Question 1:jump over

Which of these about route preference is true? (Choose two)

- **Default preference values for all routing information sources can be modified.**
- **Static routes are always preferred over direct routes.**
- **By default, static routes are preferred over RIP routes.**
- **(correct)**
- **Lower preference values are preferred over higher preference values.**
- **(correct)**

annotation

The Junos OS routing protocol process assigns a default preference value (also known as an *administrative distance*) to each route that the routing table receives. The default value depends on the source of the route. The preference value is a value from 0 through 4,294,967,295 (232 – 1), with a lower value indicating a more preferred route.

Static routes have a preference of 5 while RIP learned routes have a preference of 100, hence static routes are preferred.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/routing-protocols-default-route-preference-values.html

Question 2:jump over

Which of these methods can be used to redistribute a default route received through BGP, into OSPF?

- **Apply the default-network command to OSPF.**
- **Apply the redistribute-igp command to BGP.**
- **Apply an import policy to OSPF that imports the default route.**
- **Apply an export route to OSPF that exports the default route.**
- **(correct)**

annotation

To export a BGP route into OSPF:

1. Create an export policy to match the BGP routes in the routing table:

```
[ edit policy - options ]
user@srx # show
     policy - statement BGP - INTO - OSPF {
          term BGP - ONLY {
               from protocol bgp ;
               then {
                    accept ;
               }
```

2. Apply the export policy under OSPF:

```
[ edit protocols ]
```

```
user@srx # show
     ospf {
         export BGP - INTO - OSPF ;
         area 0.0 . 0.0 {
             interface ae0 . 0
             interface ge - 0 / 0 / 0.0
```

A similar example of injecting OSPF routes into BGP routing table can be found here:
https://www.juniper.net/documentation/en_US/junos/topics/example/routing-policy-security-opspf-route-into-bpg- routing-table-injecting.html

Question 3:jump over

Which command is used to define a router's host-name?

- **> set ip host-name <name>**
- **# set system host-name <name>**
- **(correct)**
- **# set ip host-name <name>**
- **> set system host-name <name>**

annotation

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/host-name-edit-system.html

Question 4:jump over

Which of these routing protocols creates a complete database of the network topology prior to calculating the optimal route?

- **RIP**
- **PIM**
- **OSPF**
- **(correct)**
- **BGP**

annotation

OSPF is a link-state routing protocol designed for use within an Autonomous System. OSPF is an Interior Gateway Protocol.

Link-state protocols allow for faster reconvergence, support larger internetworks, and are less susceptible to bad routing information than distance-vector protocols.

Devices running OSPF send out information about their network links and the state of those links to other routers in the AS. This information transmits reliably to all other routers in the AS by means of link-state advertisements (LSAs).

The other routers receive this information, and each router stores it locally. This total set of information now contains all possible links in the network.

Recommended reading -
https://www.juniper.net/documentation/en_US/junos/topics/concept/ospf-routing-overview.html

Question 5:jump over

Which of these methods can be used to announce static routes found in the routing table to OSPF peers?

- **Apply an import policy to OSPF that injects the static routes into OSPF.**
- **Apply an import policy to the static routes that injects the static routes into OSPF.**
- **Apply an export policy to OSPF that injects the static routes into OSPF.**
- **(correct)**
- **Apply an export policy to the static routes that injects the static routes into OSPF.**

annotation

To export a static route into OSPF:

1. Create an export policy to match the static routes in the routing table:

```
user@host # show policy-options
policy - statement ExportStatic {
    term exportstatic1 {
        from protocol static ;
        then accept ;
    }
}
```

2. Apply the export policy under OSPF:

```
user@host # show protocols ospf
export ExportStatic ;
```

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/example/ospf-routing-policy-redistributing-static-routes-into-ospf-configuring.html

Question 6:jump over

Which of these are true about firewall filter configurations? (Choose two)

- **The same term can include multiple action modifiers.**
- **(correct)**
- **The default term within a firewall filter uses the discard action.**
- **(correct)**
- **The default term within a firewall filter uses the reject action.**
- **The same term can include only a single action modifier.**

annotation

Firewall filters provide rules that define whether to accept or discard packets that are transiting an interface.

If a packet is accepted, you can configure additional actions to perform on the packet, such as class-of-service (CoS) marking (grouping similar types of traffic together and treating each type of traffic as a class with its own level of service priority) and traffic policing (controlling the maximum rate of traffic sent or received).

Firewall Filter Processing

If there are multiple terms in a filter, the order of the terms is important.

If a packet matches the first term, the switch executes the action defined by that term, and no other terms are evaluated.

If the switch does not find a match between the packet and the first term, it compares the packet to the next term.

If no match occurs between the packet and the second term, the system continues to compare the packet to each successive term in the filter until a match is found.

If the packet does not match any terms in the filter, the switch discards the packet by default.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-ocx-series-overview.html

Question 7:jump over

Which of these are default routing policies on a Junos device? (choose two)

- **The BGP import policy accepts all BGP routes.**
- **(correct)**
- **The OSPF export policy accepts all active OSPF routes.**
- **The BGP export policy rejects all active BGP routes.**
- **The OSPF import policy accepts all OSPF routes.**
- **(correct)**

annotation

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-actions-defaults.html

Question 8:jump over

How does route preference help?

- **It is used to select which routing table to use for forwarding.**
- **It is used as a tiebreaker when the same prefix is available through multiple protocols.**

- (correct)
- **It is used to select the best route between multiple equal-cost paths.**

annotation

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/routing-protocols-default-route-preference-values.html

Question 9:jump over

Which of these methods can be used to apply a firewall filter that controls SSH, HTTP and Telnet access through any interface?

- **Apply the firewall filter as an inbound filter on interface lo0**
- (correct)
- **Apply the firewall filter as an inbound filter on interface fxp0**
- **Apply the firewall filter as an outbound filter on interface lo0**
- **Apply the firewall filter as an outbound filter on interface fxp0**

annotation

Firewall filters can be used to control traffic destined to the Routing Engine of the device. A common use case is to filter SSH, telnet and ICMP packets. The filter must be applied inbound to match packets that terminate on the device.

Example configuration to limit SSH access:

```
filter limit-ssh-access {
    term ssh-accept {
        from {
            source-prefix-list {
                trusted;
            }
        protocol tcp
        destination-port ssh;
        }
        then accept;
    }
    term ssh-reject {
        from {
            protocol tcp;
            destination-port ssh;
        }
        then {
            discard;
    }
}
lo0 {
    unit 0 {
        family inet {
            filter {
```

```
                input limit - ssh - access ;
            }
            address 10.1 . 1.1 / 32
        }
    }
}
```

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-loopback-interface-acx-series.html

Question 10:jump over

Which of these are types of routing instances? (Choose three)

- **VRF**
- **(correct)**
- **VPN**
- **virtual-router**
- **(correct)**
- **forwarding**
- **(correct)**
- **policy**

annotation

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-instances-overview.html

Question 11:jump over

Which of these are true about export routing policies? (Choose two)

- **Export policies can be applied to the forwarding table.**
- **(correct)**
- **Export policies can evaluate all routes.**
- **Export policies can be applied directly to the interfaces.**
- **Export policies can evaluate only active routes.**
- **(correct)**

annotation

Policies that control how the software sends routes from the routing table are named export policies .

The software applies export policies as it exports routes from the routing table to dynamic routing protocols or to the forwarding table. Only active routes are available for export from the routing table.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-overview.html

Question 12:jump over

Which of these is the default action for firewall filters?

- **accept**
- **log**
- **reject**
- **discard**
- **(correct)**

annotation
Firewall filters always include a default term that discards all packets that the configuration does not explicitly permit through the defined terms.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-ex-series-evaluation-understanding.html

Question 13:jump over
By default, if equal-cost paths exist for the same destination, which action will the Junos device take?

- **Make a copy of the traffic and send it to both destinations.**
- **Load-balance traffic between the available paths.**
- **Drop half the traffic.**
- **Randomly select one of the available paths to send traffic.**
- **(correct)**

annotation
If equal-cost paths exist for the same destination, the routing protocol daemon (rpd) randomly selects one of the available paths. This approach provides load distribution among the paths while maintaining packet ordering per destination.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-protocols-route-preferences-overview.html

Question 14:jump over
Which of these are true about firewall filters? (Choose two)

- **forwarding-class and loss-priority are firewall filter terminating actions**
- **If a packet matches all conditions in a term, and no action is specified in the then statement, the default action is to discard the packet.**
- **If the packet passes through all the terms in the filter without a match, the packet is discarded.**
- **(correct)**
- **Firewall filter terms are evaluated in sequential order.**
- **(correct)**

annotation
References:

https://www.juniper.net/documentation/en_US/junos/topics/reference/general/firewall-filter-actions-nonterminating.html

https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-qfx-series-evaluation-understanding.html

Question 15:jump over

What is the default export policy for RIP?

- **Accept all RIP routes**
- **Accept no routes**
- **(correct)**
- **Accept all direct routes**
- **Accept all local routes**

annotation

Default Routing Policies

Protocol	Import Policy	Export Policy
BGP	Accept all BGP routes and import into `inet.0`	Accept all active BGP routes
OSPF	Accept all OSPF routes and import into `inet.0`	Reject everything (protocol floods by default)
IS-IS	Accept all IS-IS routes and import into `inet.0`	Reject everything (protocol floods by default)
RIP	Accept all RIP routes from explicitly configured neighbors and import into `inet.0`	Reject everything

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-actions-defaults.html

Question 16:jump over

Which of these firewall filter actions will cause the processing and evaluation of a packet to be terminated? (Choose two)

- **permit**
- **deny**
- **accept**
- **(correct)**
- **discard**
- **(correct)**

annotation

A filter-terminating action halts all evaluation of a firewall filter for a specific packet. The router performs the specified action, and no additional terms are examined.

Accept action causes the packet to be accepted while discard action causes the packet to be silently dropped without sending an ICMP message.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/firewall-filter-actions-terminating.html

Question 17:jump over

Which of these are valid match criteria for a routing policy? (Choose two)

- **prefix list**
- **(correct)**
- **time-to-live (TTL)**
- **OSPF area ID**
- **(correct)**
- **port**

annotation

```
from {
   family family - name ;
   match - conditions ;
   policy subroutine - policy - name ;
   prefix - list name ;
   route - filter destination - prefix match - type
<actions> ;
   source - address - filter source - prefix match - type
<actions> ;
}
to {
   match - conditions ;
   policy subroutine - policy - name ;
}
```

The OSPF area ID can be used to match a route learned from the specified OSPF area during the exporting of OSPF routes into other protocols.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-match-conditions-in-routing-policy-terms.html

Question 18:jump over

Which of these configuration steps are needed to create and apply an export policy that advertises static routes to RIP neighbors? (Choose two)

- **set protocols rip export DEMO**

```
user@host # show policy-options
policy - statement ExportStatic {
    term exportstatic1 {
        from protocol static ;
        then accept ;
```

```
        }
    }
```

- **(correct)**

```
    user@host # show protocols rip group INTERNAL
    export ExportStatic ;
```

- **(correct)**
- **edit policy-options policy-statement DEMO**
- **set term 1 from protocol static accept**

annotation

A similar configuration example that exports static routes into OSPF - https://www.juniper.net/documentation/en_US/junos/topics/example/ospf-routing-policy-redistributing-static-routes-into-ospf-configuring.html

Question 19:jump over

Which of these firewall filter actions will affect a packet's class-of-service settings? (Choose two)

- **Forwarding-class**
- **(correct)**
- **Queue**
- **Scheduler**
- **Loss-priority**
- **(correct)**

annotation

Firewall filters can be configured to assign packet loss priority (PLP) and forwarding classes so that if congestion occurs, the marked packets can be dropped according to the priority you set.

Sample configuration:

```
[ edit ]
user@host # show firewall filter mf-classifier
interface - specific ;
term assured - forwarding {
    from {
        destination - address {
            192.168 . 44.55 ;
        }
    }
    then {
        loss - priority low ;
        forwarding - class af - class ;
}
```

Reference - https://www.juniper.net/documentation/en_US/junos/topics/example/security-configuring-cos-firewall-filter-multifield-classifier.html

Question 20:jump over

What is the default export routing policy for BGP?

- **Accept all active BGP routes.**
- **(correct)**
- **Accept all active IGP routes.**
- **Accept no routes.**
- **Accept all BGP routes.**

annotation

Default Routing Policies

Protocol	Import Policy	Export Policy
BGP	Accept all BGP routes and import into `inet.0`	Accept all active BGP routes
OSPF	Accept all OSPF routes and import into `inet.0`	Reject everything (protocol floods by default)
IS-IS	Accept all IS-IS routes and import into `inet.0`	Reject everything (protocol floods by default)
RIP	Accept all RIP routes from explicitly configured neighbors and import into `inet.0`	Reject everything

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-actions-defaults.html

Question 21:jump over

Which of these commands will redistribute static routes into OSPF?

- **set routing-options static defaults readvertise**
- **set routing-options static route 0.0.0.0/0 readvertise**
- **set protocols ospf import static-routes**
- **set protocols ospf export static-routes**
- **(correct)**

annotation

Example: Redistributing Static Routes into OSPF -
https://www.juniper.net/documentation/en_US/junos/topics/example/ospf-routing-policy-redistributing-static-routes-into-ospf-configuring.html

Question 22:jump over

Which of these is an advantage of dynamic routing?

- **Dynamic routing provides DNS services along with IP connectivity, while static routing does not.**
- **Dynamic routing provides redundant IP addresses for end-user devices.**
- **Dynamic routing requires no initial configuration.**

- **Compared to static routing, dynamic routing is more scalable.**
- **(correct)**

annotation
Static routing is ideal in small networks where only a few routes exist or in networks where absolute control of routing is necessary.

However, static routing has certain drawbacks that might make it cumbersome and hard to manage in large environments where growth and change are constant.

For large networks or networks that change regularly, dynamic routing might be the best option. With dynamic routing, you simply configure the network interfaces to participate in a routing protocol.

Devices running routing protocols can dynamically learn routing information from each other. When a device adds or removes routing information for a participating device, all other devices automatically update.

例句:质量的**Dynamic Routing**：

Dynamic routing resolves many of the limitations and drawbacks of static routing. Some of the general benefits of dynamic routing include:

1. Lower administrative overhead - The device learns routing information automatically, which eliminates the need for manual route definition

2. Increased network availability - During failure situations, dynamic routing can reroute traffic around the failure automatically (the ability to react to failures when they occur can provide increased network uptime)

3. Greater network scalability - The device easily manages network growth by dynamically learning routes and calculating the best paths through a network

Question 23:jump over

Which of these is incorrect?

- **A route filter is a list of prefixes.**
- **A prefix list is a list of prefixes.**
- **A route filter can be used in multiple terms in a single policy or in different policies.**
- **(correct)**
- **A prefix list can be used in multiple terms in a single policy or in different policies.**

annotation
Both prefix lists and route filters are a list of prefixes.

The difference between the two is that a prefix list can be used in multiple terms and policies, while a route filter can only be used in a single routing policy or policy term.

References:

https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-prefix-lists-for-use-in-routing-policy-match-conditions.html

https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-route-lists-for-use-in-routing-policy-match-conditions.html

Question 24:jump over

Which of these commands can be used to create a default route towards the upstream ISP at IP address **192.168.1.1** ?

- **user@router# set protocols default route 0.0.0.0/0 next-hop 192.168.1.1**
- **user@router# set routing-options default route 0.0.0.0/0 next-hop 192.168.1.1**
- **user@router# set routing-options static route 0.0.0.0/0 next-hop 192.168.1.1**
- **(correct)**
- **user@router# set forwarding-options static route 0.0.0.0/0 next-hop 192.168.1.1**

annotation

The prefix 0.0.0.0/0 is used when you want to configure a default route (also known as a match-all route). This matches anything that hasn't been matched by a more specific prefix.

Reference - https://www.juniper.net/documentation/en_US/junos/topics/task/configuration/static-routing-ex-series-cli.html

Question 25:jump over

Which of these are examples of dynamic IGP's? (Choose three)

- **IS-IS**
- **(correct)**
- **BGP**
- **OSPF**
- **(correct)**
- **PIM**
- **RIP**
- **(correct)**

annotation

Interior Gateway Protocols are used to exchange routing information within the same autonomous system. Examples include OSPF, RIP, and IS-IS.

Exterior Gateway Protocols are used to exchange information between autonomous systems. BGP is an example.

An autonomous system is a collection of routers under a common administrative domain.

Recommended reading -
https://en.wikipedia.org/wiki/Interior_gateway_protocol

Question 26:jump over

You need to access a server on a subnet 172.0.46.0/24. The next-hop router is 10.0.4.2/30.

A static route on the gateway has been configured to accomplish the task.

You want to keep the static route from being redistributed into dynamic routing protocols. Which command will satisfy this requirement?

- **set routing-options static route 172.0.46.0/24 next-hop 10.0.4.2/30**
- **set routing-options static route 172.0.46.0/24 next-hop 10.0.4.2/30 no-resolve**
- **set routing-options static route 172.0.46.0/24 next-hop 10.0.4.2/30 no-readvertise**
- **(correct)**
- **set routing-options static route 172.0.46.0/24 next-hop 10.0.4.2/30 no-redistribute**

annotation

To avoid a static route from being readvertised, it can be tagged with the no-readvertise statement.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/example/routing-protocol-static-security-route-in-routing-and-forwarding-table-controlling-cli.html

Question 27:jump over

Which of these are terminating actions for firewall filters? (Choose three)

- **discard**
- **(correct)**
- **permit**
- **drop**
- **accept**
- **(correct)**
- **reject**
- **(correct)**

annotation

Firewall Filter Terminating Actions -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/firewall-filter-actions-terminating.html

Question 28:jump over

Which of these is the default import routing policy for OSPF?

- **Accept all OSPF routes and install them into the inet.3 routing table.**
- **Accept all OSPF routes and install them into the inet.0 routing table.**
- **(correct)**
- **Accept all OSPF routes and install them into the inet.4 routing table.**
- **Accept all OSPF routes and install them into the inet.6 routing table.**

annotation

Default Routing Policies

Protocol	Import Policy	Export Policy
BGP	Accept all BGP routes and import into `inet.0`	Accept all active BGP routes
OSPF	Accept all OSPF routes and import into `inet.0`	Reject everything (protocol floods by default)
IS-IS	Accept all IS-IS routes and import into `inet.0`	Reject everything (protocol floods by default)
RIP	Accept all RIP routes from explicitly configured neighbors and import into `inet.0`	Reject everything

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-actions-defaults.html

Question 29:jump over

Which of these is true about terms in a policy?

- **Names of terms can only be five characters long.**
- **A single term can be applied to a protocol or interface, independent of the policy.**
- **A from statement is optional in a term.**
- **(correct)**
- **Once configured, terms of a policy cannot be reordered.**

annotation

The from statement is optional.

If a term does not have from and to statements, all routes are considered to match, and the actions apply to them all.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-actions-in-routing-policy-terms.html

Question 30:jump over

Why is unicast reverse path forwarding used?

- **to validate packet receipt on interfaces where the traffic should be sent**
- **to forward packets out the interfaces where the traffic should be sent**
- **to validate packet receipt on interfaces where the traffic should be received**
- **(correct)**
- **to forward packets out the interfaces where the traffic should be received**

annotation

A unicast RPF check performs a forwarding table lookup on an IP packet's source address, and checks the incoming interface. The router or switch determines whether the packet is arriving from a path that the sender would use to reach the destination.

If the packet is from a valid path, the router or switch forwards the packet to the destination address. If it is not from a valid path, the router or switch discards the packet.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/unicast-rpf-understanding.html

Question 31:jump over

What are two reasons why a route may be hidden? (Choose two)

- **routing loop**
- **route preference**
- **routing policy**
- **(correct)**
- **invalid next hop**
- **(correct)**

annotation

Hidden routes are routes that the device cannot use for reasons such as an invalid next-hop or a routing policy that rejects the routes.

The show route hidden command can be used to view hidden routes.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/topic-map/troubleshooting-bgp-sessions.html#id-understanding-hidden-routes

Question 32:jump over

Which of these describes a route filter?

- **a collection of match prefixes used to match an incoming route address**
- **(correct)**
- **a named list of IP addresses**
- **a collection of match prefixes used to match an incoming ICMP packet**

annotation
Route filters are lists of prefixes configured within a single routing policy or policy term.

Unlike prefix lists, they are not reusable but rather are specific to the policy or term in which they are configured.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-route-lists-for-use-in-routing-policy-match-conditions.html

Question 33:jump over
Which of these is an advantage of dynamic routing?

- **Dynamic routing provides redundant IP addresses for end-user devices.**
- **Dynamic routing provides DNS services along with IP connectivity, while static routing does not.**
- **Dynamic routing requires no initial configuration.**
- **Dynamic routing requires less time to implement in a large network, compared to static routing.**
- **(correct)**

annotation
Static routing is ideal in small networks where only a few routes exist or in networks where absolute control of routing is necessary.

However, static routing has certain drawbacks that might make it cumbersome and hard to manage in large environments where growth and change are constant.

For large networks or networks that change regularly, dynamic routing might be the best option. With dynamic routing, you simply configure the network interfaces to participate in a routing protocol.

Devices running routing protocols can dynamically learn routing information from each other. When a device adds or removes routing information for a participating device, all other devices automatically update.

例句:质量的**Dynamic Routing**：

Dynamic routing resolves many of the limitations and drawbacks of static routing. Some of the general benefits of dynamic routing include:

1. Lower administrative overhead - The device learns routing information automatically, which eliminates the need for manual route definition

2. Increased network availability - During failure situations, dynamic routing can reroute traffic around the failure automatically (the ability to react to failures when they occur can provide increased network uptime)

3. Greater network scalability - The device easily manages network growth by dynamically learning routes and calculating the best paths through a network

Question 34:jump over

Which of these are true about routing policy processing? (Choose two)

- **Policy processing stops once the last statement in the policy is evaluated.**
- **Policies are evaluated from left to right as displayed in the Junos configuration file.**
- **Junos verifies the match criteria of each policy in order and performs the associated action when a match occurs.**
- **(correct)**
- **Policies are evaluated based on the order in which they are applied to a routing protocol.**
- **(correct)**

annotation

From Junos documentation:

Routing policy allows you to control the flow of routing information to and from the routing table.

You can use a routing policy to choose which routes you accept or reject from neighbors running dynamic routing protocols. You can also use routing policy to choose which routes you send to neighbors running dynamic routing protocols. as they enter or leave the routing table.

Routing policies contain ordered groups of terms . Terms are the basic building blocks of all Junos OS policy. They are essentially if...then statements. If all the match conditions specified in the from statement are true (or if no from statement is specified), all the actions in the then statement are executed.

The actions that control the acceptance and rejection of routes (accept and reject) are terminating actions. Using these terminating actions results in a first-match policy evaluation because the software takes the specified action immediately and performs no further evaluation of the policy.

When the Junos OS evaluates a policy, it evaluates each term sequentially.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-overview.html

Question 35:jump over

Which of these about static routes is true? (Choose two)

- **Static routes remain in the routing table until you remove them or until they become inactive.**
- **(correct)**
- **Static routes are defined at the [edit routing-instances] hierarchy.**
- **Static routes must have a next hop defined.**
- **(correct)**
- **Static routes are learned from neighboring devices.**

annotation

To create a static route in the routing table, you must, at a minimum, define the route as static and associate a next-hop address with it. The static route in the routing table is inserted into the forwarding table when the next-hop address is reachable. All traffic destined for the static route is transmitted to the next-hop address for transit.

Static routes remain in the routing table until you remove them or until they become inactive. One possible scenario in which a static route becomes inactive is when the IP address used as the next hop becomes unreachable.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/topic-map/policy-static-routing.html

Question 36:jump over

Which of these route filter match types will match only prefixes greater than the defined prefix?

- **upto**
- **longer**
- **(correct)**
- **exact**
- **orlonger**

annotation

The match type longer will match only if the route's prefix length is greater than the length of the defined prefix.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-route-lists-for-use-in-routing-policy-match-conditions.html

Question 37:jump over

When you display the routing table by entering the **show route** command, what does the **+** sign indicate?

- **The route is an active route.**
- **(correct)**
- **The route is both the active and last active route.**
- **The route is the last active route.**

annotation
When viewing the output of show route command, the * next to the protocol means the following:

+ : a plus sign indicates the active route, which is the route installed from the routing table into the forwarding table

- : A hyphen indicates the last active route

*** : An asterisk indicates that the route is both the active and the last active route**

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/command-summary/show-route.html

Question 38:jump over

Which of these commands can be used to view OSPF routes? (Choose two)

- **show ospf routes**
- **show ip route ospf**
- **show route protocol ospf**
- **(correct)**
- **show route**
- **(correct)**

annotation
The show route command can be used to view routes from all routing tables, from all protocols.

To view routes from a specific protocol, use the show route protocol command.

The command show route protocol ospf will only show routes from the OSPF protocol.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/command-summary/show-route.html

Question 39:jump over

Which of these is true about Junos import policies?

- **Import policies are used to filter routes destined for the routing table.**
- **(correct)**
- **Import policies are used to filter traffic entering the device.**
- **Import policies are used to filter routes from the routing table to the forwarding table.**
- **Import policies are used to filter routes being sent to neighboring devices.**

annotation

Routing policy allows you to control the flow of routing information into the forwarding table. This use allows you to control which routes you install in the forwarding table and to control some of the attributes associated with those routes.

Policies that control how the software imports routes into the routing table are named import policies. The software applies import policies before placing routes in the routing table. Thus, an import policy can change the routes that are available in the routing table and can affect the local route selection process.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/import-policy-edit-routing-options.html

Question 40:jump over

In the below exhibit containing the output of the **show route** command, what does the ***** indicate?

```
user@host > show route 192.168 . 0.0 / 12

inet . 0 : 10 destinations , 10 routes ( 9 active , 0
holddown , 1 hidden )
+ = Active Route , - = Last Active , * = Both

192.168 . 0.0 / 12 *[ Static / 5 ] 2w4d 12 : 54 : 27
                    > to 192.168 . 167.254 via fxp0 . 0
```

- **The route is both the active and the last active route.**
- **(correct)**
- **The route is a default route.**
- **The route was learned using a dynamic routing protocol.**
- **The route is a direct route.**

annotation

When viewing the output of show route command, the * next to the protocol means the following:

+ : a plus sign indicates the active route, which is the route installed from the routing table into the forwarding table

- : A hyphen indicates the last active route

*** : An asterisk indicates that the route is both the active and the last active route**

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/command-summary/show-route.html

Question 41:jump over

Which of these routing information sources is preferred by default?

- **IS-IS level 2**
- **OSPF external**
- **IS-IS level 1**
- **OSPF internal**
- **(correct)**

annotation

The Junos OS routing table consolidates routing prefixes from multiple routing information sources including various routing protocols, static routes, and directly connected routes.

The Junos OS uses route preference to rank routes received from different routing protocols or routing information sources.

OSPF Internal has a route preference of 10.

OSPF External has a route preference of 150.

IS-IS Internal has a route preference of 15.

IS-IS External has a route preference of 160.

Since OSPF Internal has the lowest route preference, it is preferred by default.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/routing-protocols-default-route-preference-values.html

Question 42:jump over

Which of the following parameters can be used to create a static route with a next-hop that is not directly connected to the router?

- **resolve**
- **(correct)**
- **indirect**
- **recursive**
- **next-hop**

annotation

The resolve argument can be used when configuring static routes. This allows you to use a next-hop IP address that is not directly connected.

The route is resolved using the inet.0 and inet.3 routing tables.

Reference -
https://www.juniper.net/documentation/en_US/junos10.0/information-products/topic-collections/config-guide-routing/resolve-edit-routing-options.html

Question 43:jump over

Which of these commands will cause a matching packet to be dropped silently?

- **set routing-options static route 192.168.1.1/32 discard**
- **(correct)**
- **set routing-options static route 192.168.1.1/32 drop**
- **set routing-options static route 192.168.1.1/32 passive**
- **set routing-options static route 192.168.1.1/32 reject**

annotation

Using the discard option will cause the packet to be dropped and an ICMP unreachable message will not be sent.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/static-edit-routing-options.html

Question 44:jump over

When you display the routing table by using the **show route** command, what does the **-** sign (hyphen) indicate?

- **The route is an active route.**
- **The route is the last active route.**
- **(correct)**
- **The route is both the active and last active route.**

annotation

When viewing the output of show route command, the * next to the protocol means the following:

+ : a plus sign indicates the active route, which is the route installed from the routing table into the forwarding table

- : A hyphen indicates the last active route

*** : An asterisk indicates that the route is both the active and the last active route**

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/command-summary/show-route.html

Question 45:jump over

What is the default route preference value for EBGP?

- **170**
- **(correct)**
- **100**
- **200**

- **20**

annotation

Default Route Preferences

Direct	0	SNMP	50
Local	0	Router discovery	55
System routes 4	4	RIP	100
Static and Static LSPs	5	RIPng	100
RSVP-signaled LSPs	7	DVMRP	110
LDP-signaled LSPs	9	Aggregate	130
OSPF internal	10	OSPF AS external	150
IS-IS Level 1 internal	15	IS-IS Level 1 external	160
IS-IS Level 2 internal	18	IS-IS Level 2 external	165
Redirects	30	BGP (internal and external)	170
Kernel	40	MSDP	175

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/routing-protocols-default-route-preference-values.html

Question 46:jump over

Which of these are requirements for two devices to communicate on an IP network? (Choose two)

- **hosts should be on the same Layer 3 broadcast domain**
- **routing information on participating Layer 3 devices**
- **(correct)**
- **end-to-end communications path**
- **(correct)**
- **hosts should be on the same Layer 2 broadcast domain**

annotation

From Junos documentation:

There are several components and considerations to effectively implement routing between remote networks. These can be classified into two primary requirements - having an end-to-end communications path and ensuring all Layer 3 devices within the communications path having the required information.

To ensure there's end-to-end communication, ensure that there's a physical path between the networks, and it is configured and functioning correctly.

To ensure all Layer 3 devices in the communications path have the required routing information, devices must be configured with the correct next-hop information. Junos uses forwarding tables to determine the correct next-hop information.

Question 47:jump over

Which of these are routing tables found by default? (choose three)

- **inet6.0**
- **(correct)**
- **inet.0**
- **(correct)**
- **inet4.0**
- **inet.6**
- **inet.3**
- **(correct)**

annotation

Summary of predefined routing tables:

inet.0: Used for IPv4 unicast routes

inet.1: Used for the multicast forwarding cache

inet.2: Used for Multicast Border Gateway Protocol (MBGP) routes to provide reverse path forwarding (RPF) checks

inet.3: Used for MPLS path information

inet.4: Used for Multicast Source Discovery Protocol (MSDP) route entries

inet6.0: Used for IPv6 unicast routes

mpls.0: Used for MPLS next hops

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-tables-understanding.html

Question 48:jump over

Which of these is true about Junos export policies?

- **Export policies are used to filter routes destined for the routing table.**
- **Export policies are used to filter routes from the routing table to the forwarding table.**
- **Export policies are used to filter routes being sent to neighboring devices.**
- **(correct)**

- **Export policies are used to filter traffic leaving the device.**

annotation
Policies applied when the routing protocol is advertising routes that are in the routing table are referred to as *export policies* because the routes are being exported from the routing table.

Routing policies applied when the routing protocol places routes into the routing table are referred to as *import policies* because the routes are being imported into the routing table.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-policy-overview.html

Question 49:jump over
Which of these are terminating actions for firewall filters? (Choose three)

- **log**
- **accept**
- **(correct)**
- **drop**
- **discard**
- **(correct)**
- **reject**
- **(correct)**

annotation
Firewall filter terminating actions -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/firewall-filter-actions-terminating.html

Question 50:jump over
Choose the acceptable modifiers to a terminating action of a firewall filter? (Choose four)

- **count**
- **(correct)**
- **log**
- **(correct)**
- **Policer**
- **(correct)**
- **Syslog**
- **(correct)**
- **Discard**

annotation
Count - counts the number of packets that pass the filter, term or policer.

Log - logs the packet's header information in the Routing Engine.

Policer - applies rate limits to the traffic

Syslog - logs an alert for this packet. The log can be sent to a server for storage and analysis.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/firewall-filter-ex-series-match-conditions-description.html

Question 51:jump over

Which of these are true about the default protocol preference values? (Choose two)

- **Both direct and local routes have the same preference value.**
- **(correct)**
- **OSPF internal routes have a lower preference than static routes.**
- **OSPF has a single preference value for both internal and external routes**
- **OSPF's preference value is lower than BGP.**
- **(correct)**

annotation

Both direct and local routes have a preference of 0.

OSPF Internal has a preference of 10 while OSPF External is 150.

BGP (internal and external) is 170.

Default Route Preferences

Direct	0	SNMP	50
Local	0	Router discovery	55
System routes 4	4	RIP	100
Static and Static LSPs	5	RIPng	100
RSVP-signaled LSPs	7	DVMRP	110
LDP-signaled LSPs	9	Aggregate	130
OSPF internal	10	OSPF AS external	150
IS-IS Level 1 internal	15	IS-IS Level 1 external	160
IS-IS Level 2 internal	18	IS-IS Level 2 external	165
Redirects	30	BGP (internal and external)	170
Kernel	40	MSDP	175

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/routing-protocols-default-route-preference-values.html

Question 52:jump over

Which of these are valid actions for a routing policy? (Choose two)

- **ignore**
- **next policy**
- **(correct)**
- **accept**
- **(correct)**
- **discard**

annotation

The following flow control actions are available in a routing policy:

1. accept

2. default-action accept

3. reject

4. default-action reject

5. next term

6. next policy

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-actions-in-routing-policy-terms.html

Question 53:jump over

Which of these about routing tables are true? (Choose two)

- **Multiple routing tables can be configured on Junos devices.**
- **(correct)**
- **Information learned from routing protocols is stored in the routing table.**
- **(correct)**
- **Routing table is populated from the forwarding table.**
- **The default IPv4 unicast routing table is inet.4**

annotation

Junos OS automatically creates and maintains several routing tables. Each routing table is used for a specific purpose. In addition to these automatically created routing tables, you can create your own routing tables.

The routing table is populated with routes learned from various routing protocols configured on the Junos device.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-tables-understanding.html

Question 54:jump over

You are modifying the default route preference under the **[edit protocols]** hierarchy.

In which two routing information sources can you change the default preference value? (Choose two)

- **BGP**
- **(correct)**
- **directly**
- **local**
- **OSPF**
- **(correct)**

annotation

The default preference value for most routing information sources can be modified to make them more or less desirable.

The exception is with direct and local routes, which are always preferred regardless of the modified route preference value associated with other routing information sources.

Controlling OSPF Route Preferences -
https://www.juniper.net/documentation/en_US/junos/topics/example/ospf-route-preference-configuring.html

Configuring BGP Route Preference (Administrative Distance) -
https://www.juniper.net/documentation/en_US/junos/topics/topic-map/bgp-route-preference.html

Question 55:jump over

When you try to view the OSPF routes using the command **show route table inet.3** , no OSPF routes are displayed.

What is the problem?

- **OSPF routes are located in inet.2 routing table.**
- **OSPF routes are located in inet.0 routing table.**
- **(correct)**
- **OSPF routes are located in inet.1 routing table.**
- **OSPF routes are located in inet.4 routing table.**

annotation

Summary of predefined routing tables:

inet.0: Used for IPv4 unicast routes

inet.1: Used for the multicast forwarding cache

inet.2: Used for Multicast Border Gateway Protocol (MBGP) routes to provide reverse path forwarding (RPF) checks

inet.3: Used for MPLS path information

inet.4: Used for Multicast Source Discovery Protocol (MSDP) route entries

inet6.0: Used for IPv6 unicast routes

mpls.0: Used for MPLS next hops

OSPF routes can be found in the inet.0 routing table.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-tables-understanding.html

Question 56:jump over

Which of these commands will provide the current configuration of the MX1-PE1 BGP group on your router? (Choose two)

- **user@router> show configuration | display set | match MX1-PE1**
- **(correct)**
- **user@router# show | display set | match MX1-PE1**
- **(correct)**
- **user@router> show configuration | match set | match MX1-PE1**
- **user@router# show groups | display set | match MX1-PE1**

annotation

Incorrect - user@router# show groups | display set | match MX1-PE1

The above command can be used only to view configuration groups , not the actual configuration.

Correct - user@router> show configuration | display set | match MX1-PE1

The above command is correct because show configuration in operational mode can be used to view the device configuration. The display set argument can be used to view the set commands used to configure the device. The match argument can be used to match specific strings in the output.

Incorrect - user@router> show configuration | match set | match MX1-PE1

The above command will try to match two strings in the output. The match set argument looks for anything containing the string set and will not return any output. This is because, when viewing configuration from the operational mode, set commands are not shown by default .

Correct - user@router# show | display set | match MX1-PE1

The above command is correct because show in configuration mode can be used to view the device configuration.

Question 57:jump over
A firewall filter has been configured with a single term to match packets with source address in the **10.1.1.0/24** subnet. This term only includes the **count** action.

Which of these are true about traffic evaluated by this firewall filter? (Choose two)

- **Packets outside the 10.1.1.0/24 subnet will be accepted**
- **Packets outside the 10.1.1.0/24 subnet will not be counted.**
- **(correct)**
- **Packets outside the 10.1.1.0/24 subnet will be counted.**
- **Packets outside the 10.1.1.0/24 subnet will be discarded.**
- **(correct)**

annotation
When a packet does not match any terms in the firewall filter, the default action is to discard the packet.

Since the packet is discarded, the action configured in the filter (count) will not be applied.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-ocx-series-overview.html

Question 58:jump over
Which of these is true about routing tables on a Junos device?

- **They populate the forwarding table.**
- **(correct)**
- **They are designed to handle only dynamic routing protocols.**
- **They purge routes not marked as active routes.**
- **They are found in the Routing Engine and Packet Forwarding Engine.**

annotation
The routing table is a collection of routes received from multiple sources. When the device receives multiple routes for a given prefix, it selects a single route as the active route. The active routes are used to populate the forwarding table.

So, the forwarding table contains a subset of the information found in the routing table.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/junos-software-routing-forwarding-table-overview.html

Question 59:jump over
What is the default protocol preference for OSPF internal routes?

- **10**
- **(correct)**
- **150**
- **160**
- **15**

annotation

Default Route Preferences

Direct	0	SNMP	50
Local	0	Router discovery	55
System routes 4	4	RIP	100
Static and Static LSPs	5	RIPng	100
RSVP-signaled LSPs	7	DVMRP	110
LDP-signaled LSPs	9	Aggregate	130
OSPF internal	10	OSPF AS external	150
IS-IS Level 1 internal	15	IS-IS Level 1 external	160
IS-IS Level 2 internal	18	IS-IS Level 2 external	165
Redirects	30	BGP (internal and external)	170
Kernel	40	MSDP	175

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/routing-protocols-default-route-preference-values.html

Question 60:jump over
Which of these are true about firewall filter configurations? (Choose two)

- **The same term can include only a single action modifier.**
- **If an action modifier exists without a terminating action, matching packets will be discarded.**
- **The same term can include multiple action modifiers.**
- **(correct)**
- **If an action modifier exists without a terminating action, matching packets will be accepted.**
- **(correct)**

annotation

Each filter term has two components:

Match conditions - specify values that a packet must contain to be considered a match

Action - specifies what to do if a packet matches the match conditions. A filter can accept, discard, or reject a matching packet and then perform additional actions, such as counting, classifying, and policing. If no action is specified for a term, The default is to accept the matching packet.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-ocx-series-overview.html

Question 61:jump over
Which of these are valid match criteria for a firewall filter applied to a Layer 3 interface? (Choose three)

- **Session ID**
- **protocol**
- **(correct)**
- **IP address**
- **(correct)**
- **MAC address**
- **port**
- **(correct)**

annotation
Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/general/firewall-filter-match-conditions-for-ipv4-traffic.html

Question 62:jump over
Which of the following options is correct regarding the configuration shown below?

```
static route 0.0.0.0/0 qualified-next-hop 172.30.25.1 preference 7
next-hop 172.30.25.5
```

- **The next-hop 172.30.25.1 is selected because the address has the lowest value.**
- **The next-hop 172.30.25.1 is selected because it is listed first.**
- **The next-hop 172.30.25.5 is selected because it is the lowest protocol preference.**
- **(correct)**
- **The next-hop 172.30.25.1 is selected because it is the lowest protocol preference.**

annotation
Static routes have a default preference of 5.

```
static route 0.0.0.0/0 qualified-next-hop 172.30.25.1 preference 7
next-hop 172.30.25.5
```

In the above example, the next-hop 172.30.25.1 will have a preference of 7 and 172.30.25.5 will have a preference of 5 . Since lower number is always preferred, 172.30.25.5 will be the preferred next-hop.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-protocol-static-security-route-preference-and-qualified-next-hop-understanding.html

Question 63:jump over

Which of these about firewall filters is true? (Choose two)

- **Firewall filters are stateless.**
- **(correct)**
- **Firewall filters can only be applied to traffic entering the device.**
- **Firewall filters are used to control traffic passing through the device.**
- **(correct)**
- **Firewall filters are used to control routing information being exchanged between devices.**

annotation

Firewall filters, sometimes called *access control lists* (ACLs), provide rules that define whether to accept or discard packets that are transiting an interface.

The Junos firewall filters are stateless in nature, and the software primarily uses them to control traffic passing through a Junos device.

Stateless firewall filters examine each packet individually. Thus, unlike a stateful firewall that tracks connections and allows you to specify an action to take on all packets within a flow, a stateless firewall filter has no concept of connections.

Because the system does not keep state information on connections, you must explicitly allow traffic in both directions for each connection that you want to permit.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-stateless-overview.html

Question 64:jump over

A firewall filter has been configured with a single term to match packets with source address in the **10.1.1.0/24** subnet. This term only includes the **count** action.

Which of these are true about traffic evaluated by this firewall filter? (Choose two)

- **Packets within the 10.1.1.0/24 subnet will be counted.**

- **(correct)**
- **Packets within the 10.1.1.0/24 subnet will not be counted.**
- **Packets within the 10.1.1.0/24 subnet will be accepted.**
- **(correct)**
- **Packets within the 10.1.1.0/24 subnet will be rejected.**

annotation
When the firewall filter has matched a packet and no action is specified for a term, the default is to accept the matching packet.

So, in this case, packets within the 10.1.1.0/24 subnet will be accepted and counted.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-ocx-series-overview.html

Question 65:jump over
Which of these are true about **terms** in a policy? (Choose three)

- **A from statement is mandatory in a term.**
- **The action is specified in a then statement.**
- **(correct)**
- **The order of terms in a policy makes no difference.**
- **The match condition can be identified with a from statement.**
- **(correct)**
- **Terms are optional in a policy.**
- **(correct)**

annotation
Term are the basic building blocks of all Junos OS policy.

They are essentially if...then statements. If all the match conditions specified in the from statement are true (or if no from statement is specified), all the actions in the then statement are executed.

When the Junos OS evaluates a policy, it evaluates each term sequentially.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/policy-routing-policies-chain-evaluation-method.html

Question 66:jump over
Which of these configuration parameters alters the default next-hop selection of a static route?

- **passive**
- **resolve**
- **preference**
- **(correct)**
- **no-readvertise**

annotation
A static route destination address can have multiple next hops associated with it. In this case, multiple routes are inserted into the routing table, and route selection must occur. Because the primary criterion for route selection is the route preference, you can control the routes That are used as the primary route for a particular destination by setting the route preference associated with a particular next hop.

The routes with a lower route preference are always used to route traffic. When you do not set a preferred route, the Junos OS chooses in a random fashion one of the next-hop addresses to install into the forwarding table.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-protocol-static-security-route-preference-and-qualified-next-hop-understanding.html

Question 67:jump over
Under which hierarchy would you define routing policies?

- **[edit policy-options]**
- **(correct)**
- **[edit forwarding-options]**
- **[edit protocols]**
- **[edit routing-options]**

annotation
Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/policy-options-edit.html

Question 68:jump over
Which of these is true about using the **reject** parameter as the next-hop value for a static route? (Choose two)

- **The packet is dropped from the network.**
- **(correct)**
- **The packet is dropped and the packet source is marked with no-readvertise.**
- **The packet is sent back to the source.**
- **An ICMP message is sent back to the source of the packet.**
- **(correct)**

annotation
When the reject parameter is used as the next-hop option, the packet is not forwarded to its destination and it is dropped. An ICMP unreachable message is sent to the packets' originators, and a reject route is installed for this destination into the routing table.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/static-edit-routing-options.html

Question 69:jump over

Which of these commands will cause a matching packet to be dropped and will send a notification message?

- **set routing-options static route 192.168.1.1/32 reject**
- **(correct)**
- **set routing-options static route 192.168.1.1/32 drop**
- **set routing-options static route 192.168.1.1/32 notify**
- **set routing-options static route 192.168.1.1/32 discard**

annotation

Using the reject option will cause the packet to be dropped and an ICMP unreachable message will be sent.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/configuration-statement/static-edit-routing-options.html

Question 70:jump over

Which command will display only direct routes?

- **show ip route direct**
- **show route**
- **show route protocol direct**
- **(correct)**
- **show route inet.0 direct**

annotation

The show route protocol command can be used to display the route entries in the routing table that were learned from a particular protocol.

The direct argument can be used with this command to only display directly connected routes.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/reference/command-summary/show-route-protocol.html

Question 71:jump over

Which of these is an advantage of dynamic routing?

- **Dynamic routing provides DNS services along with IP connectivity, while static routing does not.**
- **Dynamic routing provides redundant IP addresses for end-user devices.**
- **Dynamic routing provides increased network availability compared to static routing.**
- **(correct)**
- **Dynamic routing requires no initial configuration.**

annotation
Static routing is ideal in small networks where only a few routes exist or in networks where absolute control of routing is necessary.

However, static routing has certain drawbacks that might make it cumbersome and hard to manage in large environments where growth and change are constant.

For large networks or networks that change regularly, dynamic routing might be the best option. With dynamic routing, you simply configure the network interfaces to participate in a routing protocol.

Devices running routing protocols can dynamically learn routing information from each other. When a device adds or removes routing information for a participating device, all other devices automatically update.

例句:质量的**Dynamic Routing**：

Dynamic routing resolves many of the limitations and drawbacks of static routing. Some of the general benefits of dynamic routing include:

1. Lower administrative overhead - The device learns routing information automatically, which eliminates the need for manual route definition

2. Increased network availability - During failure situations, dynamic routing can reroute traffic around the failure automatically (the ability to react to failures when they occur can provide increased network uptime)

3. Greater network scalability - The device easily manages network growth by dynamically learning routes and calculating the best paths through a network
Question 72:jump over
Which of these routing tables stores IPv4 unicast routes and is used by multicast routing protocols to prevent loops?

- **inet.2**
- **(correct)**
- **inet.3**
- **inet.0**
- **inet.1**

annotation
inet.0 is for IPv4 unicast routes.

inet.1 is for IPv4 multicast forwarding cache.

inet.2 is for unicast routes that are used for multicast reverse-path-forwarding (RPF) lookup.

inet.3 is for IPv4 MPLS.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/routing-tables-understanding.html

Question 73:jump over

What is the default firewall filter behavior when a term is matched but no terminating action is specified?

- **An implicit accept and the filter evaluation continues to the next term.**
- **An implicit deny and the filter evaluation continues to the next term.**
- **An implicit deny and the filter evaluation terminates**
- **An implicit accept and the filter evaluation terminates**
- **(correct)**

annotation

When a packet matches a firewall filter term and no action is specified in the then statement, the default action is to accept the packet. Further evaluation is stopped because accept is a terminating action.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-qfx-series-evaluation-understanding.html

Question 74:jump over

Which of these will happen if a packet is evaluated against user-defined terms within a firewall filter and no match is found?

- **The filter will permit the packet and take no additional action.**
- **The filter will discard the packet and take no additional action.**
- **(correct)**
- **The filter will permit the packet and write a log entry to the firewall log.**
- **The filter will reject the packet and send an ICMP message back to the sender.**

annotation

1. The packet is first evaluated against the conditions in the from statement in the first term.

2. If the packet matches all the conditions in the term, the action in the then statement is taken and the evaluation ends. Subsequent terms in the filter are not evaluated.

3. If the packet does not match all the conditions in the term, the packet is evaluated against the conditions in the from statement in the second term.

This process continues until the packet matches all the conditions in the from statement in one of the subsequent terms or there are no more terms in the filter.

4. If a packet passes through all the terms in the filter without a match, the switch discards it.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/concept/firewall-filter-qfx-series-evaluation-understanding.html

The concept of firewall filters explained in the above document also applies to SRX.

Question 75:jump over

Choose the advantages that dynamic routing protocols offer over static routing protocols. (Choose three)

- **increased network availability**
- **(correct)**
- **lower administrative overhead**
- **(correct)**
- **Easier ECMP route implementation**
- **easier to implement qualified next hops**
- **greater network scalability**
- **(correct)**

annotation

Static routing is ideal in small networks where only a few routes exist or in networks where absolute control of routing is necessary. However, static routing has certain drawbacks that might make it cumbersome and hard to manage in large environments where growth and change are constant. For large networks or networks that change regularly, dynamic routing might be the best option.

例句:质量的**Dynamic Routing**：

Dynamic routing resolves many of the limitations and drawbacks of static routing. Some of the general benefits of dynamic routing include:

1. Lower administrative overhead: The device learns routing information automatically, which eliminates the need for manual route definition

2. Increased network availability: During failure situations, dynamic routing can reroute traffic around the failure automatically (the ability to react to failures when they occur can provide increased network uptime)

3. Greater network scalability: The device easily manages network growth by dynamically learning routes and calculating the best paths through a network.

Question 76:jump over

Which of these are true about terms in a routing policy? (Choose two)

- **If a term does not contain the from statement, all routes will match.**
- **(correct)**
- **If a term does not contain the from statement, Junos will not allow a commit operation.**

- **A then statement may be missing from a term.**
- **(correct)**
- **A routing policy can have only one term.**

annotation
If a term does not have from and to statements, all routes are considered to match, and the actions apply to them all.

The then statement is optional. If you omit it, one of the following occurs:

- The next term in the routing policy, if one is present, is evaluated.

- If there are no more terms in the routing policy, the next routing policy, if one is present, is evaluated.

- If there are no more terms or routing policies, the accept or reject action specified by the default policy is taken.

Reference -
https://www.juniper.net/documentation/en_US/junos/topics/usage-guidelines/policy-configuring-actions-in-routing-policy-terms.html