

Network guru MCQs

Chapters covered in questions

1. Computer Networks Introduction
2. OSI Model
3. Security & Physical Layer
4. Application Layer
5. Transport Layer
6. Frame Relay
7. TCP/IP Protocol Suite

EASY

1. A LAN (local area network) allows connected computers to
 - A. Share information and/or share peripheral equipment ✓
 - B. E-mail
 - C. Run faster
 - D. Go on line

2. Which of the following conditions allows for simultaneous transmission of two packets through a medium?
 - A. None of the above
 - B. Synchronous
 - C. Collision ✓
 - D. Asynchronous
 - E. Contention

3. Incoming packets are forwarded by a station in a network by adding them to its shortest output queue. What algorithm for routing is being applied?

None of the above

delta routing

static routing

flooding

hot potato routing ✓

4. If you configure the TCP/IP address and other TCP/IP parameters manually, you can always verify the configuration through which of the following? Select the best answer.

Server Services dialog box

DHCPINFO command-line utility

Network Properties dialog box ✓

Advanced Properties tab of TCP/ IP Info.

None of the above

5.
CSMA (Carrier Sense Multiple Access) is

a method of determining which device has access to the transmission medium at any time

a method access control technique for multiple-access transmission media. ✓

a very common bit-oriented data link protocol issued by ISO.

the network access standard for connecting stations to a circuit-switched network

None of the above

6. What amount of power can a light-emitting diode couple into an optical fibre, roughly?

10 milliwatts

100 picowatts

None of the above

440 microwatts

100 microwatts

7. What gadget divides a single network into two parts while allowing the higher protocols to see the two segments as one?

C. Bridge

D. Gateway

A. Switch

B. Router

8. Which of the following channels transmits data at a moderate pace (slowly)?

A. Wideband channel

B. Voiceband channel

D. Narrowband channel

C. Broadband channel

9. Ethernet uses

A. Mesh topology

B. Ring topology

C. Bus topology

D. All of these

10. The common name for a modulator-demodulator is

A. Modem

B. Joiner

C. Networker

D. Connector

11. The Internet's collection of links forms an interconnected network known as the

A. WWW

B. Web

C. Wide Area Web

D. All of the above

12. In the Internet model, the range of port numbers is

0 and 32,765(16-bit)

0 and 32,765(8-bit)

0 and 65,535(16-bit)

0 and 65,535(32-bit)

13. P2P is an _____ application architecture.

A. Client/server

B. Distributed

C. Centralized

D. 1-tier

14.

What is DOM, or document object model?

ASP.NET's object hierarchy

scripting language

API

html document standard for representing and interacting with objects

15.

Two machines can use the timestamp request and timestamp replay messages to determine the _____ needed for an IP datagram to travel between them.

Round-trip time

Time to reach the destination/source

Travel time for the next router

Half-trip time

16.

Which of the following ranges does not fall inside the purview of port number ranges, according to the Internet Assigned Numbers Authority (IANA)?

Static ports

Registered ports

Dynamic ports

Well-known ports

17. _____in IPv6 are addresses that begin with eight 0s.

Any cast addresses

Multicast addresses

Reserved addresses

Unicast addresses

18. An active component and a passive component make up the two-step IDS procedure. The active component includes which of the following?

Examining configuration files to find unwise settings

Password file inspection to find bad passwords

System inspection to look for policy violations

Attack simulation tools to test known attack vectors and record system responses

19.

Match with pictures

Hub switch

Router

Bridge

20. cookies are _____ in nature

Non-volatile

volatile

transient

intransient

TOUGH NUMERICALS

21. On a normal public telephone connection utilizing a 4800-bps modem, the likelihood of a single bit being incorrect is 10 to the power - 3. The residual error rate for a communication line employing 9-bit frames, if no error detection mechanism is applied, is roughly equal to

0.003

0.991

0.999

0.009

None of the above

Solution

Here the data rate of 4800 bps is redundant information.

Probability that a single bit is in error $10^{-3} = 0.001$

Probability that a single bit is not in error = $1 - 0.001 = 0.999$

In a frame of 9 bits the residual error rate value signifies the probability that at least one of the bits out of the nine is in error.

Thus, chances that all 9 bits are correct = $0.999^9 = 0.991$ (approx)

Residual error rate = chances that at least one of 9 bits is incorrect = $1 - 0.991 = 0.009$ (approx.)

22. On an 802.3 network, repeaters are frequently utilized to amplify the signals being transmitted. There is a maximum number of repeaters that can be utilized between any two nodes, just like there is a cap on segment length and segment count. What is the most repeaters that can be used at once?

Six

Five

Two

Three

Four

23. What is the value of cipher text c using the RSA algorithm if plain text M is 5 and P=3, Q=11, and D=7?

1.33

2.5

3.25

4.26

using RSA algorithm. ^{Public Key Cryptography}

Public key $\rightarrow e$ \ddot{x} network security question.
Private key $\rightarrow d$.

$P=3$ $Q=11$ $D=7$

Plain text M is 5.

\ddot{x} formula $(exd) \bmod \phi = 1$.

cipher text $c = (m)^e \bmod n$.
message.

(1) $P \times Q = 3 \times 11 = 33 = n$.

(2) $\phi = (P-1)(Q-1) = (2)(10) = 20$.

$\rightarrow (exd) \div \phi = 1$
 $(e \times 7) \div 20 = 1$
 $21 \div 20 = 1$
 $7 \times e = 3 \times 7 \therefore \boxed{e=3}$

cipher text $= (\text{message})^e \bmod n$
 $= (5)^3 \bmod 33$
 $= 125 \div 33 = 26$

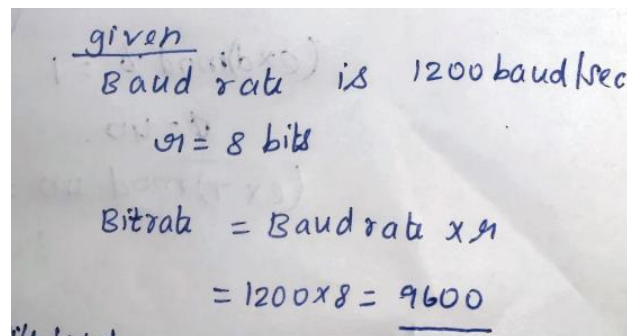
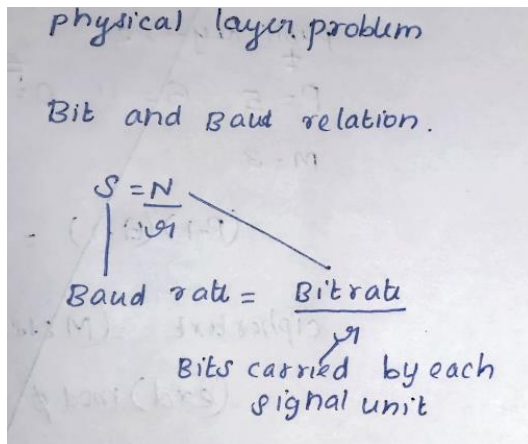
24. if the signal's baud rate is 1200 baud/sec. If each signal unit carries 8 bits, the signal's bit rate is

1. 150

2. 9600

3. 18.75

4. 8/1200



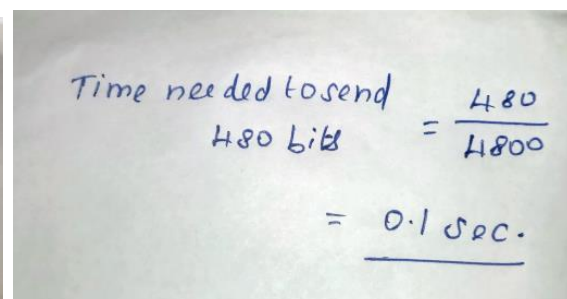
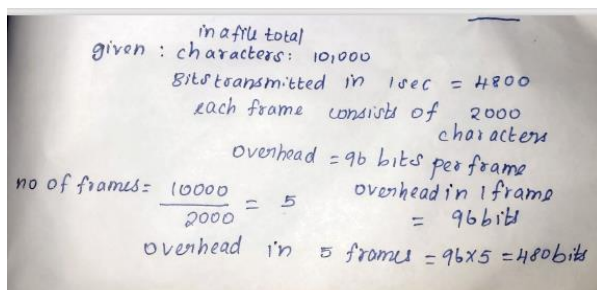
25. suppose a file of 10,000 characters is to be sent over a line at 4800 bps. Assume that the data is sent in frames. Each frame consists of 2000 characters and an overhead of 96 bits per frame. Using synchronous transmission, total overhead time is:

1. 0.05 sec

2. 0.1 sec

3. 0.2 sec

4. 2.0 sec



Sources of questions taken from

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