Be sure you can use Excel’s Data Analysis for this exam. The ANSWER line should expand to accommodate your answer. Keep your answers as short as possible. Where appropriate, always use an alpha of .05, always use the one tail test, always use a confidence interval of 95%, and assume Z = 1.96 in formulas for confidence interval calculations and sample size calculations.

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| 1. = 250, s = 62. Probability of X being 260 or more equals:  ANSWER: |
| 2. = 250, s = 62, n = 24. The 95% confidence interval for µ equals:  ANSWER: |
| 3. = 250, s = 62, n = 24, E = 15. Minimum required sample size equals:  ANSWER |
| A machine is set to fill a bottle with 8 grams of medicine. A sample of 8 recently filled bottles revealed the following grams of medicine: 9.2, 8.7, 8.9, 8.4, 8.3, 8.5, 8.1, 8. Using a One Sample t Test, answer the following questions 4-9. |
| 4. H0  ANSWER: |
| 5. H1  ANSWER: |
| 6. t Critical  ANSWER: |
| 7. t Calculated  ANSWER: |
| 8. Decision  ANSWER: |
| 9. Explanation of Decision  ANSWER: |

|  |  |  |
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| DENVER | OMAHA | MIAMI |
| 65 | 71 | 82 |
| 64 | 67 | 75 |
| 59 | 63 | 70 |
| 61 | 64 | 78 |
| 60 | 65 | 79 |
| 52 | 72 | 75 |
| 62 | 63 | 72 |
| 58 | 66 | 75 |
|  | 58 |  |
|  | 60 |  |

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| The above table depicts three random samples from Denver, Omaha, and Miami. The data represent the age at which males have their first heart attack and are to be used to answer questions 10-16.. Determine if there is any difference between Denver and Omaha using a Two Sample t Test. |
| 10. H0  ANSWER: |
| 11. H1  ANSWER: |
| 12. t Critical  ANSWER: |
| 13. t Calculated  ANSWER: |
| 14. Decision  ANSWER: |
| 15. p value and its meaning  ANSWER: |
| 16. Explanation of Decision  ANSWER: |