Communication Systems-Quiz

1. What are the three essential components of any communication system?

A. Transmitter, channel (medium), receiver

B. Sensor, controller, actuator

C. Encoder, decoder, wireless

D. Processor, antenna, actuator

2. In transportation systems, which entities commonly communicate through networks?

A. Vehicles, traffic signals, roadside units, control centers, and pedestrians

B. Only vehicles

C. Only vehicles and control centers

D. Only pedestrians and vehicles

3. Which of the following is not a wired communication medium mentioned in the lecture?

A. Bluetooth

B. Fiber optic cables

C. Copper cables

D. Coaxial cables

4. Why is wireless communication essential in transportation systems?

A. Vehicles are mobile and cannot be physically connected to cables

B. Vehicles have limited storage space

C. Wireless systems are cheaper than wired ones

D. Wireless systems never experience interference

5. Which wireless technology is designed specifically for safety-critical vehicle scenarios?

A. DSRC

B. Wi-Fi

C. Bluetooth

D. Satellite Communication

6. Internal communication inside an AV connects which components?

A. Sensors, perception, planning, control, and actuators

B. Sensors and actuators

C. Only planning and perception systems

D. Only controllers and steering system

7. External communication in AVs includes communication with which groups?

A. V2V, V2I, V2P, V2N

B. Only pedestrians

C. V2I and V2P

D. V2V and V2N

8. What is the main purpose of Vehicle-to-Vehicle (V2V) communication?

A. Cooperative safety to prevent crashes

B. Navigation map downloads

C. Cloud diagnostics reporting

D. Traffic sign reporting

9. Which wired communication medium provides the highest data transmission speed?

A. Fiber optic cables

B. Coaxial cables

C. Copper cables (twisted-pair Ethernet)

D. Shielded copper pairs

10. Which cybersecurity threat refers to sending fake safety messages to vehicles?

A. Message spoofing

B. Encryption misuse

C. Data redundancy

D. Thermal noise