

### Sample Exam Items, Installment III:

1. Briefly contrast a statistic from a parameter. Which one do we more commonly use in usability research?
2. A T-test (also known as Gauss' students T) is . . . .
  - (a) checks the likelihood that two sampled means are really different beyond chance
  - (b) checks mainly the consistency of a common hot beverage
  - (c) a descriptive statistic
  - (d) a correlation coefficient
  - (e) all of the above
3. Reliability tests . . . .
  - (a) the time-after-time consistency or stability of a result or outcome
  - (b) the correspondence or fit of the measure to the concept or construct measured
  - (c) is also known as the Hawthorne test
  - (d) Must always be done by a second group of subjects or reseachers
  - (e) Is ethically required in all human subject studies
4. In a statistically "normal" distribution how much of population outcomes are between plus and minus one (1) standard deviation . . .
  - (1) about 2/3rdsd or 68%
  - (2) about a third or 33%
  - (3) about 6%
  - (4) can't be estimated; varies greatly
  - (5) always 98%
5. As a sample size is increased (*assuming random selection*) . . .
  - (a) The error of measurement goes up because you include more different kinds of people
  - (b) Your survey costs go up, but the increase in your predictive power is less and less (it is still improving, but at a diminishing rate).
  - (c) You reduce the chance of abnormal results due to a few extreme cases.
  - (d) (b) and (c) only
  - (e) all of above
6. Describe and draw a skewed distribution (just the shape in axes).
7. We try to avoid Type 1 errors in our research. We worry less about Type 2. Why?
8. An ANOVA does what key thing beyond a T-test?

9. Describe the difference between an ordinal and interval scale. Give an example of each.
10. Which is TRUE:
- (a) You may have more than one MODE but only one MEDIAN in a given distribution
  - (b) You may have only one MEDIAN and one MODE in a distribution
  - (c) Both MEDIAN and MODE are EQUAL INTERVAL measurements
  - (d) In (c) both are ORDINAL measurements
  - (e) None of the above are true