

17UIT412 – COMPUTER NETWORKS

K1 LEVEL QUESTIONS

UNIT-I

1. In which transmission we transmit all the 8 bit at a time?
 - a. **Serial transmission**
 - b. Parallel transmission
 - c. Synchronous communication
 - d. Mixed transmission
2. Parallel transmission is generally used for what type of distances?
 - a. **Short**
 - b. Long
 - c. Vey long
 - d. Intercity
3. Which communication involves bits measurements in the middle?
 - a. Serial transmission
 - b. Parallel transmission
 - c. **Synchronous communication**
 - d. Mixed transmission
4. In which transmission the time when a character will be sent cannot be predicted?
 - a. Parallel transmission
 - b. Synchronous transmission
 - c. **Asynchronous transmission**
 - d. Isochronous transmission
5. In which transmission the whole block of data bits is transferred at once, instead of a character at a time?
 - a. **Synchronous transmission**
 - b. Asynchronous transmission
 - c. Isochronous transmission
 - d. Parallel transmission
6. Which transmission is used when large amount of data is to be sent from one place to other?
 - a. Synchronous transmission
 - b. **Asynchronous transmission**
 - c. Isochronous transmission
 - d. Parallel transmission
7. In which transmission the idle period between the two characters cannot be random.
 - a. Synchronous transmission
 - b. Asynchronous transmission
 - c. Isochronous transmission
 - d. **Parallel transmission**
8. Recall simplex communication
 - a. **Only one party can transmit data**

- b. Both parties can transmit data, but not at same time
 - c. Both parties can transmit data at the same time
 - d. No party can transmit data
9. Recall half-duplex communication
- a. Only one party can transmit data
 - b. Both parties can transmit data, but not at same time**
 - c. Both parties can transmit data at the same time
 - d. No party can transmit data
10. Recall full-duplex communication.
- a. Only one party can transmit data
 - b. Both parties can transmit data, but not at same time
 - c. Both parties can transmit data at the same time**
 - d. No party can transmit data

UNIT-2

1. Which is caused because the signals at different frequencies travel at different speeds along the medium?

(A) Noise (B) Delay distortion **(C) Attenuation** (D) Re-transmission

2. As a signal travels through any medium its strength decreases due to which of the following

(A) Noise (B) Delay distortion **(C) Attenuation** (D) Re-transmission

3. Some electromagnetic energy can get inserted somewhere during transmission, which of the following represents it.

(A) Noise (B) Delay distortion (C) Attenuation (D) Re-transmission

4. When Overhead bits are added to data?

(A) CRC **(B) Parity checking** (C) Noise (D) none of the above

5. Which of the following the receiver sends back to the sender if everything was OK?

(A) NAK (B) PAK **(C) ACK** (D) NCK

6. In which of the following the sender sends one frame and waits for an acknowledgement from the receiver before sending the next frame.

(A) Stop-and-wait (B) go-back-n (C) sliding window (D) CRC

7. Which of the following defines how much data can be sent before it must wait to receive an acknowledgement from the receiver.

(A) Buffer (B) memory (C) parity (D) sliding window

8. Which of the following is the most commonly used transmission medium.

(A) Optical fiber (B) Coaxial cable **(C) UTP** (D) STP

9. The two wires inside a UTP are twisted around each other to reduce which of the following

(A) Noise (B) crosstalk (C) error (D) voltage

10. STP helps eliminate which of the following?

(A) Noise **(B) crosstalk** (C) error (D) voltage

Unit-3

1) Which of the following spans the largest distance among the category of computer networks

(a) LAN (b)MAN **(c)WAN** (d)Ethernet

2) In which of the following, the transmission media is shared between all the computers on a network.

(a)LAN (b) MAN **(c) WAN** (d) X.25

3 Which of the following performs all network related work on a computer connected to a network.

(a) Transceiver (b) CPU (c) hard disk (d)NIC

4) Which of the following helps Ethernet recover from simultaneous transmissions errors

(a)CSMA/CD (b) CSMA (c) CD (d) Collision

5) An Ethernet address can be of which type?

(a) unique (b)duplicated (c)optional (d)never duplicated

6) In token ring a special packet containing which of the following goes around the network.

(a) Data (b) header (c) token **(d) bit**

7) To protect against fiber cut, FDDI uses how many set of fibers.

- (a) 0 (b) 1 **(c) 2** (d) 3

8) Each bus in DQDB allows traffic in how many directions.

- (a) 0 (b) 1 (c) 2 **(d) 3**

9) In DQDB the reservations made by all hosts are stored in which order queue structure.

- (a) LILO (b) LIFO **(c) FIFO** (d) FILO

10) Which is the basic hardware device in a WAN?

- (a) circuit (b) circuit switch **(c) packet switch** (d) ring

UNIT IV

1. X.25 is based on which of the following technique.

- (a) **message switching** (b) circuit switching (c) virtual circuit
(d) Datagram approach

2. The end-to-end error checking is implemented in X.25 in which layer.

- (a) **network** (b) transport (c) physical (d) data link

3. The adjacent nodes perform error control in X.25 in which layer.

- (a) network (b) transport (c) physical (d) **data link**

4. The PLP packet is found in which layer.

- (a) network** (b) transport (c) physical (d) data link

5. Which of the following is true, PVC is _____

- (a) created every time (b) never created (c) **created only once**
(d) None of the above

6. What is the maximum value for a logical channel group?

- (a) 16 (b) 32 (c) **255** (d) 1024

7. What is the maximum value for a logical channel?

- (a) 16 (b) 32 (c) 255 **(d) 1024**

8. The sender increments the value of which field every time it sends a packet.

- (a) P(R) **(b) P(S)** (c) M (d) LCM

9. The receiver's equivalent of a Call Request packet is represented by which of the following
 (a) Call Accepted (b) **Incoming Call** (c) Call Connected (d) Call Received
10. Which of the following error control mechanism is used in X.25?
 (a) **go-back-n** (b) sliding window (c) checksum (d) CRC

UNIT V

1. In internetworking, the two or more networks that connect with each other _____ incompatible with one another.
 (a) **have to be** (b) may be (c) must not be (d) none of the above
2. Usually, which of the following is used for internetworking purposes.
 (a) host (b) wire (c) **router** (d) joiner
3. How many NICs. router must have?
 (a) **2** (b) 3 (c) 4 (d) 5
4. There are _____ incompatibility issues when forming an internet out of networks.
 (a) **Both hardware and software** (b) only hardware
 (c) only software (d) software but not hardware
5. A bridge is of which type of device.
 (a) **Networking** (b) connecting (c) internetworking (d) routing
6. Which of the following is the simplest of all networking/internetworking devices.
 (a) Repeater (b) bridge (c) router (d) **gateway**
7. Generally which of the following is used to divide a network into segments.
 (a) repeater (b) **bridge** (c) router (d) gateway
8. Which of the following builds its mapping table as and when it gets more information about the network.
 (a) simple bridge (b) repeater (c) **adaptive bridge** (d) regenerator
9. A logical address is _____ the physical address.
 (a) the same as (b) **tightly coupled with**
 (c) sometimes related to (d) completely unrelated to
10. Which of the following can understand multiple networking protocols.

(a)repeater

(b) bridge

(c) Router

(d) gateway

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K2 QUESTIONS

UNIT 1:

1. Describe protocols and standards
2. Show the meaning of signal propagation
3. Demonstrate how Fourier's be applied to digital signals
4. Show the need for binary language
5. Outline BCD and its limitations
6. Discuss about multimedia
7. Define period
8. Demonstrate how video can be shown using a computer
9. Compare sampling and quantizing
10. Infer how modem is useful for digital signal analog transmission

UNIT 2:

1. Explain about shielded twisted pair wire
2. Show the advantages of optical fibers
3. Demonstrate handoff
4. Define hybrid topology.
5. Show two different approaches of packet switching
6. Recall the types of errors
7. Define attenuation.
8. Explain how transmission media is classified
9. State advantage of unguided media.
10. Expand AMPS

UNIT 3:

1. Demonstrate how does the data link layer in the OSI model works
2. Define CSMA/CD
3. Show how does a WAN achieve scalability
4. State typical WAN architecture.
5. Define ALOHA
6. Outline last mile
7. Expand BRI
8. Compare BRI and PRI.
9. List the layers of OSI model
10. State reference point

UNIT 4:

1. Compare how frame Relay is faster than X.25?
2. Infer reason for less error checking in Frame Relay as compared to X.25?
3. Demonstrate how frame Relay switches perform routing of frames

4. How is frame Relay and simple T-line?
5. Expand DLCI
6. Outline the significance of FRAD
7. Compare synchronous and asynchronous TDM.
8. Interpret why ATM cells are of a fixed size
9. State the reason why ATM cells are of small size
10. List the three layers in the ATM protocol

UNIT 5:

1. Outline universal service
2. Discuss the various broad-level issues in internetworking
3. Outline the software issues in internetworking
4. What is internetworking?
5. Define a bridge
6. Summarize the types of bridges
7. Define router
8. Explain fundamental service provided by an ISP
9. Compare SLIP and PPP
10. Discuss about leased line

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K3 QUESTIONS

UNIT 1:

1. Classify three important bodies that help standardize data communications.
2. Explain the term bandwidth. Why is it useful?
3. Explain Fourier's theory using analog signals.
4. Explain data transmission rate and how is it calculated?
5. Analyze ASCII and contrast it with BCD.

UNIT 2:

1. Distinguish between mesh topology and star topology
2. Examine how tree topology looks and explain how it works?
3. Classify merits and demerits of ring and bus topologies
4. Examine routing mean and how does it take place
5. Justify distance vector routing working

UNIT 3:

1. Classify the different layers and their roles in protocols of computer communications.
2. Explain the role played by the presentation layer in handling different data.
3. Justify the purpose of a transceiver and a Network Interface Card.
4. Analyze why binary exponential back-off policy important for Ethernet
5. Examine why FDDI is called as 'self-healing' type of network

UNIT 4:

1. Evaluate error checking in X.25, relating it to a real-life example.
2. Classify the X.25 layers at a broad level.
3. Categorize the significance of the logical channel group and the logical channel number fields
4. Examine how the various control packet type's equivalent to messages in a telephone conversation
5. Determine how is flow control implemented in X.25

UNIT 5:

1. Analyze the hardware issues in internetworking.
2. Evaluate how a router facilitates interconnection two or more networks
3. Explain the role played by the repeater at the physical layer.
4. Explain how learning and multiport bridges work.
5. Evaluate the issues involved in routing

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K4 AND K5 QUESTIONS

UNIT 1:

1. Examine the terms amplitude, period, frequency and phase
2. Infer the use of Pulse Code Modulation (PCM) in analog signal, digital transmission.
3. Explain Time Division Multiplexing
4. Contrast parallel and serial transmission methods
5. Classify simplex, half duplex and full duplex

UNIT 2:

1. Inspect the structure of optical fiber and the light source for the fiber
2. Explain the different types of topology
3. Distinguish between datagram and vc approach
4. Explain routing algorithm
5. Classify the types of guided media

UNIT 3:

1. Determine the role of the network layer in the OSI model.
2. Determine the main fields in an Ethernet frame header
3. List and explain the main fields in Token Ring frame header.
4. Explain ISDN
5. Examine the working of WAN

UNIT 4:

1. How frame Relay is faster than X.25?
2. What is the reason for less error checking in Frame Relay as compared to X.25?
3. How frame Relay switches perform routing of frames
4. Categorize the four key attributes of traffic control in Frame Relay
5. Explain the concept of bursty data with an example.

UNIT 5:

1. Explain the concept of bridges with its types
2. Explain the concept of ISP
3. Inspect the following protocols
 - a. ppp
 - b. slip
4. Examine the concept of digital subscriber line (DSL)
5. Analyze the concept of routers

