

Graded Assessment – Local Area Networks

Q1. Consider a Gigabit Ethernet hub with stations at a 100-meter distance and average frame size of 512 bytes. Assume the propagation speed is at $\frac{2}{3}$ of light speed. What is the value of normalized delay-bandwidth product?

- 0.0122
- **0.122**
- 1.22
- None of the above

Q2. Wireless data communication is compelling, because of

- **Its easy and low-cost deployment**
- **Its support to personal and mobile devices**
- Its high reliability to noise and interference
- All of the above

Q3. Why not use CSMA/CD in a wireless LAN? The primary reason is

- The round-trip delay in a wireless LAN is too large
- The frame is usually very small in a wireless LAN
- **The hidden station problem**
- All of the above

Q4. In IEEE 802.11 MAC for wireless LANs, which of following inter-frame space (IFS) is used to transmit high-priority frames such as ACKs?

- PIFS

- None of the above
- **SIFS**
- DIFS

Q5. Which of following statements identifies the similarity between HDLC (data link control) and Ethernet (medium access control)

- Both implement error control and flow control functions to provide reliable transmission
- Both provide connection-oriented packet transfer services to the network layer
- **Both contain framing information that delineates the beginning and end of each frame**
- All of the above

Q6. Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?

- **CSMA/CA**
- CSMA/CD
- CDMA
- ALOHA

Q7. Which of the following are management services offered by the MAC sublayer in wireless LAN

- Network management
- **Roaming within ESS**
- **Power management**
- Storage management

Q8. In CSMA/CA, An amount of time divided into slots called

- Contention procedure

- Contention energy
- Contention signals
- **Contention window**

Q9. In medium access control sublayer, medium usage is mediated by the access control during contention period

- True
- **False**

Q10. In Carrier Sense Multiple Access/Collision Detection (CSMA/CD), to continue transmission process we use a

- Signal
- **Loop**
- Access point
- Station