Subject Abdelrahman Adel Abdelfattah Sheet 5 Date 17012296

1)

	Distance Vector Routing	Link State Routing
Algorithm	Bellman Ford	Dijsktra
Network View	Topology information from the neighbour point of view	Complete information on the network topology
Best Path Calculation	Based on the least number of hops	Based on Cost
Updates	Full routing table	Link state updates
Updates Frequancy	Periodic Updates	Triggered Updates
CPU & memory	Low utilisation	high utilization
Convergence Time	Moderate	Fast
Updates	on broadcast	on Multicast
Hierarchical structure	No	Yes
Intermidate Nodes	No	Yes

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2) Border Gateway Protocol (BGP) is used for inter-AS.
Router Information Protocol (RIP) & Open Shortest Path First (OSPF) are used for intra-AS.

Inter-AS protocol helps in the controlled distribution of routing information.

Intra-AS protocol comprises of the policy issues which play a less important role in choosing routes

Inter-AS routing is policy oriented.
Intra-AS routing is performance oriented.

3) The Default will be localhost for the Apache server and also not all home routes allow external requests to get pages from your home network & it's considered to be a security feature.

The internet is divided into public & private IP spaces. and Private IPs aren't usually accessible from a public IP.

Problems

1) Prefix : 223.1.17/24
Subnet #1: → at least 60
Subnet #2: → at least 90
Subnet #3: → at least 12

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Subnet 1: 60 → round up → 64 → $= 2^6$

Subnet 2: 90 → round up → 128 $= 2^7$

subnet 3: 12 → round up → 16 $= 2^4$

subnet 1: 223.1.17.0/26

subnet 2: 223.1.17.128/25

subnet 3: 223.1.17.64/28

②

Step	N'	D(t),p(t)	D(u),P(u)	D(v),P(v)	D(w), P(w)	D(y) P(y)	D(z) P(z)
0	x	∞	∞	3, x	6, x	6, x	8, x
1	xv	7, v	6, v	3, x	6, x	6, x	8, x
2	xvu	7, v	6, v	3, x	6, x	6, x	8, x
3	xvuw	7, v	6, v	3, x	6, x	6, x	8, x
4	xvuwy	7, v	6, v	3, x	6, x	6, x	8, x
5	xvuwyt	7, v	6, v	3, x	6, x	6, x	8, x
6	xvuwytz	7, v	6, v	3, x	6, x	6, x	8, x