**CCNA Questions**

**Ques 1:-** What is the Difference between Hub and Switch?

**Ans :-**

**HUB**

1. Hub is a Layer 1 Device

2. Hub is not more intelligent device

3. Hub does not reads the frame

4. Hub provides the always broadcasting in the network

5. we cannot configure Hub

6. In Hub the rate of data transmission is slow

7. hub is a half duplex device

8. the rate of data transmission is divided in hub

9. hub does not provide packet filtering in the network

10. hub is a single broadcast domain

11. hub is a single collision domain

12. Hub does not create any table

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1. Generally Switch is a Layer 2/ Layer 3 Device

2. Switch is a more intelligent device

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7. Switch is a full duplex device

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Bridge maximum 16 ports are available

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**Ques 40:-** How many types of Truncking Protocol?

**Ans :-** There Are Two Types Of trunking protocol in The Network—

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2. IEEE 802.1Q

**Ques 41:-** What are Difference between RIP, IGRP, EIGRP and OSPF

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**Ans :-**

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· RIP Stands For Routing Information protocol

· It Is a Industry standard Dynamic Routing Protocol

· IT Is not a More Intelligent Dynamic Routing Protocol

· It Is Basically Use For Smaller Size Organization

· It Support Maximum 15 Routers in the Network. 16 Router Is

Unreachable

· It is denoted By R in Routing Table.

· It’s Administrative Distance Is 120.

· In RIP Routing protocol We Can not create A Separate

Administrative boundary in The Network.

· It Calculate the Metric In Terms Of Hop Count From source

Network to destination Network. Lower the Hop count that Is

the Best route For That Particular Network.

· It works on Bellman Ford algorithm

· RIPV.1 Do Not Support VLSM

· RIPV.2 Support VLSM

**2. IGRP-:**

· IGRP Stands For Interior Gateway Routing protocol

· It Is a Cisco standard Routing protocol

· It IS A More Intelligent Routing Protocol Than RIP

· It Is Basically use For Medium To Larger size organization in

The Network

· It Is denoted by I in Routing Table

· It supports Maximum 255 routers in The Network

· It’s administrative Distance Is 100

· In IGRP Routing protocol We Can Create a separate

Administrative Boundary in The Network with the Help Of

autonomous System No.

· It Calculates the Metric in terms Of bandwidth And Delay. It Is

Also Called Composite Metric.

· It works On Bellman ford Algorithm

· IGRP Do Not Support VLSM

**3. EIGRP-:**

· EIGRP Stands For Enhanced Interior Gateway Routing

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· It Is a Cisco standard routing protocol

· It Is a More Intelligent routing protocol Than RIP And IGRP

· It Is Basically Use For Medium to Lager Size Organization in

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· It supports Maximum 255 Routers in The Network

· It’s Administrative distance Is 90

· It calculates the Metric In Terms Of Bandwidth And delay

· EIGRP Works on DUAL(Diffusing Update Algorithm)

Algorithm

· EIGRP is denoted by D in Routing Table.

· EIGRP Supports VLSM

· EIGRP Creates three table In the Router

1. Neighbor Table

2. Topology Table

3. Routing table

4. **OSPF-:**

· OSPF stands For Open shortest path First

· It Is A Industry standard Routing protocol

· It supports Unlimited router in the Network

· It Is Denoted By O in routing Table

· It’s Administrative distance is 110

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· In OSPF Routing protocol We Can Create a separate

administrative boundary in the Network through Area No.

within The same area all of The routers Are exchanging The

Route information From Neighbor router in the network.

· It Calculates the Metric in terms of Bandwidth

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· It supports Maximum 255 routers in The Network

· It’s administrative Distance Is 100

· In IGRP Routing protocol We Can Create a separate

Administrative Boundary in The Network with the Help Of

autonomous System No.

· It Calculates the Metric in terms Of bandwidth And Delay. It Is

Also Called Composite Metric.

· It works On Bellman ford Algorithm

· IGRP Do Not Support VLSM

**3. EIGRP-:**

· EIGRP Stands For Enhanced Interior Gateway Routing

protocol

· It Is a Cisco standard routing protocol

· It Is a More Intelligent routing protocol Than RIP And IGRP

· It Is Basically Use For Medium to Lager Size Organization in

the network.

· It supports Maximum 255 Routers in The Network

· It’s Administrative distance Is 90It calculates the Metric In

Terms Of Bandwidth And delay

· EIGRP Works on DUAL(Diffusing Update Algorithm)

Algorithm

· EIGRP is denoted by D in Routing Table.

· EIGRP Supports VLSM

· EIGRP Creates three table In the Router

1. Neighbor Table

2. Topology Table

3. Routing table

4. **OSPF-:**

· OSPF stands For Open shortest path First

· It Is A Industry standard Routing protocol

· It supports Unlimited router in the Network

· It Is Denoted By O in routing Table

· It’s Administrative distance is 110

· It Is basically Use For Larger Size Organization in The

Network

· In OSPF Routing protocol We Can Create a separate

administrative boundary in the Network through Area No.

within The same area all of The routers Are exchanging The

Route information From Neighbor router in the network.

· It Calculates the Metric in terms of Bandwidth

· OSPF works on DIJKSTRA Algorithm

· It Is a More Intelligent routing protocol

· OSPF Supports VLSM

· OSPF Routing protocol Creates three Table in the router—

1. Neighbor Table

2. Database table

3. Routing Table

**Ques 41:-** What is CIDR {Classless Inter Domain Routing}?

**Ans :-** CIDR Stands for Classless Inter Domain Routing.

**Ques 42:-** What is VLSM {Variable Length Subnet Mask}?

**Ans :-** VLSM stands For Variable Length Subnet Mask. Whenever we

are Using Different-different Subnet Mask in entire Organization,

that architecture Is Called VLSM.

**Ques 43:-** What is CLSM {Constant Length Subnet Mask}?

**Ans :-** CLSM stands For Constant Length Subnet Mask. Whenever we

are Using Same Subnet Mask in entire Organization, that

architecture Is Called CLSM.

**Ques 44:-** What is the function of Console Cable?

**Ans :-** With the help of console cable we will configure the router,

switch, pix.

**Ques 45:-** What is the function of Multilayer Switch?

**Ans :-** Multilayer switch provides The Different-Different Functionality

in the Network. That means that switch provides the Function of

Layer2 switch, layer 3 switch And Also Works as a layer 4 Switch

in the network

**Ques 46:-** What is Access List?

**Ans :-** Access list provides the Normal security in the network. Access

list telling the router that which IP packet will be forwarded and

which IP packet will be discarded in the network.

**Ques 47:-** What is the function of Layer 1 Device?

**Ans :-** Layer 1 device provides the communication within the single

network ID. As for example Hub, Repeater, Cable, NIC

**Ques 48:-** What is VTP {VLAN Trunking Protocol}?

**Ques 49:-** ............

**Ques 50:-**

**Ques 51:-**

**Ques 52:- The using software is free version, you can upgrade it to**

**the upgrade version.http://www.allimagetool.com**

**Ans :-** VTP Stands For VLAN Trunking Protocol. It is basically used in

VLAN Environment. VLAN Trunking protocol provides the

Sending and Receiving Multiple VLAN information In the

Network.

**Ques 53:-** How many types of VTP Operation Mode?

**Ans :-** There are three types Of VTP operation Mode in the Network—

1. VTP Server mode

2. VTP Client Mode

3. VTP Transparent mode

BY default all of The Switch Are VTP Server Mode in the

Network.

**Ques 54:-** What is the difference between VTP Server Mode, Client Mode

and Transparent Mode?

**Ans :-**

1. **VTP Server Mode** – By default all of the switch are VTP

Server Mode. In this Mode We Can Modify the VLAN, that

Means We can create a VLAN; Delete a VLAN As Well as

Rename a VLAN.

2. **VTP Client Mode** – In this Mode we Can not Modify The

VLAN That means We Can Not create a VLAN, Delete a

VLAN As well as Rename a VLAN In the Switch. In this Mode

Switch Can receive the VLAN Information from Other Switch

in The Network.

3. **VTP Transparent Mode** – In this Mode We can Modify the

VLAN database that Means we can create a VLAN, Delete a

VLAN As Well As rename a VLAN But This switch Can Not

receive The VLAN Information from Other switch as well As

this switch Can Not Send the own VLAN information to other

Switch in The Network. That means we can say this Switch Is

Not participated in the VLAN configuration in the Network

**Ques 55:-** What is Switching Method in the Network?

**Ans :-** Switching Method define How the Data is Sending As Well As

receiving From one Switch To Another Switch in the Network.

There are three types of switching Method in the Network

1. Store-in-Forward

2. Cut-Through

3. Fragment free

**Ques 56:-** What is difference between Store-and-Forward, cut-through,

Fragment-Free Method?

**Ans :-**

1. Store-in-forward—

2. Cut-Through—

3. Fragment free—

**Ques 57:-** What is CDP {Cisco Discovery Protocol}?

**Ans :-** CDP Stands For Cisco discovery protocol. It is a Cisco standard

protocol. This Protocol automatically Search the Neighbor devices

in the Network.

**Ques 58:-** How many Types of Memory are available in the Router?

**Ans :-** There are four types of memory are available in the router

1. Flash Memory

2. DRAM {Dynamic Random Access Memory}

3. NVRAM {Non Volatile Random Access Memory}

4. ROM {Read Only Memory}

**Ques 59:-** What is the booting Sequence of Router?

**Ans :-** There are three steps for booting a router In the Network—

1. POST {Power On Self Test}

2. Load IOS {Internetwork Operating System}

3. Load Startup Configuration

**Ques 60:-** What is the difference between RIPv1 and RIPv2?

**Ans :-** There is one major difference between RIP v1 and RIP v2. RIP v1

does not support VSLM but RIP v2 support VLSM In the

Network.

**Ques 61:-** What is the difference Classfull Routing and Classless Routing?

**Ans :-** When Ever we are talking about Class full Routing, in this

Routing We Will use CLSM (Constant Length subnet Mask) in

the Network

When ever we are talking about Classless routing, in this routing

we will Use VLSM (Variable Length Subnet mask) in the

Network

**Ques 62:-** What is ASN {Autonomous System Number}?

**Ans :-** ASN stands for Autonomous System Number. ASN define the

administrative boundary in the network. Within the same

autonomous system number all of the routers are exchanging the

route information from neighbor router in the network.

**Ques 63:-** How many types of Cisco Standard Routing Protocol in the

Network?

**Ans :-** There are two types of Cisco standard routing protocol

1. IGRP {Interior Gateway Routing Protocol}

2. EIGRP {Enhanced Interior Gateway Routing Protocol}

**Ques 64:-** How many types of Industry Standard Routing Protocol in the

Network?

**Ans :-** There are two types of Industry Standard Routing Protocol

1. RIP {Routing Information Protocol}

2. OSPF {Open Shortest Path First}

**Ques 65:-** What is the function of Area Number in OSPF Routing Protocol?

**Ans :-** Area Number defines the administrative boundary in the network.

Within the same area all of the routers are exchanging the route

information from neighbor router in the network. Area 0 is called

backbone area. In this area all of the routers are called backbone

router. Whenever any area wants to communicate with another

area that query must be forwarded through area 0. Every area is

directly connected to area 0 in the Network.

**Ques 66:-** What is the function of Loopback Interface in OSPF Routing

Protocol?

**Ans :-** Loop back interfaces Are Basically Used in OSPF Environment.

Loop Back interface IP Address Define the RID Of Any Router in

the network. It is basically useful in DR and BDR Selection in the

Network.

**Ques 67:-** What is Update Timer?

**Ans :-** Update timer define the interval of Route Update packet from one

Router to Another Router in the network.

**Ques 68:-** What is Hold down Timer?

**Ans :-** When Ever Router do not receive A Route Update packet From

neighbor router, in that case Router Hold That route in Route table

for a particular time, that time Is called Hold Down timer in the

network.

**Ques 69:-** What is Invalid Timer?

**Ans :-** This Timer Specify how Long a Router Should Wait before

Declaring A Route is Invalid if it does not receive a Specific

update About It.

**Ques 70:-** What is Flush Timer?

**Ans :-** After Flush Timer Router Delete a Particular Route from routing

Table in the Network.

**Ques 71:-** What are the Timer of RIP, IGRP, EIGRP and OSPF Routing

Protocol?

**Ans :-**

1. RIP Timer---

1. Update Timer— 30 Second

2. Hold down Timer—180 Second

3. Invalid Timer—180 Second

4. Flush Timer—240 Second

2. IGRP Timer

1. Update timer—90 Second

2. Hold Down timer—280 Second

3. Invalid timer—270 Second

4. Flush Timer—630 Second

3. EIGRP Timer

4. OSPF time

**Ques 72:-** What is the benefit of Sub netting?

**Ans :-** There Are Many benefit Of Sub netting Such As—

1. Reduce The Broadcasting In The Network

2. No Loss of host ID

3. Create A Separate broadcast Domain in The Network

**Ques 73:-** What is the benefit of Super netting?

**Ans :-** There are many benefit Of Super netting Such as—

1. Route Summarization

2.

**Ques 74:-** What is difference between Static NAT, Dynamic NAT and

Overloading NAT?

**Ans :-** There are three Types of NAT in the Network—

1. **Static NAT** – In Static NAT Only One Computer IS Connected

To Internet. For That We Define The Mapping Of That

Particular Computer in The Network.

2. **Dynamic NAT** – In Dynamic NAT We Define the Pool. In

This NAT Only Some Computer Is Connected To Internet At A

Same Time.

3. **Overloading NAT (PAT)** – Overloading NAT Is Also Called

PAT (port Address Translation). With The Help of PAT All of

the Internal User Are connected to internet through Single

Public IP Address In the network. In this NAT All User Query

Are Differentiate Through port Basis in the network, that’s why

it is Called PAT.

**Ques 75:-** What is PAT {Port Address Translation}?

**Ans :-** Overloading NAT Is Also Known As PAT. PAT stands For Port

Address Translation. With The Help of PAT All of the Internal

User are connected to internet through single Public IP Address.

In PAT all Of the Users Query are Differentiated Through port

Basis, that’s why it is Called PAT.

**Ques 76:-** What is the Broadcast MAC Address?

**Ans :-** Broad Cast MAC address is-- FF-FF-FF-FF-FF-FF

**Ques 77:-** What is the Broadcast IP Address?

**Ans :-** Broad Cast IP address Is--- 255.255.255.255

**Ques 78:-** What is function of Telnet Command?

**Ans :-** Telnet Command provides the Remotely Configuration of Any

Devices in The Network. Such As--Router, Switch, Pix.

**Ques 79:-** How many types of Access List in the Network?

**Ans :-** There are two types of access List in The Network.

1. Number Access List

2. Name Access List

Number and Name access List is Again divides in to two parts—

1. Standard Access List

2. Extended Access List

**Ques 80:-** What is the difference between Number Access List and Name

Access List?

**Ans :- Number access List** – In this access List we can not edit the

existing access List.

**Name access List** – In this access List we can edit The Existing

access List According to My company requirement.

**Ques 81:-** What is difference between Standard Access List and Extended

Access List?

**Ans :-** There are two types Of Number and Name access List in the

Network—

1. **Standard Access List**—In Standard Access List We Will Only

Define Source Not a Destination and This Access list Will Be

Apply on Always on Destination Location Not a Source

Location in The Network.

2. **Extended Access List**—in Extended Access list We Will

Define Source As well as Destination and Also Define the

particular services. This Access List Will Be Apply on Source

As well As Destination in the Network but Recommendation Is

Always Apply on Source location.

**Ques 82:-** What is Wild Card Mask?

**Ans :-** Wild Card mask are generally Used in Access list And OSPF

routing environment in the Network.

**Ques 83:-** How many types of ISDN Technologies are available in the

Network?

**Ans :-** There are two types of technologies are available in the network

1. BRI {Basic Rate Interface}

2. PRI {Primary Rate Interface}

Whenever we are talking about BRI technologies, in this technology two B

channel and one D channel are available.

Whenever we are talking about PRI technologies again PRI are divided into

two technologies

1. T1 Technologies

2. EI Technologies

**Ques 84:-** What is the difference between BRI and PRI Technologies?

**Ans :-** BRI Stands for Basic rate Interface. When Ever we are talking

about BRI, in BRI Maximum 2 B Channel And 1 d Channel Are

available in The Network. Per B Channel Speed Is 64 Kbps And

per D Channel Speed Is 16 Kbps in the Network.

PRI Stands for Primary Rate interface. When Ever we are talking

about PRI, in PRI There Are Two Types of Technology Are

Available—

1. **E1 Technology** - In E1 Technology Maximum 30 B Channel

and 1 d channel are available. Per B Channel Speed is 64 Kbps

And per d Channel speed Is 64 kbps in The Network

2. **T1 Technology –** In T1 Technology Maximum 23 B Channel

and 1 d channel are available. Per B Channel Speed is 64 Kbps

And per d Channel speed Is 64 kbps in The Network

**Ques 85:-** What is function of B Channel in ISDN Technologies?

**Ans :-** B Channel provides The Rate Of data Transmission in The

Network

**Ques 86:-** What is the Function of D Channel in ISDN Technologies?

**Ans :-** D Channel provides the data signaling in the Network.

Connections establish From Source to Destination Computer in

the Network Depends on D Channel Speed.

**Ques 87:-** What is HDLC {High level Data Link Control Protocol}?

**Ans :-** HDLC Stands for High Level data Link Control Protocol. This

protocol Is Basically Used in leased line In the Network. By

default HDLC Protocol is enable on Cisco router.

**Ques 88:-** What is PPP?

**Ans :-** PPP stands for point to Point protocol. It Is an Industry standard

Protocol in The World. This protocol Is Basically Used in

Internet.

**Ques 89:-** What is the Difference between ISDN and Frame Relay

Technologies?

**Ans :-** ISDN Stands for Integrated service Digital Network. Generally

ISDN Works on SVC (Switched virtual Circuit) in the Network.

In isdn we are Using PPP (point To point Protocol) In the

Network

Frame relay provides the Point to point connectivity in The

Network. Generally this technology works on PVC (Permanent

virtual circuit) in the network. In this technology we are using

frame-relay protocol in the network.

**Ques 90:-** What is TFTP {Trivial File Transfer Protocol}?

**Ans :-** TFTP Stands for Trivial File Transfer Protocol. With the Help of

TFTP server we can take the Backup or Restoring of Router,

Switch and pix Configuration in the Network

**Ques 91:-** What is the function of Metric in Dynamic Routing Protocol?

**Ans :-** Metric (Cost) are generally used in Routing environment. If More

Than one routes are Available for any particular Network in

routing Table in That Case Router use The Metric Value. Lower

the Metric that Is the Best route for That Particular Network. If the

Metric Value is same In that case Router Will Do the Load

Balancing in The network

**Ques 92:-** How many types of Subnet Mask?

**Ans :-** There are two types of subnet Mask in the Network—

1. Default subnet Mask

2. Customized subnet Mask

**Ques 93:-** What is the difference between Default Subnet Mask and

Customize Subnet Mask?

**Ans :- Default subnet Mask –** It is Generally Used in Class Full IP

address In the Network.

**Customized subnet Mask** – It is Generally Used in Classless IP

address in the Network. When ever we are talking About Sub

netting and super netting in That Case we will Use Customized

Subnet Mask in The Network.

**Ques 94:-** What is RID {Router Identification No.}?

**Ans :-** Every Router are Having a one ID No. That No. Is Called RID

(Router Identification No.). Highest IP Address Of any Router Is

RID No. Of That Particular Router in the Network.

**Ques 95:-** What is DR {Designated Router}?

**Ans :-** DR stands for designated router. It is Basically Used in OSPF

Routing protocol in The Network. DR Are Having Complete

Database Information Of entire Topology in the Network.

**Ques 96:-** What is BDR {Backup Designator Router}?

**Ans :-** BDR Stands for Backup designated Routed. It is Basically Used in

OSPF routing Protocol in the Network. BDR Stores the Complete

Backup Information of Network topology. When DR Will Down

in that Case BDR Becomes a DR in the Network

**Ques 97:-** What is Process ID in OSPF Routing Protocol?

**Ans :-** Process Id Is Nothing Just enables The OSPF routing Process in

the Network. Process Id Can Be Same or May Be different on all

of the Router in the Network

**Ques 98:-** What is Bridge ID?

**Ans :-** Every Switch is having a one Id No. that No IS Called Bridge Id.

Bridge Id Is a Combination Of priority + Mac address. Lower The

Bridge Id That switch becomes a Route Bridge in the Network. In

Lemon Language We Can Say Route Bridge Is a Master switches

in The Network. Every Switch are Having a Default priority That

Is—32768 in the network. We can Change the Switch priority.

**Ques 99:-** What is DLCI {Data Link Connection Identification Number}?

**Ans :-** DLCI stands for data Link Connection Identification Number. It is

basically used in frame relay technology in the Network. With The

Help of DLCI No. We can create PVC (permanent Virtual Circuit)

from source Location to Destination Location in the Network.

DLCI No Can be from 16 to 1024 in the network.

**Ques 100:-** What is CIR {Committed Information Rate}?

**Ans :-** CIR Stands For Committed Information Rate. What Ever the Data

Transmission rate is committed By Service Provider to Customer,

That Is Called CIR (Committed information rate) in the Network.

This Term are generally Used In frame-relay technology in the

network

**Ques 101:-** What is PVC {Permanent Virtual Circuit}?

**Ans :-** When Ever a Permanent Route Is established Between Source to

Destination Computer in the Network, that Is Called PVC

(Permanent Virtual Circuit). In PVC All of The data is Sending

from Source Computer to destination Computer through That

Route in the Network.

**Ques 102:-** What is SVC {Switched Virtual Circuit}?

**Ans :-** When Ever a Permanent Route Is Not established Between Source

to Destination Computer in the Network, that Is Called SVC

(Switched Virtual Circuit). In SVC All Of The data Are Sending

from Source Computer to destination Computer Through May Be

a Different Way in the Network.

**Ques 103:-** What is DE {Discard Eligibility}?

**Ans :-** DE Stands For Discard Eligibility. This Term is basically used in

frame relay technology in the Network. It provides to stop the

congestion in frame relay technology.

**Ques 104:-** What is FECN {Forward Explicit Congestion Notification}?

**Ans :-** FECN stands for forward Explicit Congestion Notification. This

Term is basically used in Frame relay technology in The Network.

It provides to stop the congestion in frame relay technology.

**Ques 105:-** What is BECN {Backward Explicit Congestion Notification}?

**Ans :-** BECN Stands for Backward Explicit congestion Notification. This

Term is basically used in frame-relay technology In the Network.

It provides to stop the congestion in frame relay technology.

**Ques 106:-** What is VTP Pruning?

**Ans :-**

**Ques 107:-** What is Split Horizon?

**Ans :-**

**Ques 108:-** What is Root Poisoning?

**Ans :-**