**Multiple Choice. (20 pts. 10 items, 2 pts. each)**

1. A \_\_\_\_\_\_\_\_ is a computer network that covers a small area (home, office, building, campus).
   1. LAN
   2. MAN
   3. WAN
   4. Wireless Networks
2. Which of the following is a device that connects multiple networks using similar or different protocols?
   1. Communication Media
   2. NIC
   3. Bridge
   4. Router
   5. Gateway
3. Which of the following corresponds to code 400?
   1. Bad Request
   2. Unauthorized
   3. Forbidden
   4. Not found
4. Which of the following corresponds to code 401?
   1. Bad Request
   2. Unauthorized
   3. Forbidden
   4. Not found
5. Which of the following corresponds to code 403?
   1. Bad Request
   2. Unauthorized
   3. Forbidden
   4. Not found
6. Which of the following corresponds to code 404?
   1. Bad Request
   2. Unauthorized
   3. Forbidden
   4. Not found
7. Which of the following is a device that connects multiple networds using similar or different protocols?
   1. Communication Media
   2. NIC
   3. Bridge
   4. Router
   5. Gateway
8. Which of the following is a device that connects two network segments tha are similar?
   1. Communication Media
   2. NIC
   3. Bridge
   4. Router
   5. Gateway
9. Which of the following is also known as a network adpater?
   1. Communication Media
   2. NIC
   3. Bridge
   4. Router
   5. Gateway
10. Which of the following is used to transfer data from one compuer to another?
    1. Communication Media
    2. NIC
    3. Bridge
    4. Router
    5. Gateway

**Matching Type. (14 pts. 7 items, 2 pts. each)**

Match the following characteristics or description to the corresponding protocol.

|  |  |
| --- | --- |
| Column A | Column B |
| 1. Simple and straightforward method 2. After station finds line idle, it sends its frames immediately with a probability 1 3. Highest chance of collision. 4. Random delays reduce probability of collisions because two stations with data to be transmitted will wait for different amount of times. 5. Bandwidth is wasted if waiting time (backoff) is large because medium will remain idle following end of transmission even if one or more stations have frames to send. 6. Reduces chance of collision 7. If station finds line idle, it follows these steps with probability p, the station sends its frame the station waits for the beginning of next time slot and checks line again. | 1. 1 Persistent CSMA 2. p Persistent CSMA 3. Non persistent CSMA |

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**Enumeration (15 pts.)**

1. Discuss the difference between persistent and non-persistent connection in HTTP. 5 points.
2. Enumerate 5 advantages of LAN
3. Enumerate 5 characteristics of LAN