ANALYSIS ON HOW TCP/IP OPERATES.

SCENARIO: A user, John wants to access a website( www. gsudufj.com) from his laptop.

LAYER 1: PHYSICAL LAYER.

John’s laptop sends a request to the router via Ethernet cable . The router receives the request and forward it to the modem.

LAYER 2: DATA LINK LAYER.

The modem encapsulates the request into a frame and sends it to the internet service provider’s router. The router receives the frame and forward it to network layer .

LAYER 3: NETWORK LAYER.

The request is routed through multiple networks, with each router using ip addresses to forward the packet. The packet is then delivered to the web server hosting.

LAYER 4: TRANSPORT LAYER.

Web server receives the packet and uses TCP to ensure reliable transfer of data. And it also sends the webpage back to John’s laptop, using TCP to guarantee delivery.

LAYER 5-7: SESSION, PRESENTATION, & APPLICATION LAYERS.

The webpage is formatted and presented to John’s laptop using HTTP( Application protocol) and presentation layer to display content.