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# COMP 204 Homework 5

Answer the following questions based on your reading of the text book, the module key points, and the instructor’s presentation this week.

1. **[5 points]** Describe two issues that could occur when a router or a bridge is connecting media with two different speeds and/or frame types?
2. **[5 points]** If corrupted Ethernet frames are dropped (i.e. are like UDP with no retransmissions or acknowledgements), why does the frame header include the source address? Hint: explore switching and filtering.
3. **[5 points]** Why is throughput on a medium so much less than bandwidth? Why is goodput so much less than throughput?
4. **[5 points]**  Many fly-by-night cable contractors will just toss inexpensive UTP cable through drop ceilings. Name and describe several reasons why this could be a problem.
5. **[5 points]** Why do engineering standards bodies control Layer 1 (and some of Layer 2) in the OSI model encoding as opposed to software standards bodies?
6. **[5 points]** Research random exponential backoff in CSMA/CD systems. Why is exponential backoff used? What does the randomness give us?