

5G Network

Module 1: Introduction to 5G Technology

1) What is 5G primarily known for?

- (A) Faster download speeds
- (B) Improved battery life
- (C) Smaller coverage area
- (D) Limited device compatibility

2) Which generation of cellular technology precedes 5G?

- (A) 1G
- (B) 3G
- (C) 4G
- (D) 6G

3) What is a key feature of 5G networks?

- (A) Larger cell sizes
- (B) Lower latency
- (C) Decreased capacity
- (D) Analog signal transmission

4) Which technology does 5G aim to improve?

- (A) Artificial Intelligence (AI)
- (B) Internet of Things (IoT)
- (C) Landline telephones
- (D) Satellite communication

5) 5G networks primarily benefit rural areas.

- True
- False

6) 5G technology uses smaller cell towers compared to previous generations.

- True
- False

7) Match each aspect of 5G with its description.

- Higher speeds
- Lower latency

8) Match each feature of 5G with its benefit.

- Cloud-based networks
- Edge computing

9) Which industries can benefit from 5G technology? (Select all that apply)

- (A) Healthcare
- (B) Agriculture
- (C) Manufacturing
- (D) Entertainment

10) Select the correct statements about 5G networks. (Select all that apply)

- (A) They are primarily focused on decreasing download speeds.
- (B) They use smaller cell towers for better coverage.
- (C) They have higher latency compared to 4G.
- (D) They support a wide range of applications.

Module 2: Advantages of 5G for Businesses

1) How can 5G benefit smart factories?

- (A) By reducing connectivity
- (B) By improving Internet of Things (IoT) connectivity
- (C) By increasing latency
- (D) By limiting data collection

2) What role does low latency play in 5G technology?

- (A) It increases the time between data transmission and reception.
- (B) It decreases the time between data transmission and reception.
- (C) It has no impact on data transmission.
- (D) It reduces the reliability of data transfer.

3) What does edge computing offer in 5G networks?

- (A) Higher latency
- (B) Real-time responsiveness
- (C) Smaller coverage area
- (D) Reduced capacity

4) How does 5G support virtual reality (VR) technology?

- (A) By increasing latency
- (B) By reducing network bandwidth
- (C) By limiting device compatibility
- (D) By providing high-speed, low-latency connections

5) 5G technology has no impact on smart factories.

True
False

6) Edge computing in 5G networks increases latency.

True
False

7) Match each benefit of 5G for businesses with its description.

- Improved customer experiences
- Edge computing

8) Match each 5G application with its description.

Smart factories
Virtual reality (VR)

9) Which technologies can be supported by 5G networks? (Select all that apply)

- (A) Virtual Reality (VR)
- (B) Augmented Reality (AR)
- (C) Landline telephones
- (D) Internet of Things (IoT)

10) What benefits does 5G offer for businesses? (Select all that apply)

- (A) Improved customer experiences
- (B) Reduced flexibility
- (C) Decreased innovation
- (D) Enhanced scalability

Module 3: Societal Impact of 5G Networks

1) What role can 5G play in smart cities?

- (A) Increase traffic congestion
- (B) Reduce emissions
- (C) Decrease air quality
- (D) Limit data collection

2) How can 5G technology contribute to healthcare?

- (A) By increasing patient isolation
- (B) By enabling real-time remote surgery
- (C) By reducing data sharing capabilities
- (D) By limiting medical device connectivity

3) What environmental benefits can 5G offer?

- (A) Increased pollution
- (B) Accelerated climate change
- (C) Reduced emissions
- (D) Limited resource efficiency

4) How does 5G support environmental initiatives?

- (A) By increasing energy consumption
- (B) By slowing down the adoption of electric vehicles
- (C) By supporting real-time monitoring of emissions
- (D) By reducing the efficiency of smart construction projects

5) Smart cities rely on 5G technology for increased emissions.

True

False

6) 5G networks have no impact on healthcare technology.

True

False

7) Match each societal benefit of 5G with its description.

Health care

Environment

8) Match each environmental initiative with its potential impact.

- Accelerated development of electric vehicles
- Real-time monitoring of emissions

9) Which sectors can benefit from 5G's contribution to smart cities? (Select all that apply)

- (A) Transportation
- (B) Energy
- (C) Education
- (D) Public services

10) What are the societal benefits of 5G networks? (Select all that apply)

- (A) Reduction in emissions
- (B) Increased pollution
- (C) Improved healthcare technology
- (D) Enhanced resource depletion

Module 4: Technical Aspects of 5G Technology

1) What is a key feature of 5G networks compared to previous generations?

- (A) Slower download speeds
- (B) Lower capacity
- (C) Higher latency
- (D) Faster speeds and lower latency

2) What technology is essential for 5G networks' improved latency and flexibility?

- (A) Orthogonal Frequency Division Multiplexing (OFDM)
- (B) Massive MIMO
- (C) Bluetooth
- (D) Wi-Fi

3) How does 5G technology utilize smaller cell towers?

- (A) It relies solely on independent cell towers
- (B) It operates with larger transmitters
- (C) It uses smaller transmitters on buildings and infrastructure
- (D) It doesn't require any physical infrastructure

4) What is a key difference between 5G and previous generations of cellular networks?

- (A) Higher speeds
- (B) Lower latency
- (C) Smaller cell towers
- (D) Fewer bandwidth options

5) 5G technology relies on the same radio frequencies as 4G networks.

True
False

6) 5G networks operate only on high-frequency bands.

True
False

7) Match each aspect of 5G technology with its description.

OFDM
Massive MIMO

8) Match each network feature with its function.

Smaller cell towers
Network segmentation

9) What are the key differences between 5G and previous cellular networks? (Select all that apply)

- (A) Higher speeds
- (B) Lower latency
- (C) Smaller cell towers
- (D) Expanded bandwidth options

10) How does 5G technology improve network architecture and functionality? (Select all that apply)

- (A) Introduction of Massive MIMO technology
- (B) Implementation of smaller cell towers
- (C) Utilization of network slicing
- (D) Reduction in available bandwidth

Module 5: Business Applications of 5G

How can 5G technology benefit smart factories?

- (A) By decreasing latency for manufacturing environments
- (B) By providing lower network coverage compared to Wi-Fi
- (C) By increasing latency in operations
- (D) By reducing the number of connected devices

What technology enables wireless connection to thousands of smart devices in manufacturing?

- (A) 4G LTE
- (B) Wi-Fi 6
- (C) Bluetooth
- (D) 5G

What role does edge computing play in 5G networks?

- (A) It centralizes data processing
- (B) It reduces latency and improves responsiveness
- (C) It increases reliance on cloud servers
- (D) It slows down network speed

How does 5G technology support virtual reality (VR) and augmented reality (AR) applications?

- (A) By decreasing latency and increasing bandwidth
- (B) By reducing the availability of high-speed data
- (C) By limiting the number of connected devices
- (D) By relying solely on Wi-Fi networks

True/False Questions

5G networks do not support the Internet of Things (IoT).

- True
- False

Edge computing processes data in centralized data centers.

- True
- False

Match each business application with its description.

Smart factories
Virtual Reality

Match each technology feature with its role in business innovation.

Edge computing
Virtual Reality

How does 5G technology benefit industries such as healthcare, automotive, and manufacturing?

(Select all that apply)

- (A) Enables remote surgeries with real-time video transmission
- (B) Provides accurate traffic information through AI algorithms
- (C) Enhances production efficiency with IoT-connected devices
- (D) Supports traditional cable-based communication systems

What advantages does 5G technology offer for businesses in terms of innovation and customer experiences?

(Select all that apply)

- (A) Improved network reliability and consistency
- (B) Enhanced connectivity for IoT devices
- (C) Real-time data processing with edge computing
- (D) Reduced dependence on cloud-based services