EXERCISES – ID STUDENT : 1512639

R1.List five nonproprietary Internet applications and the application-layer protocols that they use :

+ HTTP

+ file transfer : FTP

+remote login : Telnet

+e- mail : SMTP

+BitTorrent file sharing : BitTorrent protocol

R3.

The Process which initialtes the communication is the client, the processs wait to be contacted is the server

R4.

No. Because IN a P2P file sharing application, the peer that is receiving a file is typically the client and the peer that is sending the file is typically the server

R5.

A process running on one host to identify a process running on another host use the IP address of the desstination host and the port number of the socket in the destination process

R6.

I would use UDP, because when I use UDP, the transaction can be completed in one roundtripp time – the client send s the transaction request into a UDP socket and the server sends the reply back to the client's UDP socket. But When i use TCP, a minimum oof two RTTs are needed - one to set-up the TCP connection, and another for the client to send the request, and for the server to send back the reply.

R7.

R8. List the four broad classes of services that a transport protocol can provide:

1.Reliable data transfer TCP provides a reliable byte-stream between client and server but UDP dose not

2.A guarantee that a certain value for through put will maintained Neither

3.A guarantee that data will be delivered within a specified amount of time Neither

4.Confidentiality Neither

R11.

Because the applications assocaated with those protocols require that all application data be received in the correct order and without gaps.TCP provides this service whereas UDP dose not

R12.

When the user first visits the site, the server creates a unique identification number, creates an entry in its back-end database, and returns this identification number as a cookie number. This cookie number is stored on the user's host and is managed by the browser. During each subsequent visit (and purchase), the browser sends the cookie number back to the site. Thus the site knows when this user (more precisely, this browser) is visiting the site.

R13.

Web caching can bring the desired content "closer" to the user, possibly to the same LAN to which the user's host is connected.Web caching can reduce the delay for all objects even oobjects tha are not cached, since caching reduces the traffic on links

R14.

R15.

FTP uses two parallel TCP connections, one connection for sending control information (such as a request to transfer a file) and another connection for actually transferring the file. Because the control information is not sent over the same connection that the file is sent over, FTP sends control information out of band.

R26.

With the UDP server, there is no welcoming socket, and all data from different clients enters the server through this one socket. With the TCP server, there is a welcoming socket, and each time a client initiates a connection to the server, a new socket is created. Thus, to support n simultaneous connections, the server would need n+1 sockets.

R27.

For the TCP application, as soon as the client is executed, it attempts to initiate a TCP connection with the server. If the TCP server is not running, then the client will fail to make a connection. For the UDP application, the client does not initiate connections (or attempt to communicate with the UDP server) immediately upon execution

P5.