

Quiz on Architecture (Ch 2) & L2 Protocols (Ch 3)

5 Marks total

Name: _____

[3 marks] Choose one of the two algorithms that we have seen & discussed in class for forwarding L2 frames. Give all the steps in correct order for your chosen algorithm. (The structure for the longer one has been created below).

1. (*) Receive entire frame [input buffer] (*) means common step for both algorithms
2. (*) Re-compute CRC
3. (*) Discard frame if bad CRC; otherwise continue processing
4. Determine VLAN
 - for access ports, according to configured VLAN
 - for trunk ports, according to VLAN tag on frame (Native VLAN if no tag)
5. (*) Look in MAC address table, (according to VLAN if a managed switch), for a match with the destination MAC address
 - if match, then select single egress port/trunk
 - if no match, then select flooding as egress method
6. Determine whether to add or strip VLAN tag
 - Add a tag if passing from access to trunk (new tag = access VLAN #)
 - Strip the tag if passing from trunk to access
 - No change if not crossing an access / trunk boundary
7. If VLAN tag added or stripped, re-do CRC
8. (*) Queue the frame on selected egress port(s) [output buffer(s)]

[1 mark; all-or-nothing] **Clearly** and correctly identify all the fields in an 802.1Q header. You may give a list of the fields, or draw a correctly labelled diagram.

[1 mark; all-or-nothing] Give the correct **length** of each of the fields.

FLG, p. 49
(Ch 3, slide 12)

