No.

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Q1.

a) peer link

b) legal. (800, 200, 300, 400, 600, 700)
illegal. (800, 200, 300, 500, 400, 600, 700)

c) i) 100, 200

ii) ① The export policy of AS100 to AS200 needs to be fixed. In this situation, As 100 should be configured that As 100 can't send traffic to 200, because there's a peer-As-provider link.

② The import policy of AS200 from As 100 needs to be fixed. As 200 should be configure that As 200 can't receive traffic from AS 100, because (700, 100, 200) is illegal.

d) illegal. Because (200, 500, 600) is a peer-As-peer link, which is illegal. As 500 transits data without getting paid.

e) As 100.
Because the shortest AS path from As800 to AS 100 is (800, 200, 100) and the shortest AS path from As800 to AS 700 is (800, 200, 500, 700), given no AS path prepending. The 1st one is shorter than the 2nd one.

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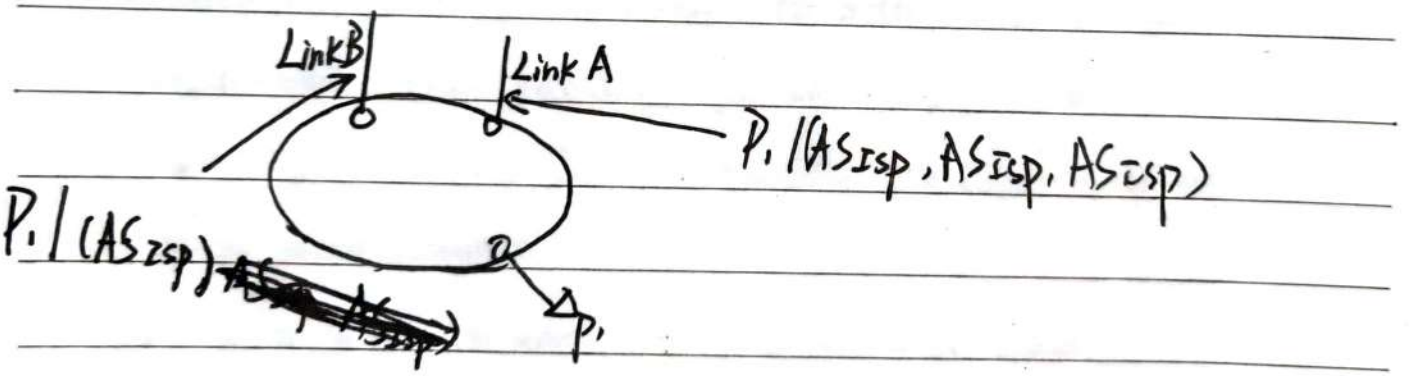
Q_2

a) [Prefix P_1, Link B, server]
[Server, Link A, Prefix P_1]
[Prefix P_2, Link B, Server]
[Server, Link A, Prefix P_2]

b) hot potato routing

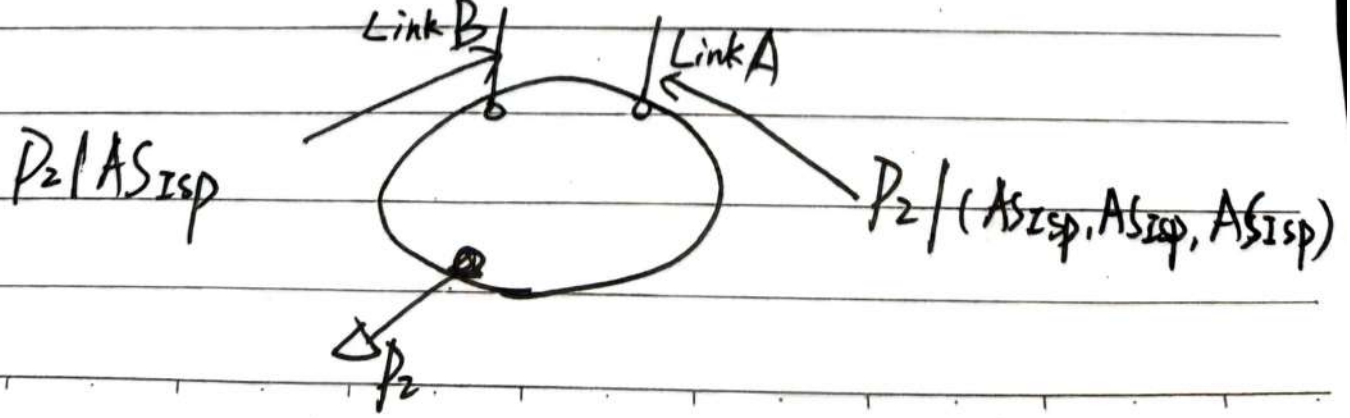
c) to P_1:

ISP prepends AS_{ISP} for P_1 over Link A. example is below.



to P_2.

ISP prepends AS_{ISP} for P_2 over Link A. example is below.



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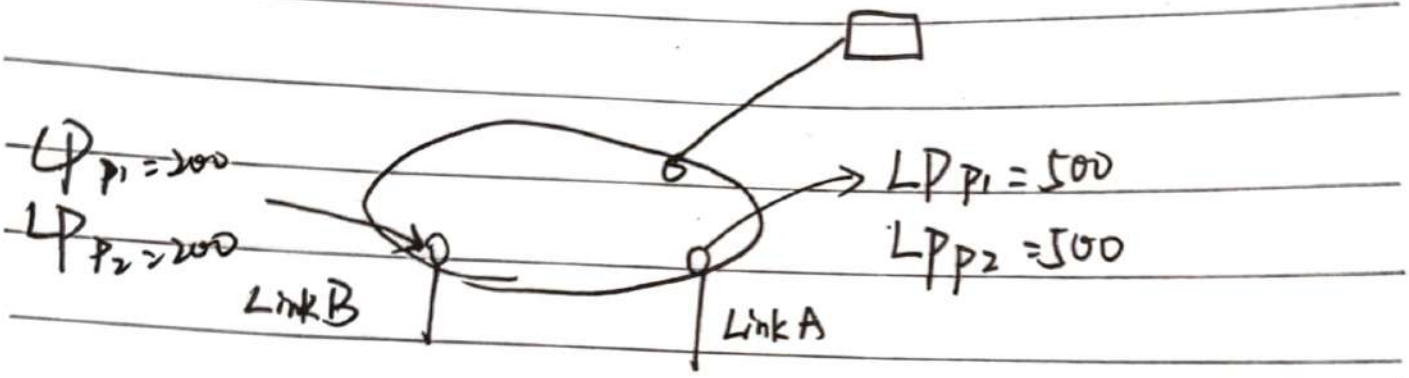
d) set local preference for both P_1 and P_2 on Router 1 is higher than that on Router 2.



e) contradiction : ISP wants receive traffic over Link B ~~[redacted]~~. But because server send traffic over ~~[redacted]~~ Link A, the ISP actually receives traffic over ~~[redacted]~~ Link A.

Traffic from server to prefix P_2 is like:

server → 5 → LinkA → do → P_2

Because the algorithm ~~[redacted]~~ take LP into consideration first, then take the length of AS path.