

Exam 1 Grading Rubric (Small deviations from this are possible for individual cases)

- I.** (a): 1 pt if half correct, 0 pts if not correct.
- (b): 1 pt for both min and max, 2 pts each for median, Q_1 , Q_3
- (c): 1 pt IQR, 1 pt each outlier, 1 pt justification.
- (d): 2 pts off if not labeled. 2 pts off if minor mistake, 4 pts off if multiple mistakes, 7 pts off if completely incorrect. 4 pts off for class boundaries which don't make sense.
- II.** (a): 3 pts if start at 100 and class width correct, 2 pts off if frequency distribution partly incorrect, 4 pts off if completely incorrect.
- (b): 4 pts histogram, 2 pts for bell-shaped, 2 pts for skewed.
- III.** (a): 3 pts mean, 2 pts mode, 3 pts median.
- (b): 4 pts standard deviation, 4 pts variance.
- (c): For correct z value formula, 2 pts value, 2 pts outlier conclusion. 3 pts off if z value formula is not correct.
- (d): 2 pts for correct logic (mean \pm 2 std deviations), 3 pts for correct answer. 4 pts off if one writes mean \pm 1 or 3 std deviations or for not writing down an interval.
- IV.** (a): 1 pt first question, 2 pts second question.
- (b): 5 pts calculation, 2 pts dependence conclusion. 3 pts off if mix up $p(A)$ and $p(S)$. 1 pt off if calculations show dependence but conclusion is independence. 5 pts off for interpreting $A|S$ as A intersection S instead of A given S .
- V.** (a): 3 pts logic, 2 pts calculation.
- (b): 3 pts logic, 2 pts calculation.
- (c): 3 pts logic, 2 pts calculation. 2 pts off if don't subtract intersection.
- (d): 3 pts logic, 2 pts calculation.
- (e): 3 pts logic, 2 pts calculation. 2 pts off if you write write $p(A \text{ intersect } B') = p(A)*p(B')$ due to the independence of these events without proper justification of this.
- (f): 3 pts logic, 2 pts calculation. 2 pts off if you write $p(A' \text{ intersect } B') = p(A')*p(B')$ due to the independence of these events without proper justification of this.