

Question 1: Answer the following (MCQ) questions: (30 Marks)

1-time for a small packet to travel from a client to server and come back.

- A)RTT B)HTTP C)URL

2-process in different hosts communicate by

- A)exchanging messages B)inter-process communication C)URL

3-data over DSL phone line goes to

- A)Internet B)telephone net C)none of the previous

4-if $L=7.5$ Mbits, $R=1.5$ Mbps then one-hop transmission delay Sec

- A)1.5 B)11.25 C)5

$$L/R=7.5/1.5=5$$

5- moves packets from router input to appropriate router output.

- A)routing B)forwarding C)switching

6-socket messages.

- A)send b)receive C)send and receive

7-send packet with false source address.

- A)type wrong address by mistake B)IP spoofing C)all of the previous

8- which of the following terms is not associated with the DSL?

- A)DSLAM B)splitter C)CMTS

9-Which of the following is an architecture paradigm?

- A)P2P B)client-server C)all of the previous

10- which of the following is false with respect to TCP?

- A)connection-oriented B)transport layer protocol C)unreliable

11-application layer protocol defines

- A)types of messages exchanged
B)rules for when and how processes send and respond to messages
C)all of the above

12- when displaying a web page, the application layer uses the

- A)HTTP B)FTP C)SMTP

13-All communication activities in internet is governed by

- A)router B) protocol C) network

14-P2P applications face the challenge

- A) ISP Friendly B)Security C)All of the previous

15- End systems access the Internet through _____

- A) Internet Service Providers (ISPs)
B) Customer premises Equipment (CBE)
C) Digital subscriber line (DSL)

16- The only control that the application developer has on the transport-layer side is

- A) the choice of transport protocol
- B) the choice of link protocol
- C) the choice of network protocol

17- ----- can make use of as much, or as little, throughput as happens to be available.

- A) bandwidth-sensitive applications
- B) elastic applications
- C) critical applications

18- When this client-server interaction is taking place over TCP, the application developer needs to make an important decision—should each request/response pair be sent over a *separate* TCP connection, or should all of the requests and their corresponding responses be sent over the *same* TCP connection? In the former approach, the application is said to use ---

- A) non-persistent connections
- B) persistent connections
- C) critical connections

19- The RTT includes

- A) packet-propagation delays
- B) packet-queuing delays
- C) all of the previous

20. The number of layers in ISO / OSI reference model is _____

- A) 10
- B) 7
- C) 6

21. Which is not an application layer protocol?

- A) HTTP
- B) SMTP
- C) TCP

22. e-mail uses which protocol?

- A) SMTP
- B) HTTP
- C) FTP

23. malware can record keystrokes, web sites visited, upload info to collection site.

- A) virus
- B) worm
- C) spyware

24. Which protocol is a protocol of application layer?

- A) HTTP
- B) TCP
- C) IP

25. What is client process?

- A) Process that initiates communication.
- B) Process that waits to be contacted.
- C) protocol in the application layer.

26. What is the HTTP port number?

- A) 25
- B) 110
- C) 80

27. voice over DSL phone line goes to.....

- A) internet
- B) telephone net
- C) cable net

28.....are the 2 key network core functions

- A) routing & switching
- B) routing & forwarding
- C) none of the previous

29- check bit errors.

- A) nodal processing
- B) queueing delay
- C) transmission delay

30- determine output link.

- A) nodal processing
- B) queueing delay
- C) transmission delay

Question 2: Select which of the following statements are false and which are true? (20 Marks)

31-In a client-server architecture, there is an always-on host, called the server

A) True B) False

32-with the client-server architecture, clients directly communicate with each other

A) True B) False

33-in the client-server architecture is that the server has a fixed, well-known address, called an IP address

A) True B) False

34-a client can always contact the server by sending a packet to the server's IP address

A) True B) False

35-a popular social-networking site can quickly become overwhelmed if it has only one server handling all of its requests

A) True B) False

36-A data center can have hundreds of thousands of servers, which must be powered and maintained

A) True B) False

37-the service providers do not pay recurring interconnection and bandwidth costs for sending data from their data centers.

A) True B) False

38-In a P2P architecture, the peers are owned by the service provider.

A) True B) False

39-One of the most compelling features of P2P architectures is their self-scalability.

A) True B) False

40-A process can be thought of as a program that is running within an end system.

A) True B) False

41-a process in a P2P file-sharing system can not both upload and download files.

A) True B) False

42-In the context of a communication session between a pair of processes, the process that initiates the communication is labeled as the server. The process that waits to be contacted to begin the session is the client.

A) True B) False

43-A process sends messages into, and receives messages from, the network through a software interface called a socket.

A) True B) False

44-the interface between the application layer and the transport layer within a host is also referred to as the Application Programming Interface (API) between the application and the network

A) True B) False

45-The application developer has control of everything on the application-layer side of the socket and has control of everything of the transport-layer side of the socket.

A) True B) False

46- Popular applications have not been assigned specific port numbers.

A) True B) False

47- something has to be done to guarantee that the data sent by one end of the application is delivered correctly and completely to the other end of the application. If a protocol provides such a guaranteed data delivery service, it is said to provide reliable data transfer.

A) True B) False

48- When a transport-layer protocol doesn't provide reliable data transfer, this is not acceptable for loss-tolerant applications,

A) True B) False

49- in UDP there is handshaking before the two processes start to communicate.

A) True B) False

50-UDP provides a reliable data transfer service.

A) True B) False

Good Luck