# S/Q

(i)

What is the difference between half duplex and full-duplex transmission modes?

Ans:- (:) Half-duplex transmission mode:- In half-duplex transmission mode, the data can be send and recive in both directions but not at the same time.

(:) Full-duplex transmission mode:- In full-duplex transmission mode, the data can be send and recive in both directions at a same time. e.g:- Telephone.

(ii)

What are headers and trailers, and how they get added and removed?

Ans:- Headers and trailers are the control data added at the begining and the end of each data unit at each layer of the sender and removed at the corresponding layers of the reciver.

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(iii)

Write two characteristics of virtual channel connection:

Ans:- The following are characteristics of virtual channel connections.

i) Quality of service
ii) Switched and semi-permanent virtual channel connections.
iii) Cell-sequence integrity

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(iv)

What is time division switching:

Ans:- The incoming and outgoing signals when received and retransmitted in a different time slot, is called time division switching. The digitized speech information is sliced into a sequence of time intervals or slots.

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(v)

What is Fading: Name five types of fading:

Ans:- The time variation of received signal power due to change in

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transmission medium or paths is called fading.

Types:-

(.) Large Scale fading

(.) Small Scale fading.

(vi)

Define hubs, switches and bridges:

Ans:- Hubs:- A hub is a physical layer networking device which is used to connect multiple devices in a network. They are generally used to connect computers in a LAN.

Switches:- A switch is a device in a computer network that connects other devices together. Multiple data cable are plugged into a switch to enable communication between different networked devices.

Bridges:- In telecommunication networks, a bridge is a product that connects a local area network (LAN) to another

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local area network that uses the same protocol.

(viii)

What is the benefit of three-way handshake mechanism?

Ans:- Three-way handshake process is designed in such a way that both ends help you to initiate, negotiate and seprate TCP socket connections at the same time. It allows you to transfer multiple TCP socket connections in both directions at the same time.

(ix)

What is fixed routing?

Ans:- fixed routing refers to router-provided networking services. These services uses routers (devices used to link network fixed over a network link to provide different data paths for fast and reliable transmission.

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(vii)

What are the SMTP and MIME standards?

Ans:- SMTP is a standard mail transfer protocol and a part of TCP/IP suite of protocols that allows two diffrent users on two diffrent servers to exchange textual data between each other. Multipurpose Internet Mail Extension (MIME) is an extension of SMTP to address some of its problems and limitations.

(viii)

What is the function of chache in Http?

Ans:- The purpose of an HTTP cache is to store information received in response to requests for use in responding to future requests. In many cases, a cache simply returns the appropiate parts of a response to the requester.

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What will be dotted decimal notation of.

10000011 01011010 00001111 11001011

Ans:- The dotted decimal notation is as:-

10000011 01011010 00001111 11001011
$2^7$ $2^1$ $2^0$ $2^6$ $2^4$ $2^3$ $2^1$ $2^3$ $2^2$ $2^1$ $2^0$ $2^7$ $2^6$ $2^3$ $2^1$ $2^0$

$= 128 + 2 + 1 \cdot 64 + 16 + 8 + 2 \cdot 8 + 4 + 2 + 1 \cdot 128 + 64 + 8 + 2 + 1$

$= 131 \cdot 90 \cdot 15 \cdot 203$

(iv)

Find the errors in IPv4:-

(a):- 111.56.045.78 → error

111.56.45.78 → Right

(b):- 221.34.7.8.20

IPv4 has 4 octet but there are five.

(c):- 75.34.301.14 → error

Each octet has maximum range of 255 but there are 301.

(d):- 11100010.23.14.67

IP address must be in one form decimal or binary but there is mix form.

Right:- 226.23.14.67