Computer Network HW/ES

1. False, LSAs are flooded throughout the entire OSPF area to ensure that all routers have a consistent and up-to-date view of the network topology.

2. No.
A BGP router determine the shortest path based on the following order of attributes:
weight → local preference → AS path length → origin path → MED → eBGP over iBGP
→ IGP Metric

3. Because UDP's feature → simplicity, low latency, resource efficiency.

4.
※ initialization

Node	Dist.	pre.
1	0	0
2	∞	0
3	∞	0
4	∞	0
5	∞	0
6	∞	0

② first step

Node	Dist.	pre
1	0	0
2	1	1
3	5	1
4	4	1
5	∞	0
6	∞	0

③ second step

Node	Dist.	pre
1	0	0
2	1	1
3	4 2	2
4	4	3
5	2	5
6	6 3	2

④ third step

Node	Dist.	pre
1	0	0
2	1	1
3	3 5	5
4	3 5	5
5	2	2
6	6 3	5

table

Node	Dist.	pre.
1	0	0
2	1	1
3	3	5
4	3	5
5	2	2
6	6	3	#

5.
(a) x to W ⇒ 2 , x to y ⇒ 5 , x to u ⇒ min(2+5, 5+6, 2+2+6, 5+2+5) = 7

(b) if c(x,W) decrease or c(x,y) decrease,
May cause the shortest path of x to u decrease ⇒ update