In TCP/IP:

*) Data link layer => MAC address

Network layer => IP address

Transport layer => Port address

*) Order of layer: Physical, Data link, Network, Transport, Application

(In OSI: Phy, Da, Net, Trans, session,presentation, app)

*) The receiver merges the data based on: Sequence number

*) How to establish a TCP connection: 3-way…

*) Layer 5 protocols (In OSI: Layer 7 protocols)

*) header is added to the application data first: Transport layer header

Layer

Host-to-host => Network layer

Dose FTP work =>Application layer

Repeater work => Physical layer

Process-to-process => Transport layer

OSI determines/ OSI model : Application layer

Encapsulates => Network layer

Node-to-node: data link layer

Điền từ:

Password: Enable password fithanu

Change Router's name to FIT – HANU: Hostname FIT-HANU

Subnet mask for 10.20.136.0/20: 255.255.240.0

Subnet mask for 10.20.136.0/21: 255.255.248.0

Running configuration: configure Terminal

Show ip routing table: show ip route

Network IDs 192.168.5.0, 192.168.6.0, and 192.168.7.0, subnet mask is: 255.255.252.0

ID 192.168.10.0, subnet with 25 hosts and a max number..: 255.255.255.224

Show vlan: show vlan

Capture: port 53 and port 80

ClASS

Class A: 255.0.0.0

Class B: 255.255.0.0

Class C: 255.255.255.0

Class A network address 10.0.0.0, 40 subnets: 255.254.0.0

Range of class A: 0-127

Range of class B: 128-191

Range of class C: 192-2233

SUBNET/NET MASK:

192.168.10.51 => 192.168.10

192.168.100.128/25 => 255.255.255.128

192.168.100.128/26=> 255.255.255.192

192.168.100.128/27=> 255.255.255.224

192.168.100.128/28=> 255.255.255.240

192.168.100.128/29 => 255.255.255.248

192.168.100.128/30 => 255.255.255.252

Netmask is: An IP address is in the subnet

How many IPs can be used, in subnet 192.168.5.0/28: 14

How many IPs can be used, in subnet 192.168.5.0/29: 6

How many IPs can be used, in subnet 192.168.5.0/30: 2

204.15.5.0/26, How many hosts are available: 62

204.15.5.0/27. How many hosts: 30

Server:

Ping fit.hanu.vn first time, first place computer request is: DSN Server

Reduce IP address configuration problems: DHCP server

UDP/ TCP:

Connection-oriented: TCP

Transport layer in SNMP: UDP

Transport layer is FTP: TCP

Connectionless: UDP

PING/NMAP/TRACERT/NSLOOKUP/NETSTAT

Test reachability of a remote host and show the list of intermediary hops: Ping

Shows the path from local host to a remote host: tracert

A security scanner: nmap

Display network connection: netstat

BGP/OSPF/RIP/EGP/FTP/SMTP:

Inter – As routing: **BGP**

Distance **vector** routing algorithm: **RIP**

Application layer for file transfers between a cilent and a Server: FTP

TRanfering electronic mail: SMTP

Link state routing algorithm: OSPF

Statem about RIP: will send out…

ROUTER/SWICTH/BRIDGE/HUB/modem:

Mainly designed to work at Data link layer: Swicth

At network layer: Router

Network sniffing: Switch

Convert analog signals: Modem

Frame from 1 lan: Bridge

Seperate a single network : Bridge

IVP:

IPV4,Fields in a header: 13

IPV6, Fields in a header: 7

IPV6, bits: 128

Telephone/postal system:

Provides circuit switching service: telephone system

Provides packet switching service: postal system

Default port:

SMTP service: 25

HTTP service: 80

POP3 service: 110

FPT service: 21

DSN service: 53

IMAP service: 143

Telnet service: 23

Show IP addess:

Linux operating system: ifconfig

Window Operating system: ipconfig

Other:

Set up static routing in Packet tracer: **ip route**

The function of a WAN: **provide connectivity over…**

Required IP address: **DNS**

Internet-like networks wiithin an enterprise: **Intranets**

The socket address is: **IP address + Port number**

When ping the loopback address, where is a packet sent: **Down through the…**

Implement and administer some network service: **IIS (Internet information services)**

Two-way traffic but only one direction at a time: **half duplex**

In VMware: **NAT**

Identified by examining the network layer header**: The destination host addess**

All data pass through a central computer: **Star network**

Which of the following is the address of router: **The default gateway**

Run command “ping 10.0.0.2**”: Reply from 10.0.0.2….**

Conect a computer and a swicth: **Straight-through cable**

VLAN stand for: **Virtual LAN**

Which address is the loopback address: **127.0.0.1**

How far can twisted pair cable be extended: **100m**

Restart Apache 2: s**udo/etc/init.d/apache2 restart**

Download and install DHCP Server (dhcp3-server): **sudo apt-get install…**

Purpose of the TTL: Limits the time…

Intranets and extanets…: **Virtual Private Network**

ICMP: **A protocol that handles error…**

Identify the odd term: **Microwaves**

Type of cable, conect 2 router: **Cross-over cable**

Non adaptive algorithm is used in: **static routing…**

The phisical layout of a computer network: **topology**

The slowest transmission: **twisted-pair wire**