



CS601-Data Communication
Latest Solved Mcqs from Midterm Papers

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Lectures 1-22

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Latest Mcqs

MIDTERM EXAMINATION
Spring 2010

Question No: 1 (Marks: 1) - Please choose one

Effective network mean that the network has fast delivery, timeliness and

- high bandwidth
- duplex transmission
- **accurate transmission (P6)**
- low bandwidth

Question No: 2 (Marks: 1) - Please choose

A set of devices connected by communication links is called networking

- **True (P12)**
- False

Question No: 3 (Marks: 1) - Please choose one

Which one best describes the given statement:

"To allow multiple users to share total capacity of a transmission medium"

- congestion control
- exchange management
- **multiplexing (P17)**

Question No: 4 (Marks: 1) - Please choose one

Line configuration refers to the way two or more devices attach to a _____.

- **Link (P25)**
- Circuit
- Route
- Node

Question No: 5 (Marks: 1) - Please choose one

_____ requires the maximum number of I/O ports.

- Bus
- Star

- **Mesh (P29)**
- Ring

Question No: 6 (Marks: 1) - Please choose one

_____ is used to define the direction of the signal flow between the linked devices.

- **transmission mode (P34)**
- transmission method
- transmission impairments

Question No: 7 (Marks: 1) - Please choose one

Unidirectional traffic movement is overcome by dual ring technology.

- **True (P33)**
- False

Question No: 8 (Marks: 1) - Please choose one

Trailer is only added at _____ layer of OSI model.

- **Data link (P41)**
- Physical
- Network
- Application

Question No: 9 (Marks: 1) - Please choose one

Data link layer deals with mechanical and electrical specifications of transmission medium and interface

- **True (P44)**
- False

Question No: 10 (Marks: 1) - Please choose one

A signal that repeats a pattern over a regular interval of time is called_____.

- **periodic signal (P58)**
- analog signal
- composite signal

Question No: 11 (Marks: 1) - Please choose one

If there is _____ in voltage then the frequency is infinite.

- instantaneous change
- **continuous change (P61)**
- no change

Question No: 12 (Marks: 1) - Please choose one

In a time-domain plot, the horizontal axis is measure of _____.

- signal amplitude
- frequency
- phase
- **time (P63)**

Question No: 13 (Marks: 1) - Please choose

DC component is also termed as Direct current component or a component with non-zero frequency.

- **False (P72)**
- True

Question No: 14 (Marks: 1) - Please choose one

Quantization means measuring amplitudes of signal at equal intervals.

- True
- **False (P80)**

Question No: 15 (Marks: 1) - Please choose one

Amplitude in ASK is more resistive to EMI and Noise.

- **True (P87)**
- False

Question No: 16 (Marks: 1) - Please choose one

ASK, PSK, FSK and QAM are examples of _____ modulation.

- digital-to-digital
- **digital-to-analog (P85)**
- analog-to-analog
- analog-to-digital

Question No: 17 (Marks: 1) - Please choose one

The bit rate always equals the baud rate in which type of signal?

- **FSK (P86)**
- QAM
- 4-PSK
- PSK

Question No: 18 (Marks: 1) - Please choose one

Asynchronous transmission is _____

- **Slow (P99)**
- costly
- non-effective
- fast

Question No: 19 (Marks: 1) - Please choose one

A _____ converts an analog signal into a digital signal.

- **Demodulator (P110)**
- Modulator
- Digital-to-analog converter

Question No: 20 (Marks: 1) - Please choose one

If a station does not receive its signal up to a specified time that system issues an alarm to _____

- **another node (P188)**
- network manager
- switch
- network analyzer

MIDTERM EXAMINATION

Spring 2010

Question No: 1 (Marks: 1) - Please choose one

The information to be communicated in a data communications system is the

- ▶ Medium
- ▶ Protocol
- ▶ **Message (P 7)**
- ▶ Transmission

Question No: 2 (Marks: 1) - Please choose one

Which is not an element of protocol

- ▶ semantics
- ▶ timing
- ▶ **communication service module (P19)**

Question No: 3 (Marks: 1) - Please choose one

Line configuration refers to the way two or more devices attach to a _____.

▶ **Link (P 25)**

▶ Circuit

▶ Route

▶ Node

Question No: 4 (Marks: 1) - Please choose one

_____ requires the maximum number of I/O ports.

▶ Bus

▶ Star

▶ **Mesh (P29)**

▶ Ring

Question No: 5 (Marks: 1) - Please choose one

Which topology requires a central controller or hub?

▶ Mesh

▶ **Star (P 30)**

▶ Bus

▶ Ring

Question No: 6 (Marks: 1) - Please choose one

Layers 5, 6 and 7 also called as network support layers.

▶ True

▶ **False (P 42)**

Question No: 7 (Marks: 1) - Please choose one

Internet with small "i" specifies the world wide Network the actual internet.

- ▶ True
- ▶ **False (P 39)**

Question No: 8 (Marks: 1) - Please choose one

Data link layer deals with mechanical and electrical specifications of transmission medium and interface

- ▶ **True (P 44)**
- ▶ False

Question No: 9 (Marks: 1) - Please choose one

Data synchronization is a function related with _____

- ▶ **session layer (P 51)**
- ▶ presentation layer
- ▶ transport

Question No: 10 (Marks: 1) - Please choose one

OSI model was developed prior to TCP/IP model.

- ▶ **True (P 54)**
- ▶ False

Question No: 11 (Marks: 1) - Please choose one

Fourier transform tells us that any digital signal can be decomposed into infinite number of periodic signals

- ▶ True
- ▶ **False (P58)**

Question No: 12 (Marks: 1) - Please choose one

A signal that repeats a pattern over a regular interval of time is called_____.

- ▶ **periodic signal (P58)**
- ▶ analog signal
- ▶ composite signal

Question No: 13 (Marks: 1) - Please choose one

Frequency band in which 99% of the total power resides is called_____

- ▶ **power bandwidth (P 67)**
- ▶ half power bandwidth
- ▶ 3dB bandwidth
- ▶ F.M.

Question No: 14 (Marks: 1) - Please choose one

In differential Manchester we require two transition or signal changes to represent binary_____

- ▶ zero
- ▶ **one (P76)**
- ▶ both zero and one

Question No: 15 (Marks: 1) - Please choose one

In Alternate mark inversion the term mark comes from_____

- ▶ **telegraphy (P77)**
- ▶ telephony
- ▶ digital telephony

Question No: 16 (Marks: 1) - Please choose one

A 56k modem can download at a rate of _____ Kbps and upload at a rate of _____ Kbps.

- ▶ 33.6: 33.6
- ▶ **33.6: 56.6**
- ▶ 56.6: 33.6
- ▶ 56.6: 56.6

Question No: 17 (Marks: 1) - Please choose one

The bit rate always equals the baud rate in which type of signal?

- ▶ **FSK (P 86)**
- ▶ QAM
- ▶ 4-PSK
- ▶ PSK

Question No: 18 (Marks: 1) - Please choose one

Asynchronous transmission is _____

- ▶ **slow (P 99)**
- ▶ costly
- ▶ non-effective
- ▶ fast

Question No: 19 (Marks: 1) - Please choose one

At the _____ layer, a DCE takes data generated by a DTE.

- ▶ **physical (P 101)**
- ▶ transport
- ▶ data link
- ▶ application

Question No: 20 (Marks: 1) - Please choose one
_____ requires more bandwidth.

- ▶ FSK
- ▶ **ASK (P 112)**
- ▶ PSK
- ▶ QAM

MIDTERM EXAMINATION
Spring 2010

Question No: 1 (Marks: 1) - Please choose one
Which topology requires a central controller or hub?

- ▶ Mesh
- ▶ **Star (P 30)**
- ▶ Bus
- ▶ Ring

Question No: 2 (Marks: 1) - Please choose one
Unidirectional traffic movement is overcome by dual ring technology.

- ▶ **True (P33)**
- ▶ False

Question No: 3 (Marks: 1) - Please choose one

Which one best describes the given statement:

"To allow multiple users to share total capacity of a transmission medium"

- ▶ congestion control
- ▶ exchange management
- ▶ **multiplexing (P17)**

Question No: 4 (Marks: 1) - Please choose one

Which one is not among standard creation committee.

- ▶ **internet society and IETF (P 24)**
- ▶ ITU-T
- ▶ IEEE

Question No: 5 (Marks: 1) - Please choose one

Set of rules that govern communication is called

- ▶ OSI model
- ▶ **Protocol (P 8)**
- ▶ TCP/IP model
- ▶ Datagram

Question No: 6 (Marks: 1) - Please choose one

Frequency of a failure and network recovery time after a failure is measures of the _____ of a network.

- ▶ **Performance (P 14)**
- ▶ Reliability
- ▶ Security
- ▶ Feasibility

Question No: 7 (Marks: 1) - Please choose one

3dB is also called as power bandwidth.

- ▶ True
- ▶ **False (P66)**

Question No: 8 (Marks: 1) - Please choose one

ASK, PSK, FSK and QAM are examples of _____ modulation.

- ▶ digital-to-digital
- ▶ **digital-to-analog (P85)**
- ▶ analog-to-analog
- ▶ analog-to-digital

Question No: 9 (Marks: 1) - Please choose one

Packet switching is a connection oriented service.

- ▶ True
- ▶ **False (P38)**

Question No: 10 (Marks: 1) - Please choose one

Data synchronization is a function related with _____

- ▶ **session layer (P51)**
- ▶ presentation layer
- ▶ transport

Question No: 11 (Marks: 1) - Please choose one

Fourier transform tells us that any digital signal can be decomposed into infinite number of periodic signals

- ▶ True
- ▶ **False (P 58)**

Question No: 12 (Marks: 1) - Please choose one

The internet model consists of _____ layers.

- ▶ **three (P239)**
- ▶ two
- ▶ five
- ▶ seven

Question No: 13 (Marks: 1) - Please choose one

Analog to digital conversion is also termed as modulating an analog signal.

- ▶ True
- ▶ **False (P 77)**

Question No: 14 (Marks: 1) - Please choose one

PCM is the first process of PAM.

- ▶ True
- ▶ **False (P80)**

Question No: 15 (Marks: 1) - Please choose one

A modulator converts a(n) _____ signal to a(n) _____ signal.

- ▶ FSK: PSK
- ▶ **Digital: analog (P 110)**
- ▶ Analog: digital
- ▶ PSK: FSK

Question No: 16 (Marks: 1) - Please choose one

The _____ layer changes bits into electromagnetic signals.

- ▶ **physical**
- ▶ data link
- ▶ transport
- ▶ none of given

http://www.ee.surrey.ac.uk/Projects/CAL/networks/Physical_Layer.htm

Question No: 17 (Marks: 1) - Please choose one

We need _____ to decompose a composite signal into its components.

- ▶ **fourier transform (P 64)**
- ▶ nyquist theorem
- ▶ shannon capacity

Question No: 18 (Marks: 1) - Please choose one

The bit rate always equals the baud rate in which type of signal?

- ▶ **FSK (P 86)**
- ▶ QAM

▶ 4-PSK

▶ PSK

Question No: 19 (Marks: 1) - Please choose one

There are _____ possible variations of 16 QAM.

▶ five

▶ two

▶ **three (P93)**

▶ four

Question No: 20 (Marks: 1) - Please choose one

Number of signal units per second that are required to represent a bit is called bit rate.

▶ True

▶ **False (P 68)**

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Please choose one (Marks: 1)

Effective network mean that the network has fast delivery, timeliness and

- high bandwidth
- duplex transmission
- **accurate transmission (P6)**
- low bandwidth

Question No: 2 (Marks: 1) - Please choose one

A set of devices connected by communication links is called networking

- **True (P12)**
- False

Question No: 3 (Marks: 1) - Please choose one
_____ is a multipoint topology.

- Ring
- Mesh
- Tree
- **Bus**

Question No: 4 (Marks: 1) - Please choose one
_____ requires the maximum number of I/O ports.

- Bus
- Star
- **Mesh (P29)**
- Ring

Question No: 5 (Marks: 1) - Please choose one
Unidirectional traffic movement is overcome by dual ring technology.

- **True (P33)**
- False

Question No: 6 (Marks: 1) - Please choose one
As the data packet moves from the lower to the upper layers, headers are

- _____.
- added
 - **subtracted**
 - rearranged
 - modified

Question No: 7 (Marks: 1) - Please choose one
Data chunk at data link layer is called _____

- frame
- **packet (P38)**
- datagram

Question No: 8 (Marks: 1) - Please choose one
The _____ layer is the layer closest to the transmission medium.

- **Physical (P45)**
- data link
- network
- transport

Question No: 9 (Marks: 1) - Please choose one
Data synchronization is a function related with _____

- **session layer (P 51)**
- presentation layer
- transport

Question No: 10 (Marks: 1) - Please choose one

Which layer is responsible for source to destination delivery of entire message?

- **transport layer (P59)**
- network layer
- session layer
- application layer

Question No: 11 (Marks: 1) - Please choose one

Encryption and encoding are the same terms.

- True
- **False (P52)**

Question No: 12 (Marks: 1) - Please choose one

TCP/IP model Application layer incorporate OSI Application and presentation

- layers
- **True**
- False

Question No: 13 (Marks: 1) - Please choose one

A sine wave must be an analog signal.

- **True (P58)**
- False

Question No: 14 (Marks: 1) - Please choose one

A periodic signal can always be decomposed into _____

- exactly an odd number of sine waves
- a set of sine waves
- set of sine waves, one of the which must have a phase of 0o
- **none of the given (P58)**

Question No: 15 (Marks: 1) - Please choose one

Manchester is a type of _____ encoding.

- **Biphase (P75)**
- polar
- biphase & polar
- none of the given

Question No: 16 (Marks: 1) - Please choose one

The powerful carrier signal is called as the _____

- **carrier frequency (P86)**
- base signal
- carrier frequency and base signal
- none of given

Question No: 17 (Marks: 1) - Please choose one

Modulation of an analog signal can be accomplished through changing the _____ of the carrier signal.

- amplitude
- frequency
- phase
- **all of the given (P58)**

Question No: 18 (Marks: 1) - Please choose one

In _____ transmission, bits are transmitted over a single wire, one at a time.

- Asynchronous serial
- Synchronous serial
- **Parallel (P99)**
- Asynchronous & Synchronous serial

Question No: 19 (Marks: 1) - Please choose one

In RS 422 Balanced mode two lines carry _____ signals which are not identical to each other.

- **Same (P109)**
- different
- digital
- analog

Question No: 20 (Marks: 1) - Please choose one

A _____ converts an analog signal into a digital signal.

- **Demodulator (P110)**
- Modulator
- Digital-to-analog converter

MIDTERM EXAMINATION Spring 2009

Question No: 1 (Marks: 1) - Please choose one

In RS 422 Balanced mode two lines carry _____ signals which are not identical to each other.

- ▶ **same (P109)**
- ▶ different
- ▶ digital
- ▶ analog

Question No: 2 (Marks: 1) - Please choose one

The _____ generates the data and passes it along with any control information to a _____.

- ▶ **DTE; DCE (P 101)**
- ▶ DCE; DTE
- ▶ DCE; node
- ▶ DTE; application

Question No: 3 (Marks: 1) - Please choose one

In _____ transmission, a start bit and a stop bit frame a character byte.

- ▶ **Asynchronous serial (P99)**
- ▶ Synchronous serial (P99)
- ▶ Parallel
- ▶ Asynchronous & Synchronous serial

Question No: 4 (Marks: 1) - Please choose one

In _____ transmission, bits are transmitted simultaneously, each across its own wire.

- ▶ Asynchronous serial
- ▶ Synchronous serial
- ▶ Parallel
- ▶ Asynchronous & Synchronous serial

Question No: 5 (Marks: 1) - Please choose one

Asynchronous transmission is _____

- ▶ **slow (P99)**
- ▶ costly
- ▶ non-effective
- ▶ fast

Question No: 6 (Marks: 1) - Please choose one

In _____ transmission the timing of the signal is unimportant.

▶ **Asynchronous (P99)**

- ▶ Synchronous
- ▶ Polar
- ▶ Bi-polar

Question No: 7 (Marks: 1) - Please choose one

In 8QAM each signal shift or one baud represents _____

- ▶ 4 bits
- ▶ 2 bits
- ▶ 5 bits
- ▶ **3 bits (P93)**

Question No: 8 (Marks: 1) - Please choose one

PCM is the first process of PAM.

- ▶ **True**
- ▶ False

Question No: 9 (Marks: 1) - Please choose one

Bi phase encoding is a type of bipolar encoding in which we use two voltage levels.

- ▶ **True (P73)**
- ▶ False

Question No: 10 (Marks: 1) - Please choose one

The amplitude of a digital signal depends upon the_____to represent a bit.

- ▶ phase
- ▶ voltage
- ▶ wavelength

Question No: 11 (Marks: 1) - Please choose one

Time domain plot show changes in signal phase with respect to time.

- ▶ True
- ▶ **False (P63)**

Question No: 12 (Marks: 1) - Please choose one

OSI model was developed prior to TCP/IP model.

- ▶ True
- ▶ **False(P54)**

Question No: 13 (Marks: 1) - Please choose one

_____layer is the layer closest to the transmission medium.

- ▶ **Physical (P45)**
- ▶ Data link
- ▶ Network
- ▶ Transport

Question No: 14 (Marks: 1) - Please choose one

Data chunk at data link layer is called_____

- ▶ frame
- ▶ **packet (P38)**
- ▶ datagram

Question No: 15 (Marks: 1) - Please choose one

The internet model consists of _____layers.

- ▶ **Three (P239)**
- ▶ Two
- ▶ Five
- ▶ Seven

Question No: 16 (Marks: 1) - Please choose one

_____representation of links that connect nodes is called as physical topology.

- ▶ **geometrical (P28)**
- ▶ logical
- ▶ physical

Question No: 17 (Marks: 1) - Please choose one

_____ is a multipoint topology.

- ▶ Ring
- ▶ Mesh
- ▶ Tree
- ▶ **Bus (P31)**

Question No: 18 (Marks: 1) - Please choose one

In mesh topology, if there are five nodes then there will be _____ links.

- ▶ 5
- ▶ **10(P10)**
- ▶ 15
- ▶ 20

Question No: 19 (Marks: 1) - Please choose one

Non proprietary standard is also termed as de facto standard.

- ▶ **True (P23)**
- ▶ False

Question No: 20 (Marks: 1) - Please choose one

Effective network mean that the network has fast delivery, timeliness and

- ▶ high bandwidth
- ▶ duplex transmission
- ▶ **accurate transmission (P6)**
- ▶ low bandwidth

MIDTERM EXAMINATION

Spring 2009

Question No: 1 (Marks: 1) - Please choose one

Frequency of a failure and network recovery time after a failure is measures of the _____ of a network.

- **Performance (P 14)**
- Reliability
- Security
- Feasibility

Question No: 2 (Marks: 1) - Please choose one
Secondary hub in a tree must be a passive hub.

- **True (P31)**
- False

Question No: 3 (Marks: 1) - Please choose one
In mesh topology, if there are five nodes then there will be _____ links.

- 5
- **10 (P29)**
- 15
- 20

Question No: 4 (Marks: 1) - Please choose one
Internet with small "i" specifies the world wide Network the actual internet.

- True
- **False (P39)**

Question No: 5 (Marks: 1) - Please choose one
Data link layer deals with mechanical and electrical specifications of transmission medium and interface

- **True (P 44)**
- False

Question No: 6 (Marks: 1) - Please choose one
When data are transmitted from device A to device B, the header from A's layer 4 is read by B's _____ layer.

- physical
- **transport**
- application
- none of the given

Question No: 7 (Marks: 1) - Please choose one
Time domain plot show changes in signal phase with respect to time.

- True
- **False (63)**

Question No: 8 (Marks: 1) - Please choose one
Frequency band in which 99% of the total power resides is called _____

- **power bandwidth (P67)**
- half power bandwidth
- F.M.

Question No: 9 (Marks: 1) - Please choose one

The inversion of the level at 1 bit is called as _____

- NRZ-L
- **NRZ-I (P73)**
- RZ

Question No: 10 (Marks: 1) - Please choose one

Which of the encoding schemes have bandwidth problems?

- Differential Manchester
- **AMI (P77)**
- RZ

Question No: 11 (Marks: 1) - Please choose one

Bi phase and bipolar are same terms.

- True
- **False (P78)**

Question No: 12 (Marks: 1) - Please choose one

Quantization means measuring amplitudes of signal at equal intervals.

- True
- **False (P80)**

Question No: 13 (Marks: 1) - Please choose one

The last process in PCM is _____ digital data into digital signal.

- **Encoding (P70)**
- decoding
- modulating

Question No: 14 (Marks: 1) - Please choose one

Which modulation technique involves tribits, eight different phase shifts, and one mplitude?

- FSK
- 8-PSK
- ASK
- 4-PSK

Question No: 15 (Marks: 1) - Please choose one

Asynchronous transmission is _____

- **slow (P99)**
- costly
- non-effective
- fast

Question No: 16 (Marks: 1) - Please choose one

Synchronous transmission have _____.

- a start bit
- a stop bit
- gaps between bytes
- **none of the given (P99)**

Question No: 17 (Marks: 1) - Please choose one Asynchronous transmission
The _____ generates the data and passes it along with any control information to a _____.

- **DTE; DCE (P101)**
- DCE; DTE
- DCE; node
- DTE; application

Question No: 18 (Marks: 1) - Please choose one
A human brain is considered as a _____

- driver
- machine
- **DTE (P101)**
- DCE

Question No: 19 (Marks: 1) - Please choose one
The last modified version of EIA-232 standard is _____

- **EIA-232 D (P102)**
- EIA-232 A
- EIA-232 B
- EIA-232 C

Question No: 20 (Marks: 1) - Please choose one
A _____ converts an analog signal into a digital signal.

- **Demodulator (P110)**
- Modulator
- Digital-to-analog converter

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