Test bank mid network

1. For IP address 172.16.35.64/26 find the number of address in the block?
   a) 63
   b) 32
   c) 64
   d) 127

2. Expand the address to its origin FDEC:84::BDFE:96:FDBC
   a) FDEC:84:000:0000:0000:BDFE:0096:FDBC
   b) FDEC:0084:000:0000:0000:BDFE:0096:FDBC
   c) FDEC:0084:0000:0000:0000:BDFE:0096:FDBC
   d) FDEC:0084:0000:BDFE:FDBC

3. Given the subnet mask 255.255.255.255 **then the number of IP addresses**:
   a) 0
   b) 1
   c) 32
   d) 255

4. Given the CIDR notation /30, how many IP addresses:
   a) 254
   b) 255
   c) 2
   d) 4

5. In half duplex communication, which of the following is not true
   a) Two devices can transmit and receive at a time
   b) Two devices can communicate one at a time
   c) Two devices can communicate only one at a time
   d) Data flow between devices travel in one direction at a time

6. If we have a three star topology connected to a single bus network, then the backbone network is called:
   a) Bus topology
   b) Star topology
   c) Ring topology
   d) Mesh topology

7. If a message in the Transport Layer is called
   a) Packet
   b) Segment
   c) Data
   d) Frame

8. A signal out of a 1.5V battery, has a frequency of
   a) Infinite
   b) $\frac{2}{3}$
   c) 1.5
   d) 0

9. In a span of 6 seconds, we spot 3 sine waves, then the frequency is
   a) 6Hz
   b) $(\frac{1}{6})$Hz
   c) 3Hz
   d) $(\frac{1}{2})$Hz

10. A network with bandwidth of 10 Mbps can pass only an average of 36 frames per hour with each frame carrying an average of 10,000 bits. What is the throughput of this network?
    a) 2Mbps
    b) 10Mbps
    c) 100Mbps
    d) None of the above

11. Unguided media, transport----------waves without using physical conductor
    a) Electric
    b) Optical
    c) Electromagnetic
    d) Magnetic

12. Switching in the internet is done by using:
    a) Circuit switch approach
    b) Datagram approach
    c) Message switched approach
    d) Telegram approach

13. The hamming distance of d (101011, 011010) is:
    a) 3
    b) 2
    c) 4
    d) 1

14. Types of errors consist of:
    a) Single bit error and byte error
    b) Single bit error and burst error
    c) Burst error and message error
    d) single bit error and packet error

15. Byte stuffing is the process of adding 1extra byte whenever there is a flag or escape character in the _____
    a) Header
    b) Trailor
    c) a+b
    d) Message body

16. In stop-and-wait ARQ frame 0 is sent and acknowledged but the acknowledgment is lost, after time out the sender resend frame 0, when it received, the receiver:
    a) Discard frame 0
    b) Copy frame 0 and send ACK0
    c) Copy frame 0 and send ACK1
    d) Do nothing

17. In step-and-Wait ARQ system if the bandwidth of the line is 2Mbps, and 1 bit takes 10 ms to make around trip, and if the system data frame is 2000 bits what is the utilization percentage of the link?
    a) 5%
    b) 10%
    c) 15%
    d) 20%

18. In Go-back-n, with window size of 3, assume the sender send frame 0 and acknowledgment ACK1 lost then send frame1 and then send frame2, then the receiver, receive them all correctly, then receiver should send:
    a) ACK0
    b) ACK1
    c) ACK2
    d) ACK3

19. In Go-Back-N the sender sent frames 0,1,2 and 3, however frame 1 is lost and the rest are received correctly, the receiver Rn pointer will point on:
    a) 0
    b) 1
    c) 2
    d) 3

20. What is the type of Ethernet address **04:02:01:4B:2C:1A**?
    a) Multicast address
    b) Unicast address
    c) Broadcast address
    d) PPP address

21. For **10base5** implementation the bandwidth and distance is:
    - **a) 10Mbps, 500m**
    - b) 10Mbps, 450m
    - c) 10Kbps, 500m
    - d) 10Mbps,500km

22. The----------farmes in CSMA/CA hand shanke can prevent collision from a hidden station:
    - a) SIFS
    - **b) RTS/CTS**
    - c) PIFS
    - d) DIFS

23. When PCF is used, we have a chance to have a hidden node problem
    - a) True
    - **b) False**

24. Vlan is a local area network that help in:
    - a) System administration and reconnection
    - b) Limiting Broadcast domain
    - c) Physical wiring
    - **d) All of the above**

25. Which of the following IP addresses is not correct?
    - a) 192.12.10.20
    - b) 127.20.15.11
    - **c) 192.10.266.16**
    - d) 132.42.10.17

26. Given IP address **172.16.35.64/26** find the last address for the block:
    - a) 172.16.35.128
    - b) 172.16.35.130
    - c) 172.16.35.129
    - **d) 172.16.35.127**