1) - true.
 - 2) false.

