



CS601-Data Communication
Latest Solved MCQs from Final term Papers

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Lectures 23-45

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Latest Mcqs

FINAL TERM EXAMINATION
Spring 2011

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

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

- ▶ NRZ-L
- ▶ **NRZ-I Page 73**
- ▶ RZ

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

In selective-reject ARQ, only the specific damaged or lost frame is _____.

- ▶ **Retransmitted (Page 200)**
- ▶ Forwarded
- ▶ Selected
- ▶ Rejected

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

YMODEM has _____ Byte of data unit.

- ▶ **1024 Page 205**
- ▶ 256
- ▶ 128
- ▶ 512

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

Which of the following sublayer, resolves the contention for the shared media

- ▶ **MAC (Page 219)**
- ▶ LLC
- ▶ Physical

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

Like 10 Base 5, 10 Base 2 is a _____ topology LAN

- ▶ Ring
- ▶ Mesh
- ▶ Star
- ▶ **Bus (Page 227)**

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

At the CRC generator, _____ added to the data unit after the division process

▶ **0s are (Page 176)**

- ▶ 1s are
- ▶ The polynomial
- ▶ The CRC remainder is

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

Flow control is needed to prevent _____.

- ▶ Bit errors
- ▶ Overflow of the sender buffer
- ▶ **Overflow of the receiver buffer (Page 46)**
- ▶ Collision between sender and receiver

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

In Y-MODEM Multiple files can be sent simultaneously

▶ **True (Page 205)**

- ▶ False

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

In 56K Modems Max Uploading speed is _____ bytes and downloading speed is _____ byte.

- 40K, 56K
- **33.6K, 56K (Page 117)**
- 56K, 33.6K
- None of given

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

If db is amplified then attenuation is -----

- **Positive (Page 142)**
- Negative
- Zero
- None of the above

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

Amplifiers are used to _____ the signal to heat.

- **Amplify (Page 142)**
- Rectify
- Testify
- Nullify

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

_____ requires the maximum number of I/O ports.

- Bus
- Star
- **Mesh (Page 29)**

- Ring

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

There are _____ basic categories of multiplexing.

- **3 (Page 148)**
- 4
- 2
- 5

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

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

- Asynchronous serial
- Synchronous serial
- **Parallel (Page 98)**
- Asynchronous & Synchronous serial

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

In _____ transmission, bits are transmitted over their own wires

- Asynchronous serial
 - Synchronous serial
 - **Parallel**
- http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter4/mixed_quiz.html
- Asynchronous & Synchronous serial

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

EIA 232 allows for a maximum bit rate of _____ Kbps.

- 40
- 30
- **20 (Page 104)**
- 10

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

In CRC the quotient at the sender _____

- Becomes the dividend at the receiver
- Becomes the divisor at the receiver
- **Is discarded**

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

- Is the remainder

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

In line discipline after the data transmission, the sending system finishes with an _____ frame

- **EOT (Page 189)**
- EKT
- ENT
- ESP

FINAL TERM EXAMINATION
Spring 2010

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

Encryption and encoding are the same terms.

- ▶ True
- ▶ **False (Page 52)**

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

Traditional modems are wide spread now to a data rate of _____.

- ▶ **56 Kbps (Page 115)**
- ▶ 72 Kbps
- ▶ 42 Kbps
- ▶ 96 Kbps

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

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

- ▶ True
- ▶ **False (Page 73)**

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

The _____ layer changes bits into electromagnetic signals.

- ▶ **physical** http://www.ee.surrey.ac.uk/Projects/CAL/networks/Physical_Layer.htm
- ▶ data link
- ▶ transport
- ▶ none of given

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

Which is not an element of protocol?

- ▶ Semantics
- ▶ Timing
- ▶ **Communication service module (Page 19)**

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

A telephone network is an example of a _____ network.

- ▶ Packet-switched
- ▶ **Circuit-switched (Page 38)**

- ▶ Message-switched
- ▶ none of the given

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

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

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

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

Secondary hub in a tree must be a passive hub.

- ▶ True
- ▶ **False (Page 31)**

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

In case of uploading at the switching station, data is converted to digital signal using _____.

- ▶ TCP
- ▶ **PCM (Page 116)**
- ▶ ICP
- ▶ TDM

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

Category 5 UTP cable is used for data transmission of upto _____.

- ▶ **100 Mbps (Page 123)**
- ▶ 200 Mbps
- ▶ 250 Mbps
- ▶ 400 Mbps

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

Which of the following primarily uses guided media?

- ▶ Cellular telephone system
- ▶ **Local telephone system (Page 120)**
- ▶ Satellite communications
- ▶ Radio broadcasting

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

Ultra high-frequency waves always use _____ propagation.

- ▶ Ground
- ▶ Sky

▶ **Line of Sight (Page 136)**

▶ Space

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

Distortion occurs in a _____ signal.

▶ Rectified

▶ **Composite (Page 141)**

▶ Amplified

▶ none of the given

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

Which of the following are not used to measure the performance of TX Media.

▶ Throughput

▶ Propagation Speed

▶ Propagation Time

▶ **none of the given (Page 144)**

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

A portion of the path that carries TX b/w a given pair of devices is known as _____.

▶ Node

▶ Bridge

▶ **Channel (Page 147)**

▶ Gateway

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

_____ takes data from one high speed line and breaks it into portions.

▶ Multiplexing

▶ **Inverse multiplexing (Page 158)**

▶ Inverse subtraction

▶ Inverse addition

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

The _____ layer is the layer closest to the transmission medium.

▶ **physical**

▶ data link

▶ network

▶ transport

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter2/multiple_choice_quiz.html

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

In primary-secondary communication _____ is always the initiator of a session

▶ **Primary (Page 189)**

- ▶ Secondary
- ▶ Sender
- ▶ Receiver

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

YMODEM has _____ Byte of data unit.

▶ **1024 (Page 205)**

- ▶ 256
- ▶ 128
- ▶ 512

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

_____ coordinates the amount of data that can be sent before receiving acknowledgment

▶ **flow control (Page 186)**

- ▶ error control
- ▶ data control

Question No: 21 (Marks: 1) - Please choose one

If the ASCII character H is sent and the character I is received, what type of error is this?

▶ **Single-bit (Page 169)**

- ▶ Multiple-bit
- ▶ Burst
- ▶ Recoverable

Question No: 22 (Marks: 1) - Please choose one

In _____ ARQ, if a NAK is received, only the specific damaged or lost frame is retransmitted.

- ▶ Stop-and-wait
- ▶ Go-Back-N
- ▶ **Selective reject (Page 200)**
- ▶ Stop-and-wait & Go-back-N

Question No: 23 (Marks: 1) - Please choose one

Data link protocols can be divided into _____ sub-groups.

▶ **two (Page 202)**

- ▶ three
- ▶ four
- ▶ five

Question No: 24 (Marks: 1) - Please choose one

If odd parity is used for ASCII error detection, the number of 0s per 8-bit symbol is _____

- ▶ Even
- ▶ **Odd (Page 173)**
- ▶ Indeterminate
- ▶ 42

Question No: 25 (Marks: 1) - Please choose one

In Y-MODEM Multiple files can be sent simultaneously

- ▶ **True (Page 205)**
- ▶ False

Question No: 26 (Marks: 1) - Please choose one

The PDU has no flag fields, no CRC, and no station address

- ▶ **TRUE (Page 220)**
- ▶ FALSE

Question No: 27 (Marks: 1) - Please choose one

Check sum method is used for _____ layers.

- ▶ Physical
- ▶ Application
- ▶ Transport
- ▶ **Data link** <http://www.cse.iitk.ac.in/users/dheeraj/cs425/lec09.html>

Question No: 28 (Marks: 1) - Please choose one

Repeater is an amplifier, not a regenerator.

- ▶ True
- ▶ **False (Page 240)**

Question No: 29 (Marks: 1) - Please choose one

RARP stands for Reverse Address Resolution Protocol.

- ▶ **True (Page 244)**
- ▶ False

Question No: 30 (Marks: 1) - Please choose one

The BNC-T connector is a T-shaped device with _____ ports

- ▶ **Three (Page 228)**
- ▶ Two
- ▶ Four
- ▶ Five

FINAL TERM EXAMINATION
Spring 2010

Question No: 1 (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

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter2/multiple_choice_quiz.html

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

A periodic signal completes one cycle in 0.001 s. What is the frequency?

- ▶ 1 Hz
- ▶ 100 Hz
- ▶ **1 KHz (Page 61)**
- ▶ 1 MHz

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

Zero crossing bandwidth is also called as equivalent noise bandwidth.

- ▶ True
- ▶ **False (Page 67)**

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

Amplitude in ASK is more resistive to EMI and Noise.

- ▶ True
- ▶ **False (Page 87)**

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

If FCC regulations are followed, the carrier frequencies of adjacent AM radio stations are _____ apart.

- ▶ 5 KHz
- ▶ **10 KHz (Page 95)**
- ▶ 200 KHz
- ▶ 530 KHz

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

There are _____ types of serial transmission:

- ▶ 1
- ▶ **2 (Page 99)**
- ▶ 3
- ▶ 4

Question No: 7 (Marks: 1) - Please choose one
Synchronous transmission has _____.

- ▶ a start bit
- ▶ a stop bit
- ▶ gaps between bytes
- ▶ **none of the given (page 99)**

Question No: 8 (Marks: 1) - Please choose one
Which of the following is an example of ITU-T modem standards?

- ▶ T-series
- ▶ X-series
- ▶ N-series
- ▶ **V-series (Page 114)**

Question No: 9 (Marks: 1) - Please choose one
The maximum data rate in the uploading direction is still _____.

- ▶ 26.6 Kbps
- ▶ **33.6 Kbps (Page 117)**
- ▶ 36.6 Kbps
- ▶ 46.6 Kbps

Question No: 10 (Marks: 1) - Please choose one
Category 5 UTP cable is used for data transmission of upto _____.

- ▶ **100 Mbps (Page 123)**
- ▶ 200 Mbps
- ▶ 250 Mbps
- ▶ 400 Mbps

Question No: 11 (Marks: 1) - Please choose one
All of popular Fiber optic connectors are _____ shaped.

- ▶ Conical
- ▶ **Barrel (Page 131)**
- ▶ Circular
- ▶ Rectangular

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

The VLF and LF bands use _____ propagation for communications.

- ▶ Ground
- ▶ Sky
- ▶ **Line of sight (Page 134)**
- ▶ Space

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

Multiplexing is the set of techniques that allows simultaneous TX of multiple signals across _____ data link

- ▶ **Single (Page 147)**
- ▶ Multi
- ▶ Single and Multi
- ▶ none of the given

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

Need for Addressing makes Asynchronous TDM inefficient for bit or byte _____.

- ▶ **Interleaving (Page 158)**
- ▶ Addition
- ▶ Subtraction
- ▶ None of the given

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

_____ takes data from one high speed line and breaks it into portions.

- ▶ Multiplexing
- ▶ **Inverse multiplexing (Page 158)**
- ▶ Inverse subtraction
- ▶ Inverse addition

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

A traditional telephone line has a bandwidth of _____.

- ▶ **3000Hz (Page 111)**
- ▶ 4000 Hz
- ▶ 2000 MHz
- ▶ 4000 MHz

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

If the ASCII character H is sent and the character I is received, what type of error is this?

- ▶ **Single-bit (Page 169)**
- ▶ Multiple-bit

- ▶ Burst
- ▶ Recoverable

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

At the CRC generator, _____ added to the data unit after the division process

- ▶ **0s are**
- ▶ 1s are
- ▶ The polynomial
- ▶ The CRC remainder is

http://highereducation.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

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

Error control in the data link layer is based on _____

- ▶ **automatic repeat request (Page 196)**
- ▶ automatic repeat acknowledgment
- ▶ automatic send acknowledgment

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

In line discipline the initiator first transmits a frame called an _____

- ▶ **Enquiry (Page 189)**
- ▶ Acknowledgment
- ▶ NAK
- ▶ Request

Question No: 21 (Marks: 1) - Please choose one

Primary device uses _____ to receive transmission from the secondary devices.

- ▶ ACK
- ▶ ENQ
- ▶ **POLL (Page 191)**

Question No: 22 (Marks: 1) - Please choose one

Flow control is needed to prevent _____.

- ▶ Bit errors
- ▶ Overflow of the sender buffer
- ▶ **Overflow of the receiver buffer (Page 46)**
- ▶ Collision between sender and receiver

Question No: 23 (Marks: 1) - Please choose one

For stop-and-wait ARQ, for N data packets sent, _____ acknowledgments are needed.

- ▶ **N**

- ▶ 2N
- ▶ N-1
- ▶ N+1

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter11/mixed_quiz.html

Question No: 24 (Marks: 1) - Please choose one

In Y-MODEM Multiple files can be sent simultaneously

- ▶ **True (Page 205)**
- ▶ False

Question No: 25 (Marks: 1) - Please choose one

HDLC is an acronym for _____.

- ▶ High-duplex line communication
- ▶ **High-level data link control (Page 210)**
- ▶ Half-duplex digital link combination
- ▶ Host double-level circuit

Question No: 26 (Marks: 1) - Please choose one

Token Bus has no commercial application in data communications

- ▶ **True (Page 232)**
- ▶ False

Question No: 27 (Marks: 1) - Please choose one

The BNC-T connector is a T-shaped device with _____ ports

- ▶ **Three (Page 228)**
- ▶ Two
- ▶ Four
- ▶ Five

Question No: 28 (Marks: 1) - Please choose one

Each station in the Token Ring regenerates the frame.

- ▶ **True (Page 234)**
- ▶ False

Question No: 29 (Marks: 1) - Please choose one

Repeater works on _____ layer.

- ▶ Data Link
- ▶ Physical
- ▶ **Network (224)**
- ▶ Application

Question No: 30 (Marks: 1) - Please choose one

Trunks are transmission media such as _____ that handle the telephone to the nearest end office.

- ▶ Satellite links
- ▶ **Twisted-pair & Fiber-optic**
- ▶ Twisted-pair
- ▶ Fiber-optic

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter8/mixed_quiz.html

**Spring 2010
CS601- Data Communication**

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

_____ representation of links that connect nodes is called as physical topology.

- ▶ geometrical
- ▶ logical
- ▶ **physical (page 44)**

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

The internet model consists of _____ layers.

- ▶ three
- ▶ two
- ▶ **five**
- ▶ seven

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter2/multiple_choice_quiz.html

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

Encryption and encoding are the same terms.

- ▶ True
- ▶ **False (Page 52)**

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

The amplitude of a digital signal depends upon the _____ to represent a bit.

- ▶ phase
- ▶ **voltage (Page 59)**
- ▶ wavelength

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

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

- ▶ NRZ-L

▶ **NRZ-I (Page 73)**

▶ RZ

Question No: 6 (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**

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

If FCC regulations are followed, the carrier frequencies of adjacent AM radio stations are _____ apart.

- ▶ 5 KHz
- ▶ **10 KHz (Page 95)**
- ▶ 200 KHz
- ▶ 530 KHz

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Category 5 UTP cable is used for data transmission of upto _____.

- ▶ **100 Mbps (Page 123)**
- ▶ 200 Mbps
- ▶ 250 Mbps
- ▶ 400 Mbps

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

The RG number gives us information about _____.

- ▶ Twisted pairs
- ▶ **Coaxial cables (Page 125)**
- ▶ Optical fibers
- ▶ all of the given

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

The inner core of an optical fiber is _____ in composition.

- ▶ **Glass plastic (Page 130)**
- ▶ Copper
- ▶ Bimetallic
- ▶ Liquid

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

All of popular Fiber optic connectors are _____ shaped.

- ▶ Conical
- ▶ **Barrel (Page 131)**
- ▶ Circular
- ▶ Rectangular

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

The VLF and LF bands use _____ propagation for communications.

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- ▶ Sky
- ▶ **Line of sight (Page 134)**
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Question No: 14 (Marks: 1) - Please choose one

A portion of the path that carries TX b/w a given pair of devices is known as _____.

- ▶ Node
- ▶ Bridge
- ▶ **Channel (Page 147)**
- ▶ Gateway

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

Which error detection method involves polynomials?

- ▶ Checksum
- ▶ Two-dimensional parity check
- ▶ **CRC (Page 177)**
- ▶ Simple parity check

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

If the ASCII character G is sent and the character D is received, what type of error is this?

- ▶ Single-bit
- ▶ Multiple-bit

▶ **Burst**

- ▶ Recoverable

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

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

Which error detection method involves the use of parity bits?

▶ **Simple parity check & two dimensional parity check**

- ▶ CRC
- ▶ Two-dimensional parity check
- ▶ Simple parity check

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

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

Which error detection method can detect a single-bit error?

- ▶ Simple parity check
- ▶ Two-dimensional parity check
- ▶ CRC

▶ **All of the given**

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

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

The Hamming code is a method of _____

- ▶ Error detection
- ▶ **Error correction (Page 181)**
- ▶ Error encapsulation
- ▶ Error detection & Error encapsulation

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

Sliding window requires that data frames be transmitted _____

▶ **Sequentially (Page 199)**

- ▶ Frequently
- ▶ Synchronously
- ▶ Asynchronously

Question No: 21 (Marks: 1) - Please choose one

In selective-reject ARQ, only the specific damaged or lost frame is _____.

▶ **Retransmitted (Page 200)**

- ▶ Forwarded
- ▶ Selected
- ▶ Rejected

Question No: 22 (Marks: 1) - Please choose one

Which of the following sub layer, resolves the contention for the shared media

- ▶ **MAC (Page 219)**
- ▶ LLC
- ▶ Physical

Question No: 23 (Marks: 1) - Please choose one

The PDU has no flag fields, no CRC, and no station address

- ▶ **TRUE (Page 220)**
- ▶ FALSE

Question No: 24 (Marks: 1) - Please choose one

IEEE divides the base band category into _____ standards.

- ▶ **5 (Page 222)**
- ▶ 4
- ▶ 3
- ▶ 6

Question No: 25 (Marks: 1) - Please choose one

Like 10 Base 5, 10 Base 2 is a _____ topology LAN

- ▶ Ring
- ▶ Mesh
- ▶ Star
- ▶ **Bus (Page 227)**

Question No: 26 (Marks: 1) - Please choose one

Check sum method is used for _____ layers.

- ▶ Physical
- ▶ Application
- ▶ Transport
- ▶ **Data link** <http://www.cse.iitk.ac.in/users/dheeraj/cs425/lec09.html>

Question No: 27 (Marks: 1) - Please choose one

Repeater works on _____ layer.

- ▶ Data Link
- ▶ Physical
- ▶ **Network (Page 224)**
- ▶ Application

Question No: 28 (Marks: 1) - Please choose one

Trunks are transmission media such as _____ that handle the telephone to the nearest end office.

- ▶ Satellite links
- ▶ **Twisted-pair & Fiber-optic**
- ▶ Twisted-pair
- ▶ Fiber-optic

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter8/mixed_quiz.html

Question No: 29 (Marks: 1) - Please choose one

Which of the following _____ uses a series of filters to decompose multiplexed signal into its constituent signals?

- ▶ MUX
- ▶ **DEMUX (Page 150)**
- ▶ Switch
- ▶ Bridge

Question No: 30 (Marks: 1) - Please choose one

In Fast Ethernet, data rate can be increased by _____ collisions.

- ▶ Increasing
- ▶ **Decreasing (Page 230)**
- ▶ Keeping Constant
- ▶ None of the given

**FINAL TERM EXAMINATION
Spring 2009**

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

Which is not an element of protocol

- ▶ semantics
- ▶ timing
- ▶ **communication service module (Page 19)**

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

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

- ▶ True
- ▶ **False (Page 42)**

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

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

- ▶ True
- ▶ **False (Page 42)**

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

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

- ▶ True
- ▶ **False (Page 63)**

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

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

- ▶ True
- ▶ **False (Page 70)**

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

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

- ▶ **False (Page 72)**
- ▶ True

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

Manchester is a type of _____ encoding.

- ▶ **biphase (Page 75)**
- ▶ polar
- ▶ biphase & polar
- ▶ none of the given

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

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

- ▶ NRZ-L
- ▶ **NRZ-I (Page 73)**
- ▶ RZ

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

PCM is the first process of PAM.

- ▶ True
- ▶ **False (Page 80)**

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

In 4PSK each phase change represents _____ bits.

- ▶ 3
- ▶ 6
- ▶ **2 (Page 91)**
- ▶ 4

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

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

▶ **Same (Page 109)**

- ▶ different
- ▶ digital
- ▶ analog

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

A _____ converts an analog signal into a digital signal.

▶ **Demodulator (Page 110)**

- ▶ Modulator
- ▶ Digital-to-analog converter

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

Which of the following is an example of ITU-T modem standards:

- ▶ T-series
- ▶ X-series
- ▶ N-series

▶ **V-series (Page 114)**

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

The maximum data rate in the uploading direction is still _____.

- ▶ 26.6 Kbps

▶ **33.6 Kbps (Page 117)**

- ▶ 36.6 Kbps
- ▶ 46.6 Kbps

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Which of the following primarily uses guided media

- ▶ Cellular telephone system

▶ **Local telephone system (Page 120)**

- ▶ Satellite communication
- ▶ Radio broadcasting

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

When a beam of light travels through media of two different densities, if the angle of incidence is greater than the critical angle, _____ occurs.

- ▶ Reflection

▶ **Refraction (Page 127)**

- ▶ Incidence
- ▶ Criticism

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

When we talk about unguided media, usually we are referring to _____.

- ▶ Metallic wires
- ▶ Nonmetallic wires

▶ **The air (Page 132)**

- ▶ Water

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

Optical fibers are defined by the ratio of the _____ of their core to the diameter of their cladding.

▶ **Diameter (Page 130)**

- ▶ Radius
- ▶ Length
- ▶ Width

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

All of popular Fiber optic connectors are _____ shaped.

- ▶ Conical

▶ **Barrel (Page 131)**

- ▶ Circular
- ▶ Rectangular

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

Radio wave transmission utilizes _____ different types of propagation.

- ▶ Four
- ▶ Three
- ▶ Two

▶ **Five (Page 132)**

Question No: 21 (Marks: 1) - Please choose one

dB is _____ if a signal is amplified.

- ▶ Negative

▶ **Positive (Page 142)**

- ▶ Null
- ▶ Zero

Question No: 22 (Marks: 1) - Please choose one

A prism can deflect the light depending upon the angle of _____ and the frequency.

- ▶ Deviation

▶ **Incident (Page 151)**

- ▶ Refraction (Page 127)
- ▶ Reflection

Question No: 23 (Marks: 1) - Please choose one

Asynchronous TDM is efficient only when the size of the time slot is kept relatively _____

▶ **Large (Page 158)**

- ▶ Small
- ▶ Medium
- ▶ None of the given

Question No: 24 (Marks: 1) - Please choose one

The local loop has _____ cable that connects the subscriber telephone to the nearest end office.

▶ **Twisted-pair (Page 160)**

- ▶ Coaxial
- ▶ Fiber-optic
- ▶ None of the given

Question No: 25 (Marks: 1) - Please choose one

Data from a computer are _____; the local loop handles _____ signals.

- ▶ Analog; analog
- ▶ Analog; digital
- ▶ Digital; digital

▶ **Digital; analog**

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter9/multiple_choice_quiz.html

Question No: 26 (Marks: 1) - Please choose one

Which error detection method uses ones complement arithmetic?

- ▶ Simple parity check
- ▶ Two-dimensional parity check
- ▶ CRC

▶ **Checksum (Page 179)**

Question No: 27 (Marks: 1) - Please choose one

Flow control is needed to prevent _____

- ▶ Bit errors
- ▶ Overflow of the sender buffer
- ▶ **Overflow of the receiver buffer (Page 46)**
- ▶ Collision between sender and receiver

Question No: 28 (Marks: 1) - Please choose one

_____ coordinates the amount of data that can be sent before receiving acknowledgment

▶ **flow control (Page 186)**

- ▶ error control
- ▶ data control

Question No: 29 (Marks: 1) - Please choose one

Error control is both error _____ and error _____

▶ **detection; correction (Page 186)**

- ▶ detection; deletion
- ▶ detection; avoidance
- ▶ detection; forwarding

Question No: 30 (Marks: 1) - Please choose one

Addressing is not needed in _____ configuration.

▶ **Point to Point (Page 190)**

- ▶ Multipoint
- ▶ Point to point and multipoint

Question No: 31 (Marks: 1) - Please choose one

In a Go-Back-N ARQ, if the window size is 63, what is the range of sequence number?

▶ **0 to 63**

- ▶ 0 to 64
- ▶ 1 to 63
- ▶ 1 to 64

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter11/multiple_choice_quiz.html

Question No: 32 (Marks: 1) - Please choose one

A timer is set when _____ is sent out.

- ▶ A data frame
- ▶ **An ACK (Page 197)**
- ▶ A NAK

Question No: 33 (Marks: 1) - Please choose one

Sliding window requires that data frames be transmitted _____

▶ **Sequentially (Page 199)**

- ▶ Frequently
- ▶ Synchronously
- ▶ Asynchronously

Question No: 34 (Marks: 1) - Please choose one

In Y-MODEM Multiple files can be sent simultaneously

▶ **True (Page 205)**

- ▶ False

Question No: 35 (Marks: 1) - Please choose one

BLAST stands for :

▶ **Blocked asynchronous transmission (Page 205)**

- ▶ Blocked synchronous transmission
- ▶ Barrel asynchronous transmission
- ▶ Below asynchronous transmission

Question No: 36 (Marks: 1) - Please choose one

HDLC is an acronym for _____.

- ▶ High-duplex line communication
- ▶ **High-level data link control (Page 210)**
- ▶ Half-duplex digital link combination
- ▶ Host double-level circuit

Question No: 37 (Marks: 1) - Please choose one

The HDLC _____ field defines the beginning and end of a frame.

▶ **Flag (Page 214)**

- ▶ Address
- ▶ Control
- ▶ FCS

Question No: 38 (Marks: 1) – Please choose one
_____ is the access protocol used by traditional Ethernet.

▶ **CSMA/CD (Page 222)**

- ▶ CSMA/CA
- ▶ Token Ring
- ▶ CSMA

Question No: 39 (Marks: 1) – Please choose one
Bridges can divide a large _____ into smaller segments

▶ **Network (Page 241)**

- ▶ Packet
- ▶ Frame
- ▶ Address

Question No: 40 (Marks: 1) – Please choose one
Like VRC, LRC and CRC, Checksum is also based on _____.

▶ **Redundancy (Page 179)**

- ▶ Decimal Division
- ▶ Encryption
- ▶ Encoding

FINAL TERM EXAMINATION
Fall 2009

Question No: 1 (Marks: 1) – Please choose one
The information to be communicated in a data communications system is the

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

Question No: 2 (Marks: 1) – Please choose one
A set of devices connected by communication links is called networking

- ▶ **True (Page 12)**
- ▶ False

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

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

- ▶ True
- ▶ **False (Page 39)**

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

Data chunk at data link layer is called _____

- ▶ frame
- ▶ **packet (Page 38)**
- ▶ datagram

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

Data synchronization is a function related with _____

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

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

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter2/multiple_choice_quiz.html

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

Data must be converted into _____ before transmission.

- ▶ **signal (Page 56 and 84)**
- ▶ wave
- ▶ electric pulse

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

PCM is the first process of PAM.

- ▶ True
- ▶ **False (Page 80)**

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

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

- ▶ Asynchronous serial
- ▶ Synchronous serial
- ▶ **Parallel (Page 98)**
- ▶ Asynchronous & Synchronous serial

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

EIA 232 allows for a maximum bit rate of _____ Kbps.

- ▶ 40
- ▶ 30
- ▶ **20 (Page 104)**
- ▶ 10

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

When a beam of light travels through media of two different densities, if the angle of incidence is greater than the critical angle, _____ occurs.

- ▶ Reflection
- ▶ **Refraction (Page 127)**
- ▶ Incidence
- ▶ Criticism

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

A parabolic dish antenna is a(n) _____ antenna.

- ▶ Omnidirectional
- ▶ Bidirectional
- ▶ **Unidirectional (Page 138)**
- ▶ Horn

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

Ultra high-frequency waves always use _____ propagation.

- ▶ Ground
- ▶ Sky
- ▶ **Line of Sight (Page 136)**
- ▶ Space

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

Middle frequency waves having range 300 KHz-3 MHz always use _____ propagation.

- ▶ Ground
- ▶ Sky
- ▶ **Line of Sight**
- ▶ Space

<http://www.scribd.com/doc/22810820/Data-Communication-and-Networking> **Page 8 of this book.**

Question No: 15 (Marks: 1) – Please choose one
DB is _____ if a signal is attenuated.

- ▶ **Negative (Page 142)**
- ▶ Positive
- ▶ Null
- ▶ Zero

Question No: 16 (Marks: 1) – Please choose one
Which multiplexing technique involves signals composed of light beams?

- ▶ FDM
- ▶ TDM
- ▶ **WDM (Page 150)**
- ▶ none of the given

Question No: 17 (Marks: 1) – Please choose one
Multiplexing has long been used as an essential tool in the _____.

- ▶ Electronic industry
- ▶ **Telephone industry (Page 159)**
- ▶ Space science
- ▶ VLAN

Question No: 18 (Marks: 1) – Please choose one
A telephone network is an example of a _____ network.

- ▶ Packet-switched
- ▶ **Circuit-switched (Page 38)**
- ▶ Message-switched
- ▶ none of the given

Question No: 19 (Marks: 1) – Please choose one
The local loop has _____ cable that connects the subscriber telephone to the nearest end office.

- ▶ **Twisted-pair (Page 160)**
- ▶ Coaxial
- ▶ Fiber-optic
- ▶ None of the given

Question No: 20 (Marks: 1) – Please choose one
Which error detection method involves polynomials?

- ▶ Checksum
- ▶ Two-dimensional parity check
- ▶ **CRC (Page 177)**
- ▶ Simple parity check

Question No: 21 (Marks: 1) – Please choose one

In CRC there is no error if the remainder at the receiver is _____

- ▶ Equal to the remainder at the sender
- ▶ **Zero (Page 176)**
- ▶ Nonzero
- ▶ The quotient at the sender

Question No: 22 (Marks: 1) – Please choose one

In CRC the quotient at the sender _____

- ▶ Becomes the dividend at the receiver
- ▶ Becomes the divisor at the receiver
- ▶ **is discarded**
- ▶ is the remainder

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

Question No: 23 (Marks: 1) – Please choose one

Which error detection method can detect a bust error?

- ▶ The parity check
- ▶ Two-dimensional parity check
- ▶ CRC
- ▶ **Two-dimensional parity check and CRC**

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

Question No: 24 (Marks: 1) – Please choose one

At the CRC checker, _____ means that the data unit is damaged

- ▶ A string of 0s
- ▶ A string of 1s
- ▶ A string of alternating 1s and 0s
- ▶ **A nonzero remainder**

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

Question No: 25 (Marks: 1) – Please choose one

Error control is both error _____ and error _____

- ▶ **detection; correction (Page 186)**
- ▶ detection; deletion
- ▶ detection; avoidance
- ▶ detection; forwarding

Question No: 26 (Marks: 1) – Please choose one

In line discipline the initiator first transmits a frame called an _____

▶ **Enquiry (Page 189)**

- ▶ Acknowledgment
- ▶ NAK
- ▶ Request

Question No: 27 (Marks: 1) – Please choose one

In line discipline after the data transmission, the sending system finishes with an _____ frame

▶ **EOT (Page 189)**

- ▶ EKT
- ▶ ENT
- ▶ ESP

Question No: 28 (Marks: 1) – Please choose one

In primary-secondary communication _____ is always the initiator of a session

▶ **Primary (Page 189)**

- ▶ Secondary
- ▶ Sender
- ▶ Receiver

Question No: 29 (Marks: 1) – Please choose one

Primary device uses _____ to receive transmission from the secondary devices.

- ▶ ACK
- ▶ ENQ
- ▶ **POLL (Page 191)**

Question No: 30 (Marks: 1) – Please choose one

In a Go-Back-N ARQ, if the window size is 63, what is the range of sequence number?

- ▶ **0 to 63**
- ▶ 0 to 64
- ▶ 1 to 63
- ▶ 1 to 64

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter11/multiple_choice_quiz.html

Question No: 31 (Marks: 1) – Please choose one

Sliding window requires that data frames be transmitted _____

- ▶ **Sequentially (Page 199)**
- ▶ Frequently
- ▶ Synchronously
- ▶ Asynchronously

Question No: 32 (Marks: 1) – Please choose one

Data link protocols can be divided into _____ sub-groups.

- ▶ **two (Page 202)**
- ▶ three
- ▶ four
- ▶ five

Question No: 33 (Marks: 1) – Please choose one
XMODEM is a _____ protocol designed for telephone-line communication b/w PCs.

- ▶ **file transfer (Page 203)**
- ▶ hardware
- ▶ software
- ▶ application exchange

Question No: 34 (Marks: 1) – Please choose one
In Y-MODEM Multiple files can be sent simultaneously

- ▶ **True (Page 205)**
- ▶ False

Question No: 35 (Marks: 1) – Please choose one
Which of the following combines features of the other two?

- ▶ **ZMODEM (Page 205)**
- ▶ YMODEM
- ▶ XMODEM
- ▶ None of given

Question No: 36 (Marks: 1) – Please choose one
BLAST stands for :

- ▶ **Blocked asynchronous transmission (Page 205)**
- ▶ Blocked synchronous transmission
- ▶ Barrel asynchronous transmission
- ▶ Below asynchronous transmission

Question No: 37 (Marks: 1) – Please choose one
Which one of the following uses full duplex operation with sliding window flow control.

- ▶ **BLAST (Page 205)**
- ▶ XMODEM
- ▶ YMODEM
- ▶ ZMODEM

Question No: 38 (Marks: 1) – Please choose one

HDLC is an acronym for _____.

- ▶ High-duplex line communication
- ▶ **High-level data link control (Page 210)**
- ▶ Half-duplex digital link combination
- ▶ Host double-level circuit

Question No: 39 (Marks: 1) – Please choose one

The DSAP and SSAP are addresses used by _____ to identify the protocol stacks.

- ▶ **LLC (Page 220)**
- ▶ MAC
- ▶ Network

Question No: 40 (Marks: 1) – Please choose one

The PDU has no flag fields, no CRC, and no station address

- ▶ **TRUE (Page 220)**
- ▶ FALSE

Question No: 41 (Marks: 1) – Please choose one

Which of the following is a bus topology LAN that uses base band signaling and has a max? segment length of 500 meters

- ▶ **10 Base5 (Page 223)**
- ▶ 10 Base2
- ▶ 100 Base2
- ▶ 100 Base5

Question No: 42 (Marks: 1) – Please choose one

Token Bus has no commercial application in data communications

- ▶ **True (Page 232)**
- ▶ False

Question No: 43 (Marks: 1) – Please choose one

The BNC-T connector is a T-shaped device with _____ ports

- ▶ **Three (Page 228)**
- ▶ Two
- ▶ Four
- ▶ Five

Question No: 44 (Marks: 1) – Please choose one

_____ is the access protocol used by traditional Ethernet.

▶ **CSMA/CD (Page 222)**

- ▶ CSMA/CA
- ▶ Token Ring
- ▶ CSMA

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter13/mixed_quiz.html

Question No: 45 (Marks: 1) – Please choose one

When a collision is detected in a network using CSMA/CD. _____

- ▶ The frame is immediately resent
- ▶ **A jam signal is sent by the station**
- ▶ The backoff value is set to 0
- ▶ The backoff value is decremented by 1

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter13/mixed_quiz.html

Question No: 46 (Marks: 1) – Please choose one

Like VRC, LRC and CRC, Checksum is also based on _____.

▶ **Redundancy (Page 179)**

- ▶ Decimal Division
- ▶ Encryption
- ▶ Encoding

Question No: 47 (Marks: 1) – Please choose one

Check sum method is used for _____ layers.

- ▶ Physical
- ▶ Application
- ▶ Transport

▶ **Data link** <http://www.cse.iitk.ac.in/users/dheeraj/cs425/lec09.html>

Question No: 48 (Marks: 1) – Please choose one

Repeater works on _____ layer.

- ▶ Data Link
- ▶ Physical
- ▶ **Network (Page 224)**
- ▶ Application

Question No: 49 (Marks: 1) – Please choose one

When systems share a point to point link, then protocols used are called _____ protocols.

- ▶ **Direct (Page 21)**
- ▶ Indirect

- ▶ Monolithic
- ▶ structured

Question No: 50 (Marks: 1) – Please choose one
_____ requires more bandwidth.

- ▶ **FSK** http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter5/
- ▶ ASK
- ▶ PSK
- ▶ QAM

Fall 2009
CS601- Data Communication

Question No: 1 (Marks: 1) – Please choose one
An unauthorized user is a network _____ issue.

- ▶ Performance
- ▶ Reliability
- ▶ **Security (Page 15)**
- ▶ All of the given

Question No: 2 (Marks: 1) – Please choose one
Which is not an element of protocol?

- ▶ semantics
- ▶ timing
- ▶ **communication service module (Page 19)**

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

- ▶ Ring
- ▶ Mesh
- ▶ Tree
- ▶ **Bus (Page 31)**

Question No: 4 (Marks: 1) – Please choose one
Unidirectional traffic movement is overcome by dual ring technology.

- ▶ **True (Page 33)**
- ▶ False

Question No: 5 (Marks: 1) – Please choose one
Physical layer define characteristics of interface between device and _____

- ▶ **transmission medium** http://en.wikipedia.org/wiki/OSI_model
- ▶ another device

- ▶ another peer physical layer at other side
- ▶ modem

Question No: 6 (Marks: 1) – Please choose one
_____ layer deals with syntax and semantics of information exchange.

- ▶ **presentation (Page 51)**
- ▶ session
- ▶ application
- ▶ physical

Question No: 7 (Marks: 1) – Please choose one
To allow access to network resources is the function of _____

- ▶ **application layer (Page 53)**
- ▶ physical layer
- ▶ network layer

Question No: 8 (Marks: 1) – Please choose one
Time domain plot show changes in signal phase with respect to time.

- ▶ True
- ▶ **False (Page 63)**

Question No: 9 (Marks: 1) – Please choose one
In 8QAM each signal shift or one baud represents _____.

- ▶ 4 bits
- ▶ 2 bits
- ▶ 5 bits
- ▶ **3 bits (Page 93)**

Question No: 10 (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 (Page 62)**

Question No: 11 (Marks: 1) – Please choose one
EIA 449 provides much better functionality than EIA _____

- ▶ **232 (Page 110)**
- ▶ 223

- ▶ 262
- ▶ 222

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

Which of the following is an example of ITU-T modem standards:

- ▶ T-series
- ▶ X-series
- ▶ N-series
- ▶ **V-series (Page 114)**

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

Traditional modems are wide spread now to a data rate of _____.

- ▶ **56 Kbps (Page 115)**
- ▶ 72 Kbps
- ▶ 42 Kbps
- ▶ 96 Kbps

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

In case of uploading at the switching station, data is converted to digital signal using _____.

- ▶ TCP
- ▶ **PCM (Page 116)**
- ▶ ICP
- ▶ TDM

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

The RG number gives us information about _____.

- ▶ Twisted pairs
- ▶ **Coaxial cables (Page 125)**
- ▶ Optical fibers
- ▶ all of the given

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

The _____ is an association that sponsors the use of infrared waves.

- ▶ **IrDA** http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter7/mixed_quiz.html
- ▶ EIA
- ▶ FCC
- ▶ PUD

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

Optical fibers are defined by the ratio of the _____ of their core to the diameter of their cladding.

▶ **Diameter (Page 130)**

- ▶ Radius
- ▶ Length
- ▶ Width

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

The section of EM spectrum defined as Radio Communication is divided into _____ ranges called BANDS.

▶ **8 (Page 132)**

- ▶ 10
- ▶ 5
- ▶ 6

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

Radio wave transmission utilizes _____ different types of propagation.

- ▶ Four
- ▶ Three
- ▶ Two

▶ **Five (Page 132)**

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

The VLF and LF bands use _____ propagation for communications.

- ▶ Ground
- ▶ Sky

▶ **Line of sight (Page 136)**

- ▶ Space

Question No: 21 (Marks: 1) – Please choose one

In _____ propagation, low-frequency radio waves hug the earth.

- ▶ Ground
- ▶ Sky
- ▶ Line of Sight

▶ **Space (Page 133)**

Question No: 22 (Marks: 1) – Please choose one

dB is _____ if a signal is amplified.

- ▶ Negative

▶ **Positive (Page 142)**

- ▶ Null
- ▶ Zero

Question No: 23 (Marks: 1) – Please choose one
Distortion occurs in a _____ signal.

- ▶ Rectified
- ▶ **Composite (Page 141)**
- ▶ Amplified
- ▶ none of the given

Question No: 24 (Marks: 1) – Please choose one
There are _____ basic categories of multiplexing.

- ▶ **3 (Page 148)**
- ▶ 4
- ▶ 2
- ▶ 5

Question No: 25 (Marks: 1) – Please choose one
In bit _____, MUX adds extra bits to a device.

- ▶ **Stuffing (Page 156)**
- ▶ Adding
- ▶ Multiplication
- ▶ Exchanging

Question No: 26 (Marks: 1) – Please choose one
The local loop has _____ cable that connects the subscriber telephone to the nearest end office.

- ▶ **Twisted-pair (Page 160)**
- ▶ Coaxial
- ▶ Fiber-optic
- ▶ None of the given

Question No: 27 (Marks: 1) – Please choose one
FTTC stands for _____

- ▶ flexible to the curb
- ▶ **fiber to the curb (Page 166)**
- ▶ fiber to the cable
- ▶ fiber to the center

Question No: 28 (Marks: 1) – Please choose one
If the ASCII character G is sent and the character D is received, what type of error is this?

- ▶ Single-bit
- ▶ Multiple-bit
- ▶ **Burst**

- ▶ Recoverable

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

Question No: 29 (Marks: 1) – Please choose one

Which error detection method can detect a single-bit error?

- ▶ Simple parity check
- ▶ Two-dimensional parity check
- ▶ CRC
- ▶ **All of the given**

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

Question No: 30 (Marks: 1) – Please choose one

Flow control is needed to prevent _____

- ▶ Bit errors
- ▶ Overflow of the sender buffer
- ▶ **Overflow of the receiver buffer (Page 46)**
- ▶ Collision between sender and receiver

Question No: 31 (Marks: 1) – Please choose one

In data link layer, communication requires at least _____ devices working together

- ▶ 3
- ▶ **2 (Page 185)**
- ▶ 4
- ▶ 5

Question No: 32 (Marks: 1) – Please choose one

Data link control is composed of _____ important functions.

- ▶ 2
- ▶ **3 (Page 185)**
- ▶ 4
- ▶ 5

Question No: 33 (Marks: 1) – Please choose one

_____ coordinates the amount of data that can be sent before receiving acknowledgment

- ▶ **flow control (Page 186)**
- ▶ error control
- ▶ data control

Question No: 34 (Marks: 1) – Please choose one

Primary device uses _____ to receive transmission from the secondary devices.

- ▶ ACK
- ▶ ENQ
- ▶ **POLL (Page 191)**

Question No: 35 (Marks: 1) – Please choose one

In a Go-Back-N ARQ, if the window size is 63, what is the range of sequence number?

- ▶ **0 to 63**
- ▶ 0 to 64
- ▶ 1 to 63
- ▶ 1 to 64

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter11/multiple_choice_quiz.html

Question No: 36 (Marks: 1) – Please choose one

Data link protocols can be divided into _____ sub-groups.

- ▶ **two (Page 202)**
- ▶ three
- ▶ four
- ▶ five

Question No: 37 (Marks: 1) – Please choose one

XMODEM is a _____ protocol designed for telephone-line communication b/w PCs.

- ▶ **file transfer (Page 203)**
- ▶ hardware
- ▶ software
- ▶ application exchange

Question No: 38 (Marks: 1) – Please choose one

YMODEM uses ITU-T CRC-_____ for Error Checking

- ▶ **16 (Page 205)**
- ▶ 32
- ▶ 8
- ▶ 4

Question No: 39 (Marks: 1) – Please choose one

In Y-MODEM Multiple files can be sent simultaneously

- ▶ **True (Page 205)**
- ▶ False

Question No: 40 (Marks: 1) – Please choose one

HDLC is an acronym for _____.

- ▶ High-duplex line communication
- ▶ **High-level data link control (Page 210)**
- ▶ Half-duplex digital link combination
- ▶ Host double-level circuit

Question No: 41 (Marks: 1) - Please choose one

What is present in all HDLC control fields?

- ▶ **P/F bit (Page 215)**
- ▶ N(R)
- ▶ N(S)
- ▶ Code bits

Question No: 42 (Marks: 1) - Please choose one

Which of the following sublayer, resolves the contention for the shared media

- ▶ **MAC (Page 219)**
- ▶ LLC
- ▶ Physical

Question No: 43 (Marks: 1) - Please choose one

Ethernet LANs can support data rates between _____

- ▶ **1 and 100 Mbps (Page 223)**
- ▶ 1 and 200 Mbps
- ▶ 1 and 500 Mbps
- ▶ 1 and 100 Gbps

Question No: 44 (Marks: 1) - Please choose one

In FDDI, Token Passing is used as Access method.

- ▶ **True (Page 236)**
- ▶ False

Question No: 45 (Marks: 1) - Please choose one

Bridges can divide a large _____ into smaller segments

- ▶ **Network (Page 241)**
- ▶ Packet
- ▶ Frame
- ▶ Address

Question No: 46 (Marks: 1) - Please choose one

Like VRC, LRC and CRC, Checksum is also based on _____.

▶ **Redundancy (Page 179)**

- ▶ Decimal Division
- ▶ Encryption
- ▶ Encoding

Question No: 47 (Marks: 1) - Please choose one

Check sum method is used for _____ layers.

- ▶ Physical
- ▶ Application
- ▶ Transport

▶ **Data link** <http://www.cse.iitk.ac.in/users/dheeraj/cs425/lec09.html>

Question No: 48 (Marks: 1) - Please choose one

_____ Which of the following _____ uses a series of filters to decompose multiplexed signal into its constituent signals?

- ▶ Bridge
- ▶ MUX
- ▶ **DEMUX (Page 150)**
- ▶ Switch

Question No: 49 (Marks: 1) - Please choose one

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

- ▶ **Fourier transform (Page 64)**
- ▶ nyquist theorem
- ▶ shannon capacity

Question No: 50 (Marks: 1) - Please choose one

Data from computer is in _____ form and the local loop handles _____ signals.

- ▶ Analog; analog
- ▶ Analog; digital
- ▶ Digital; digital
- ▶ **Digital; analog**

http://highered.mcgraw-hill.com/sites/0072967757/student_view0/chapter9/multiple_choice_quiz.html

FINALTERM EXAMINATION
Spring 2009

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

There are how many factors on which the performance of a network depends?

- ▶ Three
- ▶ **Five (Page 14)**
- ▶ Four
- ▶ Two

Question No: 2 (Marks: 1) - Please choose one
_____requires the maximum number of I/O ports.

- ▶ Bus
- ▶ Star
- ▶ **Mesh (Page 29)**
- ▶ Ring

Question No: 3 (Marks: 1) - Please choose one
Headers are added at layers 1 and 7 of OSI model.

- ▶ True
- ▶ **False (Page 41)**

Question No: 4 (Marks: 1) - Please choose one
Trailer is only added at _____layer of OSI model.

- ▶ **data link (Page 41)**
- ▶ physical
- ▶ network
- ▶ application

Question No: 5 (Marks: 1) - Please choose one
A sine wave must be an analog signal.

- ▶ **True (Page 58)**
- ▶ False

Question No: 6 (Marks: 1) - Please choose one
If there is _____in voltage then the frequency is infinite.

- ▶ **instantaneous change (Page 61)**
- ▶ continuous change
- ▶ no change

Question No: 7 (Marks: 1) - Please choose one
The inversion of the level at 1 bit is called as _____

- ▶ NRZ-L
- ▶ **NRZ-I (Page 73)**

- ▶ RZ

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

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

- ▶ **encoding (Page 82)**
- ▶ decoding
- ▶ modulating

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

Amplitude in ASK is more resistive to EMI and Noise.

- ▶ True
- ▶ **False (Page 87)**

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

If FCC regulations are followed, the carrier frequencies of adjacent AM radio stations are _____ apart.

- ▶ 5 KHz
- ▶ **10 KHz (Page 95)**
- ▶ 200 KHz
- ▶ 530 KHz

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

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

- ▶ **Asynchronous serial (Page 99)**
- ▶ Synchronous serial
- ▶ Parallel
- ▶ Asynchronous & Synchronous serial

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

Synchronous transmissions have _____.

- ▶ a start bit
- ▶ a stop bit
- ▶ gaps between bytes
- ▶ **none of the given (Page 99)**

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

Transmission media are usually categorized as _____

- ▶ Fixed or Unfixed
- ▶ **Guided or Unguided (Page 119)**
- ▶ Determinate or Indeterminate

- ▶ Metallic or Nonmetallic

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

The RG number gives us information about _____.

- ▶ Twisted pairs
- ▶ **Coaxial cables (Page 125)**
- ▶ Optical fibers
- ▶ all of the given

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

Radio wave and microwave frequencies range from _____.

- ▶ 3 to 300 KHz
- ▶ **300 KHz to 300GHz (Page 132)**
- ▶ 3 KHz to 300 GHz
- ▶ 3 KHz to 3000 GHz

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

All of popular Fiber optic connectors are _____ shaped.

- ▶ Conical
- ▶ **Barrel (Page 131)**
- ▶ Circular
- ▶ Rectangular

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

In _____ method a signal can be directed in a straight from Antenna to antenna.

- ▶ **Line of sight (Page 134)**
- ▶ Ground propagation
- ▶ Sky propagation
- ▶ Microwaves

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

Amplifiers are used to _____ the signal to heat.

- ▶ **Amplify (Page 142)**
- ▶ Rectify
- ▶ Testify
- ▶ Nullify

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

There are _____ basic categories of multiplexing.

- ▶ **3 (Page 148)**

- ▶ 4
- ▶ 2
- ▶ 5

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

If a T-1 carries 8000 frames, the data rate is _____

- ▶ 2.544 Mbps
- ▶ **1.544 Mbps (Page 165)**
- ▶ 1.544 Kbps
- ▶ 1.544 Gbps

Question No: 21 (Marks: 1) - Please choose one

FTTC stands for _____

- ▶ flexible to the curb
- ▶ **fiber to the curb (Page 166)**
- ▶ fiber to the cable
- ▶ fiber to the center

Question No: 22 (Marks: 1) - Please choose one

Optical signals are multiplexed using _____ at switching office to create wider BW optical signals

- ▶ **WDM (Page 167)**
- ▶ FDM
- ▶ TDM
- ▶ MUX

Question No: 23 (Marks: 1) - Please choose one

Which error detection method consists of a parity bit for each unit as well as an entire data unit of parity bits?

- ▶ Simple parity check
- ▶ **Two-dimensional parity check**

http://highered.mcgraw-hill.com/sites/0072515848/student_view0/chapter10/mixed_quiz.html

- ▶ CRC
- ▶ Checksum

Question No: 24 (Marks: 1) - Please choose one

If the ASCII character G is sent and the character D is received, what type of error is this?

- ▶ Single-bit
- ▶ Multiple-bit
- ▶ **Burst**

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- ▶ Recoverable

Question No: 25 (Marks: 1) - Please choose one

Flow control is needed to prevent _____

- ▶ Bit errors
- ▶ Overflow of the sender buffer
- ▶ **Overflow of the receiver buffer. (Page 46)**
- ▶ Collision between sender and receiver

Question No: 26 (Marks: 1) - Please choose one

In data link layer, communication requires at least _____ devices working together

- ▶ 3
- ▶ **2 (Page 185)**
- ▶ 4
- ▶ 5

Question No: 27 (Marks: 1) - Please choose one

Data link control is composed of _____ important functions.

- ▶ 2
- ▶ **3 (Page 185)**
- ▶ 4
- ▶ 5

Question No: 28 (Marks: 1) - Please choose one

Error control is both error _____ and error _____

- ▶ **detection; correction (Page 186)**
- ▶ detection; deletion
- ▶ detection; avoidance
- ▶ detection; forwarding

Question No: 29 (Marks: 1) - Please choose one

ENQ/ACK stands for _____

- ▶ **Enquiry/ Acknowledgment (Page 187)**
- ▶ Enque/ Acknowledgment
- ▶ Enquist/ Acknowledgment
- ▶ none of the given

Question No: 30 (Marks: 1) - Please choose one

In _____ ARQ, if a NAK is received, only the specific damaged or lost frame is retransmitted.

- ▶ Stop-and-wait
- ▶ Go-Back-N
- ▶ **Selective reject (Page 200)**
- ▶ Stop-and-wait & Go-back-N

Question No: 31 (Marks: 1) - Please choose one

Sliding window requires that data frames be transmitted _____

- ▶ **Sequentially (Page 199)**
- ▶ Frequently
- ▶ Synchronously
- ▶ Asynchronously

Question No: 32 (Marks: 1) - Please choose one

Which of the following combines features of the other two?

- ▶ **ZMODEM (Page 205)**
- ▶ YMODEM
- ▶ XMODEM
- ▶ None of given

Question No: 33 (Marks: 1) - Please choose one

BLAST stands for :

- ▶ **Blocked asynchronous transmission (Page 205)**
- ▶ Blocked synchronous transmission
- ▶ Barrel asynchronous transmission
- ▶ Below asynchronous transmission

Question No: 34 (Marks: 1) - Please choose one

HDLC is an acronym for _____.

- ▶ High-duplex line communication
- ▶ **High-level data link control (Page 210)**
- ▶ Half-duplex digital link combination
- ▶ Host double-level circuit

Question No: 35 (Marks: 1) – Please choose one

The HDLC _____ field defines the beginning and end of a frame.

- ▶ **Flag (Page 214)**
- ▶ Address
- ▶ Control
- ▶ FCS

Question No: 36 (Marks: 1) – Please choose one

The shortest frame in HDLC protocol is usually the _____ frame.

- ▶ Information
- ▶ **Supervisory (Page 213)**
- ▶ Management
- ▶ None of the given

Question No: 37 (Marks: 1) - Please choose one

The PDU has no flag fields, no CRC, and no station address

- ▶ **TRUE (Page 220)**
- ▶ FALSE

Question No: 38 (Marks: 1) - Please choose one

_____ is the access protocol used by traditional Ethernet.

- ▶ **CSMA/CD (Page 222)**
- ▶ CSMA/CA
- ▶ Token Ring
- ▶ CSMA

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Question No: 39 (Marks: 1) - Please choose one

Repeater is an amplifier, not a regenerator.

- ▶ True
- ▶ **False (Page 240)**

Question No: 40 (Marks: 1) - Please choose one

Bridges can divide a large _____ into smaller segments

- ▶ **Network (Page 241)**
- ▶ Packet
- ▶ Frame
- ▶ Address

**CS601 Data Communication
Final Term Examination – Spring 2006**

Question No. 1 Marks : 2

Which error detection method uses ones complement arithmetic?

- Simple parity check
- Two-dimensional parity check
- CRC
- **Checksum (Page 179)**

Question No. 2 Marks : 2

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

- **Amplitude (Page 59)**
- Frequency
- Phase
- Time

Question No. 4 Marks : 2

Which topology requires a multipoint connection?

- Mesh
- Star
- **Bus (Page 31)**
- Ring

Question No. 8 Marks : 2

A timer is set when _____ is (are) sent out.

- A data frame
- **An ACK (Page 197)**
- A NAK
- An ARQ

Question No. 9 Marks : 2

If the data unit is 11111, the divisor 1010, and the remainder 110, what is the dividend at the receiver?

- 11111011
- **11111110**
- 1010110
- 110111111

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FINAL TERM EXAMINATION

FALL 2006

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

OSI standard is practically implemented in the form of internet.

- ▶ TRUE
- ▶ FALSE

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

TCP/IP application layers combine the functions of OSI Application, Session and Transport layers.

- ▶ **TRUE (Page 55)**
- ▶ FALSE

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

Unipolar use one voltage levels.

▶ **TRUE (Page 71)**

▶ FALSE

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

The material of core and cladding in fiber optic cable is same.

▶ TRUE

▶ **FALSE (Page 127)**

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

Burst error is easily corrected then bit error.

▶ TRUE

▶ FALSE

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

Set of rules governing communication is known as

▶ OSI model

▶ **Protocol (Page 08)**

▶ Medium

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

WDM(wave division multiplexing) deals with

▶ electric waves

▶ **light waves (Page 150)**

▶ both

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

A Null modem is a

▶ traditional modem

▶ **technique to connect two DTE (Page 106)**

▶ both

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

Router work on

▶ data link layer

▶ physical layer

▶ **network layer (Page 48)**

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

Poll/Select is a technique related with

▶ line control

▶ **line discipline (Page 187)**

- ▶ error control

Final Term Examination – Spring 2005

Question No. 1 Marks : 02

In cyclic redundancy checking, what is the CRC?

- ▶ the divisor
- ▶ the quotient
- ▶ the dividend
- ▶ **the remainder**

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Question No. 2 Marks : 02

In fiber optics the signal source is _____ waves.

- ▶ **Light (Page 126)**
- ▶ Radio
- ▶ Very Low frequency
- ▶ Infrared

Question No. 3 Marks : 02

Each device has a dedicated point – to – point line configuration only with the two devices on either side of it.

- ▶ **Ring Topology (Page 33)**
- ▶ Star Topology
- ▶ Mesh Topology
- ▶ Tree Topology

Question No. 6 Marks : 02

Measures the relative strengths of two signals

- ▶ **Decibel (Page 141)**
- ▶ Bandwidth
- ▶ Wavelength
- ▶ Phase

Question No. 7 Marks : 02

Which multiplexing technique shifts each signal to a different carrier frequency?

- ▶ **FDM (Page 149)**

- ▶ Synchronous TDM
- ▶ Asynchronous TDM
- ▶ None of the above

Question No. 8 Marks : 02

The _____ of a signal is the width of the frequency spectrum.

- ▶ Amplitude
- ▶ **Bandwidth (Page 66)**
- ▶ Bit interval
- ▶ Phase

Final Term Examination – Spring 2005

Question No. 1

In cyclic redundancy checking, what is the CRC? Marks : 02

- ▶ the divisor
- ▶ the quotient
- ▶ the dividend
- ▶ **the remainder**

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Question No. 2

In fiber optics the signal source is _____ waves. Marks : 02

- ▶ **Light (Page 126)**
- ▶ Radio
- ▶ Infrared
- ▶ Very Low frequency

Question No. 3 Marks : 02

Each device has a dedicated point – to – point line configuration only with the two devices on either side of it.

- ▶ **Ring Topology (Page 33)**
- ▶ Mesh Topology
- ▶ Star Topology
- ▶ Tree Topology

Question No. 6

Measures the relative strengths of two signals Marks : 02

▶ **Decibel (Page 141)**

- ▶ Bandwidth
- ▶ Phase
- ▶ Wavelength

Question No. 7 Marks : 02

Which multiplexing technique shifts each signal to a different carrier frequency?

▶ **FDM (Page 149)**

- ▶ Synchronous TDM
- ▶ Asynchronous TDM
- ▶ None of the above

Question No. 8

The _____ of a signal is the width of the frequency spectrum. Marks : 02

- ▶ Amplitude
- ▶ **Bandwidth (Page 66)**
- ▶ Bit interval
- ▶ Phase