An Introduction to Computer Networks
Problem Set 1 - Solutions

Note: Due to an error in the initial grading, your grades may have been updated. However, your new total score should not be less than your initial score.

Grading details:

The maximum score is 450 points.

For Questions 1 to 10, each correct assertion checked is worth 10 points, and each correct assertion checked is worth -10 points.

The score for each one of Questions 11, 12 and 13 is 100. For multiple choice subquestions in Questions 11 and 13, you need to check all the right answers in order to get any points - however, no point is removed for incorrect assertions checked.

Question 1: e) - 10 points

Question 2: c),d) - 20 points

Question 3: b),c) - 20 points

Question 4: a),d) - 20 points

Question 5: a),e) - 20 points

Question 6a: b) - 10 points

Question 6b: b) - 10 points

Question 7: c) - 10 points

Question 8: b) - 10 points

Question 9: c) - 10 points

Question 10: e) - 10 points

Question 11a: 5 - 25 points

Question 11b: 50 - 25 points

Question 11c: a) - 25 points

Question 11d: 0 - 25 points

Question 12: The total score for this question is reported under the label `q12ab1`.

The points are distributed as follows:

- For all completed rows in AB:
  - Ident fields = 4: 10 points
  - MF fields are 1, 1, 1, ..., 0: 10 points
  - Lengths are ≤ 780 and a multiple of 8, and the sum of all lengths is 1480: 10 points
  - Offsets are the sum of previous lengths divided by 8: 10 points
- For all completed rows in BC:
  - Ident fields = 4: 10 points
  - MF fields are 1, 1, 1, ..., 0: 10 points
  - Lengths are ≤ 680 and a multiple of 8, and the sum of all lengths is 1480: 10 points
  - Offsets are the sum of previous lengths divided by 8: 10 points
- B processes each fragment received from A independently (i.e. B does not merge the end of a fragment with the beginning of the next one): 20 points

Here is a sample answer:

Ident	Offset	Length	MF
4	0	776	1
4	97	704	0

Ident	Offset	Length	MF
4	0	680	1
4	85	96	1
4	97	680	1
4	182	24	0

Question 13a: a),b),c),e) - 20 points

Question 13b: 7 - 20 points

Question 13c: b) - 20 points

Question 13d: c) - 20 points

Question 13e: 3 - 20 points