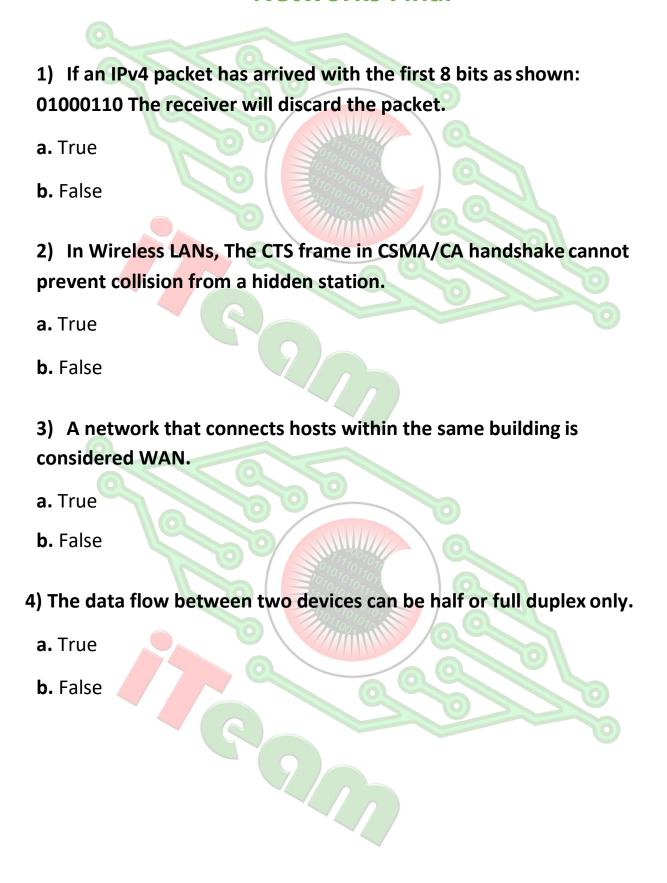
Networks Final



5) In data link control, most of the channels tend to be noisy. a. True						
b. False						
6) Microwaves signals are used for short range communication in a						
closed area.						
a. True						
b. False						
7) ARP request is a unicast.						
a. True						
b. False						
8) If an IPv4 packet arrives with M=0, then it will be the last fragment.						
a. True						
b. False						
9) A network topology that requires central hub is called Bus topology						
a. True						
b. False						

- 10) If the least significant bit of the first byte in Ethernet address is zero, then it will be a unicast address.
 - a. True
 - **b.** False
- 11) A process has a socket address 200.23.56.8:15550 wants to connect to another process with socket address 200.23.56.8:65550, which of the following is correct
- a. The communication will be successful
- b. There is an error with this setting
- **c.** The communication will be established regardless if there is an error or not
- **d.** The communication will be established but no data will be transmitted
- e. None of the above
- 12) If a host in a network has an ipv4 address 144.17.37.39 /21. What is the first IP address in the network?
- a. 144.16.32.0
- **b.** 144.17.32.0
- **c.** 144.17.37.0
- **d.** 144.16.37.0
- **e.** 144.17.30.0

13) If a network with a mask /24. How many hosts can be existing in this network?

- **a.** 256
- **b.** 265
- **c.** 514
- **d.** 1024
- **e.** 16777216

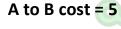
14) Which of the following is correct:

- a. SNMP uses only UDP
- b. FTP uses only UDP
- c. SCTP uses TCP only
- d. HTTP uses UDP only
- e. None of the above

15) To check if a remote server is working, we can use

- a. Netsat
- **b.** ipconfig
- c. ping
- **d.** rtable
- e. None of the above

16) In distance vector routing algorithm, if router A wants to forward a packet to router E and given the following information:



B to E cost = 3

A to $C \cos t = 4$

C to E cost = 6

A to D cost = 6

D to E cost = 1

Based on the given information, which next hop should router A choose:

- **a.** B
- **b.** C
- c. A
- **d.** D
- e. None of the above

17) One of the following techniques is used in order to reduce the number of simultaneous requests on the web server is

- a. Cache memory
- **b.** Backup server
- c. Proxy server
- d. Primary serve
- e. All of the above

18) If a host in a network has an ipv4 address 205.16.37.39 /26. What is the range of all IP addresses within this network including the hosts and the broadcast addresses?

- **a.** 205.16.37.0 205.16.37.60
- **b.** 205.16.37.0 205.16.37.61
- **c.** 205.16.37.0 205.16.37.62
- **d.** 205.16.37.0 205.16.37.63
- e. 205.16.37.0 205.16.37.64

19) If an IPv4 packet has arrived with the first 10 bytes represented in hexadecimal digits as

2/1/

0x45000028000100000306

Then which of the following is correct?

- a. The packet has travelled 6 hops and it is TCP
- **b.** The packet has travelled 6 hops and it is UDP
- c. The packet has travelled 30 hops and it is TCP
- d. The packet has travelled 3 hops and it is UDP
- e. The packet has travelled 3 hops and it is TCP

20) Quality of service in networks is important for what of the following

- a. Improving the quality of network links
- **b.** Giving priorities for traffic going through the network
- c. Improving the quality of network routers
- d. Increasing the bandwidth of the network
- e. All of the above
- 21) In DNS name-address resolution, the algorithm sends the request for many servers until it reaches to the server that has the authority of the requested domain name. This process is:
- a. Linear resolution
- **b.** Sequential resolution
- c. Recursive resolution
- d. Exponential resolution
- e. None of the above
- 22) In web servers that provide HTML documents over the web, in case the server runs a script in order to respond to the client request, the output document will be
- a. Static b. Dynamic c. Active d. B and C e. None of the above

23) If host X sends an email to host Y, user on host X will compos and click send. Which of the following is true

- **a.** X will use Message transfer agent to compose the message, POP3 protocol can be used to send the message, and SMTP protocol can be used to access the email by Y
- **b.** X will use Message transfer agent to compose the message, SMTP protocol can be used to send the message, and POP3 protocol can be used to access the email by Y
- **c.** X will use user agent to compose the message, POP3 protocol can be used to send the message, and IMAP4 protocol can be used to access the email by Y
- **d.** X will use user agent to compose the message, SMTP protocol can be used to send the message, and IMAP4 protocol can be used to access the email by Y
- e. None of the above

24) What reason(s) of the following can be main cause (s) of network congestion?

- a. Many processes are running at the same time at a particular host
- **b.** Many routers are connecting the network
- c. A process is sending too much packets through the network
- d. All of the above
- e. A and B

25) When a host connects to the network, it has to have a unique address that distinguishes it from other hosts.

Which of the following can grant the host this address?

- a. The host itself
- b. DNS
- c. TCP/IP
- d. OSPF
- e. DHCP

26) In order to upload a file to a server, which of the following should be made?

- **a.** establish a control connection on port 21 and a data connection of port 20 and both have to be TCP
- **b.** establish a control connection on port 20 and a data connection of port 21 and both have to be TCP
- c. establish a control connection on port 21 and a data connection of port 20 and both have to be UDP
- d. Establish only a data connection on port 21 and has to be UDP
- e. Establish only a data connection on port 20 and has to be TCP

DA

27) If an IPv4 packet was fragmented and one of the fragments has a total length = 25 (assuming that there are no options) and has fragmentation offset = 10. Then what will be the range of the data bytes that are included in this fragment:

b.
$$80 - 100$$

d.
$$80 - 84$$

- 28) Which of the following is true when a connection is established between a client and a server on port number 80 at the server:
- **a.** The connection should be immediately closed after the first response is received by the client
- **b.** The connection cannot be established with the server at the port number 80
- c. The connection should be established using TCP protocol
- d. The connection should be left open for further requests
- e. C and D

29) If Host A sends a TCP segment to Host B with a PSH flag = 1, ACK flag = 1, and sequence number = 441. Host B then sends a TCP segment to Host A with a ACK flag = 1 and ACK number = 449. Then, what range of bytes was received by Host B this segment that was sent from Host A to Host B?

- a.441 448
- **b.** 441 449
- **c.** 441 450
- **d.** 440 449
- **e.** 440 448

30) UDP and TCP are very important protocols in data communication, which of the following applies on the two protocols

- a. TCP header length is larger than the UDP header length
- b. UDP is faster than TCP and more reliable
- c. both UDP and TCP use sliding window
- **d.** TCP is more reliable than UDP. Also, TCP segments are not ordered at the destination process
- e. None of the above

Suggested Answers:

1	В	110	В	21	С
2	В	12	В	22	В
3	В	13	A 170	23	D
4	В	14	E	24	D
5	A	15	COO	25	E
6	B	16	D	26	A
7	В	17	С	27	С
8	Α	18	D	28	E
9	В	19	E	29	A
10	A	2000	В	30	A

