



## MidTerm 2024/2025

- 1- ..... is the time for a small packet to travel from client to server and back.
- a) RTT
  - b) HOL
  - c) RFC
  - d) GDPR
- 2- In ....., different channels transmitted in different frequency bands.
- a) HFC
  - b) FDM
  - c) CMTS
  - d) DSL
- 3- .... define the format, order of messages sent and received among network entities, and actions taken on message transmission.
- a) Routers
  - b) Protocols
  - c) Switches
  - d) Servers
- 4- In ..... transmission order of requested objects based on client specified object priority. It pushes unrequested objects to client, divide them into frames, and then schedule them.
- a) HTTP 1.1
  - b) HTTP 1.2
  - c) HTTP 2.1
  - d) HTTP 2
- 5- In ..... end-end resources allocated to, reserved for call between source and destination
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- a) Queueing
- b) TDM
- c) Packet-Switching
- d) Circuit Switching

6- A packet switch receives a packet and determines the outbound link to delay = 19.2

which the packet should be forwarded, When the packet arrives other packet is halfway done being transmitted on this outbound link and four other packet are waiting to be transmitted, Packets are transmitted in order of arrival , Suppose all packets are 1500 bytes and the link rate is 2.5 Mbps . What is the queueing delay for the packet?

a) 21.6 ms

$$\text{Packet Size} = 1500 * 8 = 12000 \text{ bit}$$

b) 19.2 ms

$$\text{Transmission Rate} = L/R = 12000/(2.5*10^6) = 4.8\text{ms}$$

$$4 * 4.8 = 19.2\text{ms}$$

$$4 * 4.8 = 2.4\text{ms} = TR$$

$$c) 16.8 \text{ ms}$$

$$4 * 4.8 = 19.2\text{ms} \quad d) 2.4 \text{ ms} = \text{باكتش في الكيو}$$

7- ..... attacks intercept DNS queries, returning bogus replies

- a) ICANN
- b) DoS
- c) Spoofing
- d) DDoS

8- In ..... Fiber attaches homes to ISP router , homes share access network to cable headend

- a) DSL
- b) Packet Transmission Delay
- c) TDM
- d) Cable-Based Access

9- ..... provides retrieval, deletion and folders of stored messages on the Email server.



- a) IMAP
- b) ICANN
- c) POP
- d) SMTP

10- A small object may have to wait for transmission behind a large object.

This is called ..... blocking.

- a) ICANN
- b) GDPR
- c) HOL
- d) FCFS

11- ..... is the rate (bits/time unit) at which bits are being sent from sender to receiver

- a) Throughput
- b) Queueing delay
- c) Transmission delay
- d) Nodal processing

12- Consider sending over HTTP/2 a Web page that consists of one video clip, and five images. Suppose that the video clip is transported as 2000 frames and each image has three frames. If all the video frames are sent first without interleaving, How many “Frame Times” are needed until all five images are sent?

- a) 2000
- b) 2015
- c) 2030
- d) 4030

Video frames: 2000 frames  
Image frames:  $5 \text{ images} \times 3 \text{ frames/image} = 15 \text{ frames}$   
Total frames:  $2000 + 15 = 2015 \text{ frames}$

13- In .... Use existing telephone line to central office, It has 24-52 Mbps dedicated downstream transmission rate and 3.5-16 Mbps dedicated upstream transmission rate.

- a) DSL
- b) TDM



c) DSLAM

d) CMTS

14- ....... uploads new file (object) to server, it completely replaces a file at a specified URL with content in entity body of HTTP request message.

a) POST

b) HEAD

c) GET

d) **PUT**

15- HTTP response status code equals to .... When the required object is moved to a new location specified later in the message.

a) 400

b) 305

c) **301**

d) 505

16- The following are fields in RR format in DNS records, except....

a) TTL

b) **URL**

c) Type

d) Value

17- Users are generating data at a rate of 100 Kbps when busy, But are busy generating data only with probability  $p = 0.1$ , Suppose that we have 1Gbps link, What is N, the maximum number of users that can be supported

حلہ بال Circuit Switching

$$N = 1 * 10^9 / (100 * 10^3) = 10^4 = 10000$$

simultaneously under circuit switching?

a) **10000**

b) 100000

c) 1000



d) 5000

18- In ..... Attackers make resources(server, bandwidth) unavailable to legitimate traffic by overwhelming resource with bogus traffic.

- a) Wireshark
- b) DoS
- c) Spoofing
- d) Sniffing

19- ..... Is the premier standards development organization for the internet.

- a) FDM
- b) HFC
- c) RFC
- d) IETF

20- SMTP uses TCP to reliably transfer email message from client to server in port .....

- a) 80
- b) 29
- c) 25
- d) 27