4 Correct
11 Incorrect
0 Left

Choose a question no.

1 2 3 4 5
6 7 8 9 10
11 12 13 14 15

Question No. 1 +1 0

Which one of the following is not a function of network layer?

A. routing — Your answer is wrong!
B. inter-networking
C. congestion control
D. error control — Correct answer!

Explanation

The basic functions of network layer are logical addressing and routing. Routing can be either intra-domain or inter-domain. In the OSI model, network layer is the third layer. Congestion is a state occurring in network layer when the traffic is so heavy that the routers cannot handle. Error control is a function of the data link layer and the transport layer.

Question No. 2 +1 0

In _____ routing, the routing tables are updated periodically and the routing tables are not manually updated by the network administrator.

A. Static
B. Dynamic — Correct answer!

Explanation

In static routing, the network administrator updates the routing information in all the routers manually. In dynamic routing, the dynamic routing table is updated periodically using dynamic routing protocols like RIP, OSPF, EIGRP etc.,

C. both a and b — Your answer is wrong!
D. none of the above

Question No. 3 +1 0

_____ is a group of networks and routers managed by a single administrative authority.

A. An Area
B. An Autonomous Network
C. An Autonomous System — Your answer is correct!

Explanation

An autonomous system (AS) is a collection of networks and routers under the control of one or more network operators on behalf of a single administrative entity or domain that presents a common, clearly defined routing policy to the internet.

D. Routing

Question No. 4 +1 0

Routing inside a single administrative domain is called as _____ routing.

A. Inter-domain
B. Intra-domain — Correct answer!

Explanation

Routing inside an administrative domain is called intra-domain routing and routing between different administrative domains is called inter-domain routing. RIP, OSPF are example of intra-domain routing protocols and BGP is an example inter-domain routing protocol.

C. Path Vector
D. None of the above — Your answer is wrong!

Question No. 5 +1 0

In _____, each router maintains a vector (table) of minimum distances to every node.

A. Path Vector Routing
B. Distance Vector Routing — Your answer is correct!

Explanation

In Distance Vector Routing (DVR) each router maintains a vector of minimum distances to every node is maintained. In Link State Routing (LSR), each router maintains the minimum cost (shortest path) to every node.

C. Link State Routing
D. All of the above

Question No. 6 +1 0

Which of the following routing algorithms can be used for network layer design?

A. shortest path algorithm
B. distance vector routing — Your answer is wrong!
C. link state routing
D. all of the mentioned — Correct answer!

Explanation

Routing means finding the best path to the destination. There are several routing techniques like shortest path algorithm, static and dynamic routing, decentralized routing, distance vector routing, link state routing, hierarchical routing etc.,

Question No. 7 +1 0

Which one of the following is TRUE about Interior Gateway Routing Protocols – Routing Information Protocol (RIP) and Open Shortest Path First (OSPF)

A. RIP uses distance vector routing and OSPF uses link state routing — Correct answer!

Explanation

Both Routing Information Protocol (RIP) and Open Shortest Path First (OSPF) are Interior Gateway Protocol, i.e., they both are used within an autonomous system. RIP is an old protocol (not used anymore) based on distance vector routing and OSPF is based on Link State Routing.

B. OSPF uses distance vector routing and RIP uses link state routing — Your answer is wrong!
C. Both RIP and OSPF use link state routing
D. Both RIP and OSPF use distance vector routing

Question No. 8 +1 0

The metric used by _____ is the hop count.

A. RIP — Correct answer!

Explanation

RIP uses hop count as the metric. OSPF uses cost (shortest path) as the metric. BGP uses a metric chosen by the network administrator. EIGRP uses a metric that includes Bandwidth and Delay.

B. OSPF
C. BGP — Your answer is wrong!
D. EIGRP

Question No. 9 +1 0

Two popular routing algorithms are Distance Vector (DVR) and Link State (LSR) routing. Which of the following are true?
(S1) Count to infinity is a problem only with DV and not LS routing
(S2) In LS, the shortest path algorithm is run only at one node
(S3) In DV, the shortest path algorithm is run only at one node
(S4) DV requires lesser number of network messages than LS

A. S1, S2 and S4 only — Your answer is wrong!
B. S1, S3 and S4 only
C. S2 and S3 only

D. S1 and S4 only — Correct answer!

whenever a link cost changes. DVR is prone to count to infinity problem. In LSR, the shortest path algorithm runs at every node and broadcasted to all neighboring nodes. Each node in LSR broadcasts it's neighbor's information to all the other nodes. In DVR, each node sends routing information only to its immediate neighbors. So the number of network messages required in DVR is lesser than LSR.

Question No. 10 +1 0

The computation of the shortest path in OSPF is usually done by _____

A. Dijkstra's algorithm — Correct answer!

Explanation

Link State Routing (LSR) uses Dijkstra's algorithm for finding the shortest path between the source and the destination. It is a greedy method algorithm and hence may not guarantee the shortest path every time, but is really fast.

B. Kruskal's algorithm

C. Bellman Ford algorithm — Your answer is wrong!

D. Vector algorithm

Question No. 11 +1 0

In OSPF, which protocol is used to discover neighbor routers automatically?

A. Link state protocol

B. Error-correction protocol — Your answer is wrong!

C. Routing information protocol

D. Hello protocol — Correct answer!

Explanation

Hello protocol is used to discover neighboring routers automatically. It makes sure that the communication between neighbors is bidirectional and is analogous to the real world moral construct of saying "Hello" to initialize the communication.

Question No. 12 +1 0

What is the correct order of the operations of OSPF?

i – Hello packets

ii – Propagation of link-state information and building of routing tables

iii – Establishing adjacencies and synchronization of database

A. i-ii-iii — Your answer is wrong!

B. i-iii-ii — Correct answer!

Explanation

OSPF first implements a hello protocol to discover neighbors. It later tries to establish synchronization with database by forming adjacency relationship with the neighbors. Finally, the routing tables are built by the routers.

C. iii-ii-i

D. ii-i-iii

Question No. 13 +1 0

Consider the following statements about the routing protocols. Routing Information Protocol (RIP) and Open Shortest Path First (OSPF) in an IPv4 network.

I. RIP uses distance vector routing

II. RIP packets are sent using UDP

III. OSPF packets are sent using TCP

IV. OSPF operation is based on link-state routing

Which of the above statements are CORRECT?

A. I and IV only

B. I, II and III only — Your answer is wrong!

C. I, II and IV only — Correct answer!

Explanation

RIP uses distance vector routing (DVR) protocol which employ the hop count as a routing metric. Also, RIP uses the UDP as its transport protocol with port no 520. OSPF uses link state routing (LSR) protocol works within a single Autonomous System. OSPF encapsulates its data directly into IP Packets and does not use either TCP or UDP.

D. II, III and IV only

Question No. 14 +1 0

Which field in OSPF Database Descriptor Packet (DBD) is used to detect a missing packet?

A. LSA header

B. MS

C. Database descriptor sequence number — Your answer is correct!

Explanation

Generally sequence number field is used to detect a missing packet. In OSPF DBD, database descriptor sequence number field is used to detect the missing packet.

D. Options

Question No. 15 +1 0

_____ is an inter-domain routing protocol using path vector routing.

A. RIP

B. OSPF

C. BGP — Your answer is correct!

Explanation

The Border Gateway Protocol (BGP) connects two different Autonomous Systems (AS) using path vector routing. Hence BGP is an example of path vector routing.

D. EIGRP