King Saud University

College of Computer & Information Science

Information Systems department

Data Communication and Computer Networks (IS370)

Midterm #1

Second Semester 2016/2017

Form A   **Date: 14/03/2017**   **Exam duration 2 hours**

Name:	ID:
Section:	

Please select <u>one and only one</u> answer

Q	Answer					Q	Answer				
1	a	b	c	d	**e**	16	a	b	c	d	**e**
2	a	b	c	**d**	e	17	a	b	**c**	d	e
3	a	**b**	c	d	e	18	a	**b**	c	d	e
4	a	**b**	c	d	e	19	a	b	c	**d**	e
5	a	b	**c**	d	e	20	a	**b**	c	d	e
6	**a**	b	c	d	e	21	a	b	c	d	**e**
7	a	**b**	c	d	e	22	a	b	c	d	**e**
8	**a**	b	c	d	e	23	**a**	b	c	d	e
9	**a**	b	c	d	e	24	**a**	b	c	d	e
10	a	**b**	c	d	e	25	a	b	**c**	d	e
11	a	b	c	**d**	e	26	**a**	b	c	d	e
12	**a**	b	c	d	e	27	a	**b**	c	d	e
13	a	**b**	c	d		28	a	b	c	**d**	e
14	a	**b**	c	d	e	29	a	**b**	c	d	e
15	**a**	b	c	d	e	30	a	b	c	**d**	e

Note that all Math questions fall under student outcome A the rest of the questions under J

Q1. A communication protocol defines

    a. Message format
    b. Message order
    c. Actions based on received messages
    d. Actions based on transmitted messages
    e. All of the above

Q2. The function of digital subscriber line access multiplexer is

    a. Convert analog signals into digital signals
    b. Convert digital signals into analog signals
    c. Separates the data and phone signals
    d. a and c
    e. b and c

Q3. Which of the following is not correct about Ethernet networks

    a. Speed can be up to 10 Gbps
    b. Used to connect homes to ISP
    c. Uses Ethernet switches
    d. Most widely used in businesses
    e. None of the above

Q4. Which of the following is not correct about coaxial cables

    a. Can achieve high data transmission rates
    b. Uses two eccentric wires
    c. Classified as a guided medium
    d. Often used with fiber
    e. None of the above

Q5. In circuit switching all true except one

    a. Dedicated resources
    b. Call setup
    c. Support more users
    d. Performance guaranteed
    e. None of the above

Q6. In packet switching all true except one

a. Suitable for real-time services
b. Simpler, more efficient
c. Less costly to implement
d. Great for bursty data
e. None of the above

Q7. Most packet switches use this principle

a. Stop and wait
b. Store and forward
c. Pipelining
d. Both a and b
e. None of the above

Q8. If we have 3 links between host A and host B, and at each node: the processing delay is 10 µs, the propagation delay is 10 µs and queuing delay is 2 ms, 5 ms and 4 ms respectively and the transmission delay (for 10 Kb packet) is 0.0005 s, what is the total amount of delay?

a. 12.56 ms
b. 72.50 ms
c. 71.0015 ms
d. 11.6015 ms
e. None of the above

Q9. The time required to examine the packet's header and determine where to direct the packet is part of

a. Processing delay
b. Queuing delay
c. Transmission delay
d. Propagation delay
e. All of the above

Q10. For a 10 Mbps Ethernet link, if the length of the packet is $32*10^7$ bits, so the transmission delay is

a. $32*10^6$ s
b. 30.52 s
c. 0.3052 s
d. 32 s
e. $0.64*10^6$ s

Q11. In the OSI model, the presentation layer support all of the following except one:

a. Encryption
b. Compression
c. Machine specific convention
d. Synchronization
e. All of the above are supported

Q12. The OSI model has _____ layers:

a. 7
b. 5
c. 4
d. 6
e. None of the above

Q13. Packet sniffers involve:

a. Active receiver
b. Passive receiver
c. Both a and b
d. None of the above

Q14. The DoS attack in which the attacker sends deluge of packets to the targeted host is:

a. Vulnerability attack
b. Bandwidth flooding
c. Connection flooding
d. a and b
e. a and b and c

Q15. The first packet-switched computer network and a direct ancestor of today's public Internet is:

a. ARPAnet
b. ALOHAnet
c. CSnet
d. BITnet
e. NSFnet

Q16. In a client-server model, one of the following is not correct:

a. Server is always on
b. Server has a fixed IP
c. Clients communicate with server
d. Server farms can be used for scaling
e. A client can communicate with other clients from time to time

Q17. In a communication process the port number is needed because

a. There are many networks connected to each other
b. In one network there are many hosts connected
c. In any host there are many process running
d. Port number is needed to rout the message to the correct host
e. None of the above

Q18. One of the following is not correct

a. HTTP uses TCP
b. FTP uses UDP
c. SMTP uses TCP
d. DNS uses UDP
e. All of the above are correct

Q19. SMTP stands for

a. Some mail transport protocol
b. Simple management transfer protocol
c. Simple mail text protocol
d. Simple mail transfer protocol
e. Simple mail transport protocol

Q20. A persistent connection means

a. Handshakes first
b. Uses same connection to transfer more than object or message
c. Uses different connections to transfer multiple objects or messages
d. Does not hand shake
e. None of the above

Q21. In http, requesting 2 objects from the server (non-persistent) costs us

a. 2 RTT and 1 transmission time

b. 3 RTT and 3 transmission times

c. 4 RTT and 1 transmission times

d. 4 RTT and 4 transmission times

e. None of the above

Q22. Number of header lines in an http request is

a. 4

b. 3

c. 5

d. 6

e. Variable

Q23. In an HTTP response the header DATE means

a. Date and time packet was sent

b. Date and time request was received

c. Date and time object was created

d. Date and time object was modified

e. Date and time connection was established

Q24. Which of the following is not correct about Web cache

a. Web cache doesn't have its own disk space

b. Web cache can act both like server and client

c. Web cache might reduce the response time

d. Web cache contains copies of recently requested objects

e. None of the above

Q25. The conditional GET mechanism

a. Imposes conditions on the objects to be requested

b. Limits the number of response from a server

c. Helps to keep a cache up to date

d. a and c

e. None of the above

Q26. In FTP

a. The server opens a new connection for every file transfer
b. The server opens one connection for all file transfer
c. When retrieving a file, The client opens a new connection
d. When retrieving a file, the client uses one connection for all file transfer
e. None of the above

Q27. Which of the following in not correct in the following steps of SMTP

a. A client creates a message
b. Only HTTP is used to transfer mail to client's mail server
c. Client's mail server uses SMTP to transfer to recipient's mail server
d. Recipient uses IMAP to retrieve data from mail server
e. All are correct

Q28. If the TCP server were to support 10 simultaneous connections, each from a different client host, how many sockets would the TCP server need?

a. 1
b. 2
c. 10
d. 11
e. 9

Q29. Which of the following is not among the hierarchy of DNS

a. Root server
b. Local server
c. TLD server
d. Authoritative server
e. All among the hierarchy

Q30. The header of DNS query/reply is

a. 20 B
b. 4 B
c. 8 B
d. 12 B
e. None of the above