* **Question 1**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | In point estimation |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  data from the sample is used to estimate the population parameter. | | Answers: | a.  the mean of the population equals the mean of the sample. | |  | b.  data from the sample is used to estimate the sample statistic. | |  | c.  data from the sample is used to estimate the population parameter. | |  | d.  data from the population is used to estimate the population parameter. | |  |  |  |

* **Question 2**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The standard deviation of a point estimator is called the |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  standard error. | | Answers: | a.  standard error. | |  | b.  variance of estimation. | |  | c.  standard deviation. | |  | d.  point estimator. | |  |  |  |

* **Question 3**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The purpose of statistical inference is to provide information about the |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  population based upon information contained in the sample. | | Answers: | a.  population based upon information contained in the population. | |  | b.  mean of the sample based upon the mean of the population. | |  | c.  sample based upon information contained in the population. | |  | d.  population based upon information contained in the sample. | |  |  |  |

* **Question 4**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | When the population has a normal distribution, the sampling distribution of   is normally distributed​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  ​for any sample size. | | Answers: | a.  ​for any sample size of 30 or more. | |  | b.  ​for any sample size of 50 or more. | |  | c.  ​for any sample from a finite population. | |  | d.  ​for any sample size. | |  |  |  |

* **Question 5**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Random samples of size 17 are taken from a population that has 200 elements, a mean of 36, and a standard deviation of 8. Which of the following best describes the form of the sampling distribution of the sample mean for this situation? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  None of these alternatives is correct. | | Answers: | a.  Approximately normal because the sample size is small relative to the population size | |  | b.  Approximately normal because of the central limit theorem | |  | c.  Exactly normal | |  | d.  None of these alternatives is correct. | |  |  |  |

* **Question 6**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The following data was collected from a simple random sample of a population.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 13 | 15 | 14 | 16 | 12 |   The point estimate of the population mean |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  is 14 | | Answers: | a.  cannot be determined, since the population size is unknown | |  | b.  is 14 | |  | c.  is 5 | |  | d.  is 4 | |  |  |  |

* **Question 7**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Which of the following is an example of nonprobabilistic sampling? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  Judgment sampling | | Answers: | a.  Judgment sampling | |  | b.  Simple random sampling | |  | c.  Stratified simple random sampling | |  | d.  Cluster sampling | |  |  |  |

* **Question 8**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Which of the following sampling methods does **not** lead to probability samples? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  Convenience sampling | | Answers: | a.  Cluster sampling | |  | b.  Convenience sampling | |  | c.  Systematic sampling | |  | d.  Stratified sampling | |  |  |  |

* **Question 9**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The standard deviation of  is referred to as the​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  ​standard error of the proportion. | | Answers: | a.  ​standard error of the proportion. | |  | b.  ​deviated proportion. | |  | c.  ​sample mean proportion. | |  | d.  ​standard proportion. | |  |  |  |

* **Question 10**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The following data was collected from a simple random sample of a population.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 13 | 15 | 14 | 16 | 12 |   If the population consisted of 10 elements, how many different random samples of size 6 could be drawn from the population? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  210 | | Answers: | a.  362880 | |  | b.  60 | |  | c.  210 | |  | d.  3024 | |  |  |  |

* **Question 11**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | How many simple random samples of size 5 can be selected from a population of size 8? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  56 | | Answers: | a.  68 | |  | b.  56 | |  | c.  336 | |  | d.  40 | |  |  |  |

* **Question 12**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The following data was collected from a simple random sample of a population.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 13 | 15 | 14 | 16 | 12 |   The point estimate of the population standard deviation is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  1.581 | | Answers: | a.  2.000 | |  | b.  2.500 | |  | c.  1.414 | |  | d.  1.581 | |  |  |  |

* **Question 13**

0 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | As the sample size increases, the |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  standard deviation of the population decreases. | | Answers: | a.  standard error of the mean increases. | |  | b.  standard error of the mean decreases. | |  | c.  standard deviation of the population decreases. | |  | d.  population mean increases. | |  |  |  |

* **Question 14**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The standard error of the proportion will become larger as​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  ​*p* approaches .5. | | Answers: | a.  ​*p* approaches 0. | |  | b.  ​*p* approaches .5. | |  | c.  ​*n* increases. | |  | d.  ​*p* approaches 1. | |  |  |  |

* **Question 15**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A simple random sample of size *n* from an infinite population of size *N* is to be selected. Each possible sample should have |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  the same probability of being selected | | Answers: | a.  a probability of *N/n* of being selected | |  | b.  the same probability of being selected | |  | c.  a probability of *1/n* of being selected | |  | d.  a probability of *1/N* of being selected | |  |  |  |

* **Question 16**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A population has a mean of 300 and a standard deviation of 18. A sample of 144 observations will be taken. The probability that the sample mean will be between 297 to 303 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  0.9544. | | Answers: | a.  0.0668. | |  | b.  0.4332. | |  | c.  0.9332. | |  | d.  0.9544. | |  |  |  |

* **Question 17**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The sampling distribution of the sample means |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  is the probability distribution showing all possible values of the sample mean. | | Answers: | a.  shows the distribution of all possible values of *μ*. | |  | b.  is used as a point estimator of the population mean *μ*. | |  | c.  is an unbiased estimator. | |  | d.  is the probability distribution showing all possible values of the sample mean. | |  |  |  |

* **Question 18**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A population has a mean of 180 and a standard deviation of 24. A sample of 64 observations will be taken. The probability that the sample mean will be between 183 and 186 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  0.1359 | | Answers: | a.  0.8185 | |  | b.  0.1359 | |  | c.  0.3413 | |  | d.  0.4772 | |  |  |  |

* **Question 19**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The basis for using a normal probability distribution to approximate the sampling distribution of   is​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  ​The central limit theorem. | | Answers: | a.  ​The empirical rule. | |  | b.  ​Bayes' theorem. | |  | c.  ​The central limit theorem. | |  | d.  ​Chebyshev’s theorem. | |  |  |  |

* **Question 20**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | As a rule of thumb, the sampling distribution of the sample proportions can be approximated by a normal probability distribution whenever |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  *np* ≥5 and *n(1-p*) ≥5. | | Answers: | a.  *np* ≥5, *n* ≥30. | |  | b.  *np* ≥5 and *n(1-p*) ≥5. | |  | c.  *n*  30 and *(1 - p)* = 0.5. | |  | d.  none of these alternatives is correct. | |  |  |  |

* **Question 21**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A subset of a population selected to represent the population is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  a sample. | | Answers: | a.  a sample. | |  | b.  a parameter. | |  | c.  a small population. | |  | d.  a subset. | |  |  |  |

* **Question 22**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The closer the sample mean is to the population mean, |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  the smaller the sampling error. | | Answers: | a.  the larger the sampling error. | |  | b.  the smaller the sampling error. | |  | c.  the sampling error equals 1. | |  | d.  none of these alternatives is correct. | |  |  |  |

* **Question 23**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The expected value of equals the mean of the population from which the sample is drawn​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  ​for any sample size. | | Answers: | a.  ​only if the sample size is 30 or greater. | |  | b.  ​for any sample size. | |  | c.  ​only if the sample size is 100 or greater. | |  | d.  ​only if the sample size is 50 or greater. | |  |  |  |

* **Question 24**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | How many simple random samples of size 3 can be selected from a population of size 7? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  35 | | Answers: | a.  35 | |  | b.  21 | |  | c.  7 | |  | d.  343 | |  |  |  |

* **Question 25**

0 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Random samples of size 49 are taken from a population that has 200 elements, a mean of 180, and a variance of 196. The distribution of the population is unknown. The mean and the standard error of the mean are |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  180 and 2 | | Answers: | a.  180 and 1.74 | |  | b.  180 and 24.39 | |  | c.  180 and 28 | |  | d.  180 and 2 | |  |  |  |

* **Question 26**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The population being studied is usually considered \_\_\_\_\_\_ if it involves an ongoing process that makes listing or counting every element in the population impossible.​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  ​infinite | | Answers: | a.  ​skewed | |  | b.  ​infinite | |  | c.  ​finite | |  | d.  ​symmetric | |  |  |  |

* **Question 27**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | From a group of 12 students, we want to select a random sample of 4 students to serve on a university committee. How many combination of random samples of 4 students can be selected? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  495 | | Answers: | a.  495 | |  | b.  48 | |  | c.  16 | |  | d.  20,736 | |  |  |  |

* **Question 28**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Random samples of size 81 are taken from an infinite population whose mean and standard deviation are 200 and 18, respectively. The distribution of the population is unknown. The mean and the standard error of the mean are |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  200 and 2 | | Answers: | a.  200 and 2 | |  | b.  81 and 18 | |  | c.  200 and 18 | |  | d.  9 and 2 | |  |  |  |

* **Question 29**

0 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Doubling the size of the sample will |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  reduce the standard error of the mean to one-half its current value. | | Answers: | a.  reduce the standard error of the mean to one-half its current value. | |  | b.  reduce the standard error of the mean to approximately 70% of its current value. | |  | c.  have no effect on the standard error of the mean. | |  | d.  double the standard error of the mean. | |  |  |  |

* **Question 30**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A sample of 25 observations is taken from an infinite population. The sampling distribution of  is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  approximately normal if np  5 and n(1-P)  5 | | Answers: | a.  not normal since n < 30 | |  | b.  approximately normal if np > 30 and n(1-P) > 30 | |  | c.  approximately normal if np  5 and n(1-P)  5 | |  | d.  approximately normal because  is always normally distributed | |  |  |  |

* **Question 31**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A sample of 92 observations is taken from an infinite population. The sampling distribution of  is approximately |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  normal because of the central limit theorem. | | Answers: | a.  normal because  is always approximately normally distributed. | |  | b.  normal because the sample size is small in comparison to the population size. | |  | c.  normal because of the central limit theorem. | |  | d.  none of these alternatives is correct. | |  |  |  |

* **Question 32**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Which of the following statements about cluster sampling is false?​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  ​It generally requires a smaller total sample size than simple random sampling | | Answers: | a.  ​It generally requires a smaller total sample size than simple random sampling | |  | b.  ​Ideally, each cluster is a representative small-scale version of the entire population | |  | c.  ​It provides the best results when the elements within the clusters are not alike | |  | d.  ​All elements within the randomly selected clusters form the sample | |  |  |  |

* **Question 33**

0 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A random sample of 121 bottles of cologne showed an average content of 4 ounces.  It is known that the standard deviation of the contents (i.e., of the population) is 0.22 ounces.  The standard error of the mean equals |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  4.000 | | Answers: | a.  4.000 | |  | b.  0.3636 | |  | c.  0.0331 | |  | d.  0.0200 | |  |  |  |

* **Question 34**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | In a local university, 40% of the students live in the dormitories. A random sample of 80 students is selected for a particular study.  The probability that the sample proportion (the proportion living in the dormitories) is at least 0.30 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  0.9664 | | Answers: | a.  0.9664 | |  | b.  0.9328 | |  | c.  0.0336 | |  | d.  0.4664 | |  |  |  |

* **Question 35**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The desired situation is when​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  ​the sampled population is identical to the targeted population. | | Answers: | a.  ​the sampled population is smaller than the targeted population. | |  | b.  ​the sampled population is identical to the targeted population. | |  | c.  ​the sampled population is larger than the targeted population. | |  | d.  ​the sampled population is more varied than the targeted population. | |  |  |  |

* **Question 36**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The sample statistic *s* is the point estimator of |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  *σ* | | Answers: | a. | |  | b.  *μ* | |  | c. | |  | d.  *σ* | |  |  |  |

* **Question 37**

0.5 out of 0.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A simple random sample of 64 observations was taken from a large population. The sample mean and the standard deviation were determined to be 320 and 120 respectively. The standard error of the mean is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  15 | | Answers: | a.  15 | |  | b.  40 | |  | c.  5 | |  | d.  1.875 | |  |  |  |

* **Question 38**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A simple random sample of 5 observations from a population containing 400 elements was taken, and the following values were obtained.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 12 | 18 | 19 | 20 | 21 |   A point estimate of the mean is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  18 | | Answers: | a.  400 | |  | b.  18 | |  | c.  20 | |  | d.  10 | |  |  |  |

* **Question 39**

0 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | From a population of 500 elements, a sample of 225 elements is selected. It is known that the variance of the population is 900. The standard error of the mean is approximately |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  2 | | Answers: | a.  30 | |  | b.  1.1022 | |  | c.  2 | |  | d.  1.4847 | |  |  |  |

* **Question 40**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | The sample mean is the point estimator of |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  *μ* | | Answers: | a.  *σ* | |  | b. | |  | c. | |  | d.  *μ* | |  |  |  |

* **Question 41**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Which of the following is(are) point estimator(s)? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  *s* | | Answers: | a.  *μ* | |  | b.  *s* | |  | c.  *σ* | |  | d.  *α* | |  |  |  |

* **Question 42**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A sample of 66 observations will be taken from an infinite population. The population proportion equals 0.12. The probability that the sample proportion will be less than 0.1768 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  0.9222 | | Answers: | a.  0.9222 | |  | b.  0.4222 | |  | c.  0.0778 | |  | d.  0.0568 | |  |  |  |

* **Question 43**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Convenience sampling is an example of |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  nonprobabilistic sampling. | | Answers: | a.  stratified sampling. | |  | b.  cluster sampling. | |  | c.  nonprobabilistic sampling. | |  | d.  probabilistic sampling. | |  |  |  |

* **Question 44**

0.5 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A simple random sample of size *n* from a finite population of size *N* is a sample selected such that each possible sample of size​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  ​*n* has the same probability of being selected. | | Answers: | a.  ​*N* has the same probability of being selected. | |  | b.  ​*n* has a probability of 0.1 of being selected. | |  | c.  ​*n* has a probability of 0.5 of being selected. | |  | d.  ​*n* has the same probability of being selected. | |  |  |  |

* **Question 45**

0 out of 0.5 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Which of the following best describes the form of the sampling distribution of the sample proportion? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  When standardized, it is exactly the standard normal distribution. | | Answers: | a.  It is approximately normal as long as *np*  5 and *n*(1 - *p*)  5. | |  | b.  It is approximately normal as long as *n*  30. | |  | c.  When standardized, it is exactly the standard normal distribution. | |  | d.  When standardized, it is the *t* distribution. | |  |  |  |

* **Question 46**

0.5 out of 0.5 points

|  |  |  |  |  |
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|  |  | | | |
|  | The following information was collected from a simple random sample of a population.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 16 | 19 | 18 | 17 | 20 | 18 |   The point estimate of the mean of the population is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  18.0 | | Answers: | a.  18.0 | |  | b.  16 | |  | c.  108 | |  | d.  19.6 | |  |  |  |

* **Question 47**

0.5 out of 0.5 points

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|  | The fact that the sampling distribution of sample means can be approximated by a normal probability distribution whenever the sample size is large is based on the |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  central limit theorem. | | Answers: | a.  central limit theorem. | |  | b.  fact that we have tables of areas for the normal distribution. | |  | c.  assumption that the population has a normal distribution. | |  | d.  none of these alternatives is correct. | |  |  |  |

* **Question 48**

0.5 out of 0.5 points

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|  | Random samples of size 525 are taken from an infinite population whose population proportion is 0.3. The standard deviation of the sample proportions (i.e., the standard error of the proportion) is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  0.0200 | | Answers: | a.  0.2100 | |  | b.  0.0200 | |  | c.  0.0004 | |  | d.  0.3000 | |  |  |  |

* **Question 49**

0.5 out of 0.5 points

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|  | A simple random sample of 144 observations was taken from a large population. The sample mean and the standard deviation were determined to be 1234 and 120 respectively. The standard error of the mean is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  10. | | Answers: | a.  120. | |  | b.  1440. | |  | c.  10. | |  | d.  1234±120. | |  |  |  |

* **Question 50**

0.5 out of 0.5 points

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|  | A population has a mean of 53 and a standard deviation of 21. A sample of 49 observations will be taken. The probability that the sample mean will be greater than 57.95 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | c.  .0495 | | Answers: | a.  .4505 | |  | b.  0 | |  | c.  .0495 | |  | d.  .9505 | |  |  |  |

* **Question 51**

0.5 out of 0.5 points

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|  | The extent of the sampling error might be affected by all of the following factors except​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  ​the expected value of the sample statistic​ | | Answers: | a.  ​the expected value of the sample statistic​ | |  | b.  ​the sample size. | |  | c.  ​the sampling method used. | |  | d.  ​the variability of the population. | |  |  |  |

* **Question 52**

0.5 out of 0.5 points

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|  |  | | | |
|  | Whenever the population has a normal probability distribution, the sampling distribution of  is a normal probability distribution for |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  any sample size. | | Answers: | a.  small sample sizes. | |  | b.  any sample size. | |  | c.  samples of size thirty or greater. | |  | d.  large sample sizes. | |  |  |  |

* **Question 53**

0 out of 0.5 points

|  |  |  |  |  |
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|  |  | | | |
|  | The following data was collected from a simple random sample of a population.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 13 | 15 | 14 | 16 | 12 |   The mean of the population |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  is 14 | | Answers: | a.  is 14 | |  | b.  could be any value | |  | c.  is 15 | |  | d.  is 15.1581 | |  |  |  |

* **Question 54**

0.5 out of 0.5 points

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|  |  | | | |
|  | A population has a mean of 84 and a standard deviation of 12. A sample of 36 observations will be taken. The probability that the sample mean will be between 80.54 and 88.9 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  0.9511 | | Answers: | a.  8.3600 | |  | b.  0.0347 | |  | c.  0.7200 | |  | d.  0.9511 | |  |  |  |

* **Question 55**

0.5 out of 0.5 points

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|  | A population of size 1,000 has a proportion of 0.5. Therefore, the proportion and the standard deviation of the sample proportion for samples of size 100 are |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  0.5 and 0.047 | | Answers: | a.  0.5 and 0.047 | |  | b.  500 and 0.050 | |  | c.  500 and 0.047 | |  | d.  0.5 and 0.050 | |  |  |  |

* **Question 56**

0.5 out of 0.5 points

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|  |  | | | |
|  | The value of the \_\_\_\_\_\_\_\_\_\_\_ is used to estimate the value of the population parameter​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | a.  ​sample statistic | | Answers: | a.  ​sample statistic | |  | b.  ​population statistic | |  | c.  ​population estimate | |  | d.  ​sample parameter | |  |  |  |

* **Question 57**

0.5 out of 0.5 points

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|  | All of the following are true about the standard error of the mean except​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  ​it is larger than the standard deviation of the population. | | Answers: | a.  ​it measures the variability in sample means. | |  | b.  ​it decreases as the sample size increases. | |  | c.  ​its value is influenced by the standard deviation of the population. | |  | d.  ​it is larger than the standard deviation of the population. | |  |  |  |

* **Question 58**

0.5 out of 0.5 points

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|  | A probability sampling method in which we randomly select one of the first *k* elements and then select every *k* th element thereafter is​ |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  ​systematic sampling. | | Answers: | a.  ​stratified random sampling. | |  | b.  ​cluster sampling. | |  | c.  ​convenience sampling. | |  | d.  ​systematic sampling. | |  |  |  |

* **Question 59**

0.5 out of 0.5 points

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|  |  | | | |
|  | A sample of 51 observations will be taken from an infinite population. The population proportion equals 0.85. The probability that the sample proportion will be between 0.9115 and 0.946 is |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | d.  0.0819 | | Answers: | a.  0.0345 | |  | b.  0.8633 | |  | c.  0.6900 | |  | d.  0.0819 | |  |  |  |

* **Question 60**

0.5 out of 0.5 points

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|  | The sample statistic, such as , s, or , that provides the point estimate of the population parameter is known as |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | b.  a point estimator. | | Answers: | a.  a population parameter. | |  | b.  a point estimator. | |  | c.  a population statistic. | |  | d.  a parameter. | |  |  |  |

Wednesday, February 12, 2020 1:52:43 PM PST