King Fahd University of Petroleum & Minerals Department of Mathematics & Statistics STAT-212-Term111-I Quiz #1

Name:	ID:	Serial:

A contract with a parts supplier calls for no more than .07 defects in the large shipment of parts. To test whether the shipment meets the contract, the receiving company has selected a random sample of size 200 parts and found 25 defects. If the hypothesis test is to be conducted,

- a. Construct the appropriate null and alternative hypotheses.
- b. What is the test statistic?
- c. Find the observed level of significance of the test and interpret it.

- d. What conclusion should the company reach based on the sample data? Using a significance level equal to 0.025.
- e. Referring to your answer in part d, which of the two statistical errors might have made in this case? Explain.