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Subject - Computer Networking

Assignment - 3rd

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Section-A

Q1. write short notes on CRC checker.

Ans:- CRC or cyclic Redundancy check is a method of detecting accidental changes/errors in the communication channel.

CRC uses Generator polynomial which is available in both sender and receiver side.

Q2. Discuss in detail about HDLC ?

Ans:- HDLC stands for High-Level Data Link Control.

It's generally uses term "frame" to indicate and represent an entity of data or a protocol of data unit often transmitted or transferred

from one station to another station. Each and every frame on link should begin and end with flag sequence field. Each of frames in HDLC includes mainly six fields.

Q3. what is the purpose of subnetting?

Ans:- The purpose of subnetting is to create a fast, efficient resilient computer network. As networks become larger and more complex, the traffic travelling through them needs more efficient routers.

Q4. what role does the DNS resolver play in the DNS system?

Ans:- A DNS resolver, also called a recursive resolver, is a server designed to receive DNS queries from web browsers and other applications. The resolver receives a hostname and is responsible for tracking down the IP address for the hostname.

Q5. what is a hostid and netid

Ans:- Every IP address contains two distinct parts.

The netid identifies the network. The hostid identifies the host on that network.

A netid is the fragment of an IP address that classifies the network for a specified host.

A hostid is the fragment of an IP address that uniquely classifies a host on a specified TCP/IP network.

Q6. Compare the HTTP and FTP.

Ans:-

<u>HTTP</u>	<u>FTP</u>
(i) Hyper Text transfer protocol.	file transfer protocol.
(ii) used to transfer web page frame remote server after connection is established.	used to transfer files from remote Computer after Connection is established.
(iii) HTTP is faster than FTP when downloading one big file.	FTP is slower than HTTP.
(iv) HTTP is used to view websites.	Used to access and transfer file.

Section-B

Q1. Explain in detail the error detection and error corrections.

Ans:- Error detection :-

In the ~~digital~~ digital world, error correction can be done in two ways.

Backward Error Correction :-

When the receiver detects an error in data received it requests back the sender to retransmit the data unit.

Forward Error Correction :- When the

receiver detects some error in the data received it executes error correcting code, which helps it to auto recover and to correct same kind of errors.

Error Detection :-

Error in the received frames are detected by means of paring check and cyclic redundancy check (CRC). In both cases few extra bits are sent along with actual data to confirm that bits received at other end are same as they were sent.

Q2. List the difference between circuit switching and packet switching.

circuit switching

- (1) In circuit switching there are 3 phase.
 - Connection Establishment.
 - Data Transfer.
 - Connect Released.
- (2) In circuit switching, each data unit know the entire path address from source to destination.
- (3) In circuit switching data is processed at source system only.
- (4) Delay between data units in circuit switching is uniform.
- (5) circuit switching is more reliable.

packet switching

In packet switching directly data transfer takes place.

In packet switching each data unit just know the final destination address intermediate path is decided by routers.

Data is processed at all intermediate node including source system.

Delay between data units in packet switching is not uniform.

Packet switching is less reliable.

Q. Explain in detail IP addressing methods.

(i) In classful addressing how is an IP address in class A, class B and class C divided?

Ans. - The 32 bit IP address is divided into five classes:-

- class A
- class B
- class C
- class D
- class E

classes D and E are reserved for multicast and experimental purpose respectively.

Class A:- IP addresses belonging to class A are assigned to the networks that contains a large no. of hosts.

- The network ID is 8 bits long.
- The host ID is 24 bits long.

Class B:- IP addresses belonging to class B are assigned to the networks that ranges from medium-sized to large size networks.

- The network ID is 16 bits long.
- The host ID is 16 bits long.

Class C:- IP addresses belonging to C are assigned to small sized networks.

- The network ID is 24 bits long.
- The host ID is 8 bits long.

(ii) Given the address 23.56.7.91 and the default class ~~B~~ and ~~C~~ mask, find the beginning address (network address).

Ans:- The default mask is 255.0.0.0 which means that only the first byte is preserved and the other 3 bytes are set to 0.

The network address is 23.0.0.0.

(iii) Given the address 201.180.56.5 and the default class C mask, find the beginning address (network address).

Ans:- The default mask is 255.255.255.0, which means that the first 3 bytes are preserved and the last byte is set to 0.

The network address is 201.180.56.0.