

Monday April 3rd, 2017

1. Exam Instructions:

- (a) Test will be closed book, no notes.
- (b) You may use a calculator.
- (c) Please show your work in the exam, write in complete sentences, and indicate your answers clearly.

2. Syllabus for the test: All material covered till Friday 30th March 2017, except for the proof of Neyman Pearson lemma.

3. Studying for the test

- (a) The following terms and definitions you must know
 - i. Null Hypothesis and Alternate Hypothesis
 - ii. z -test, t -test and F -test.
 - iii. Simple and Composite Hypothesis.
 - iv. Level and Size of a test.
 - v. Rejection Region.
 - vi. Power Function.
 - vii. Type I and Type II Error.
 - viii. Unbiased test.
 - ix. Uniformly Most Powerful test.
- (b) The following results you must know
 - i. Central Limit Theorem
 - ii. Neyman Pearson Lemma
- (c) The following computations you must know
 - i. Compute the rejection of a test for a given size.
 - ii. Graph and Compute the power function of a test.
 - iii. Use the Neyman-Pearson lemma to determine the rejection region of a test for a given level.
- (d) Things to do : Please solve all home work problems given so far.