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NPTEL

Unit 13 - Week 12

Register for Certification exam

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Lesson - 56 Simple linear regression –I

Lesson - 57 Simple linear regression –II

Lesson -58 Assumption of

Assignment 12

The due date for submitting this assignment has passed. **Due on 2019-04-24, 23:59 IST.**
As per our records you have not submitted this assignment.

1) What type of correlation should we expect from variables? ***1 point***
Ability of supervisors and output of their subordinates.

- a) Positive
- b) Negative
- c) Zero
- d) Can't predict

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Positive

2) What type of correlation should we expect from variables? ***1 point***
Age at first full-time job and number of years of education.

- a) Positive
- b) Negative
- c) Zero
- d) Can't predict

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Positive

3) What type of correlation should we expect from variables? ***1 point***
College grade-point average and student's height.

- a) Positive
- b) Negative
- c) Zero

Regression
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a) Total variation of the Y- variable
b) The variation around the regression line
c) The explained variation
d) The variation of the X variable

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) The variation around the regression line

5) What information is contained in the co-efficient of determination? ***1 point***

a) The co-efficient of correlation is larger than one
b) Weather r has any significance
c) We should not partition the total variation
d) The proportion of the total variation in Y- that is explained by X

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) The proportion of the total variation in Y- that is explained by X

6) What do residuals represent? ***1 point***

a) The difference between the actual Y-values and the mean of Y
b) The difference between the actual Y-values and the predicted Y values
c) The square root of the sloop
d) The predicted value of Y for the average X value

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) The difference between the actual Y-values and the predicted Y values

7) What do residuals represent? ***0 points***

a) The difference between the actual Y-values and the mean of Y
b) The difference between the actual Y-values and the predicted Y values
c) The square root of the sloop
d) The predicted value of Y for the average X value

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) The difference between the actual Y-values and the predicted Y values

8) What do residuals represent? ***0 points***

a) The difference between the actual Y-values and the mean of Y
b) The difference between the actual Y-values and the predicted Y values
c) The square root of the sloop
d) The predicted value of Y for the average X value

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) The difference between the actual Y-values and the predicted Y values

9) What does the adjusted R-squared value describe: ***1 point***

- a) There is negative relationship
- b) There is positive relationship
- c) How much the variance in the dependence variable can be accounted by the independent variable
- d) None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) How much the variance in the dependence variable can be accounted by the independent variable

10) Campus Store has been selling the believe it or Not: Wonders of Statistics Study Guide for 12 semesters and would like to estimate the relationship between sales and number of sections of elementary statistics taught in each semester. Calculate the sample co-efficient of determination. The following data have been collected ***0 points***

Sales (units)	33	38	24	61	52	45	65	82	29	63	50	79
No. of section	3	7	6	6	10	12	12	13	12	13	14	15

- a) 0.9673
- b) 0.8355
- c) 0.2356
- d) 0.7111

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 0.9673

11) What are the assumption of a regression line? ***1 point***

- a) Linearity
- b) Independence of error
- c) Normality of error
- d) All the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) All the above

12) What are the assumption of a regression line? ***0 points***

- a) Linearity
- b) Independence of error
- c) Normality of error
- d) All the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) All the above

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Unit 12 - Week 11

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Lesson - 51 A Factorial Design-I

Lesson - 52 A Factorial Design-II

Lesson - 53 Chi-square test

Assignment 11

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-04-17, 23:59 IST.**

1) What type of data do you need for a chi-square test? ***1 point***

- a) Interval
- b) Scale
- c) Categorical
- d) Ratio

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Categorical

2) Given the 5 rows, 4 columns dimension for the contingency table, how many degrees of freedom will be the chi-square statistics have? ***1 point***

- a) 12
- b) 16
- c) 20
- d) 6

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 12

3) An advertising firm is trying to determine the demographics for a new product. They have randomly selected 75 people in each of 5 different age groups and introduced the product to them. The result of the survey are given below: Calculate the sample chi-square value. ***1 point***

Age Group

c) 67.33
d) 17.12

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 32.27

4) What is the purpose of a goodness of fit test ***1 point***

a) To analyze probabilities of multinomial distribution trials along a single dimension.
b) To extract factors from the data
c) To assess whether there is a significant difference between a collection of categorical data
d) To identify significant effect

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) To analyze probabilities of multinomial distribution trials along a single dimension.

5) What other name is used for a contingency table? ***1 point***

a) A cross classification table
b) An ANOVA table
c) A histogram
d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) A cross classification table

6) Santosh Anand, a hospital administrator, has examined past records from 210 randomly selected 8-hour shifts to determine the frequency with which the hospital treats fractures. The no of days in which zero, one, two, three, four, or five or more patients with broken bones were treated were 25, 55, 65, 35, 20 and 10 respectively. Calculate the sample chi-square value. ***1 point***

a) 3.95
b) 3.35
c) 2.03
d) 6.57

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 2.03

7) The chi-square goodness-of-fit test can be used to test for: ***1 point***

a) significance of sample statistics
b) difference between population means
c) normality
d) probability

No, the answer is incorrect.
Score: 0

Accepted Answers:

c) normality

8) The chi-square test is not very effective if the sample is: ***1 point***

- a) small
- b) large
- c) irregular
- d) heterogeneous

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) small

9) In a factorial design, a(an)_____ between independent variables indicates that the effect of one independent variable is different at different levels of the other independent variable. ***1 point***

- a) Main effect
- b) Factorial effect
- c) Interaction
- d) Moderation

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Interaction

10) Factorial experiments.. ***1 point***

- a) Include two or more dependent variable
- b) Include two or more independent variable
- c) Focus on unmeasured factors
- d) Focus on organismic factors

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Include two or more independent variable

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Lesson - 46 Analysis of variance-I

Lesson - 47 Analysis of variance-II

Lesson - 48 Analysis of variance-III

Lesson - 49

Assignment 10

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-04-10, 23:59 IST.**

1) Analysis of variance is a statistical method of comparing the _____ of several populations. ***1 point***

- a) standard deviations
- b) variances
- c) means
- d) proportions

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) means

2) The _____ sum of squares measures the variability of the observed values around their respective treatment means. ***1 point***

- a) treatment
- b) error
- c) interaction
- d) total

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) error

3) What do ANOVA calculate? ***1 point***

- a) Z-score
- b) F Ratio

Solution- Assignment 10

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4) Tukey- Kramer procedure would be used ***1 point***

a) To test independence of errors

b) To test for homogeneity of variance

c) To test for pair-wise mean differences

d) To test for normality

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) To test for pair-wise mean differences

5) For calculation F test statistic for one-way ANOVA experiment, which one is used? ***1 point***

a) SSW/SSA

b) MSA/MSW

c) SSA/SSW

d) MSW/MSA

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) MSA/MSW

6) What are the two type of variance which can occur in your data? ***1 point***

a) Independence and confounding

b) Between or within group

c) Anova and Ancova

d) Repeated and extraneous

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Between or within group

7) Question (7-10) a study compare the number of hours of relief provided by five different brands of antacid administered to 25 different people, each with stomach acid consideration strong. The results are given below: ***1 point***

Brands	Brands	Brands	Brands	Brands
A	**B**	**C**	**D**	**E**
4.4	5.8	4.8	2.9	4.6
4.6	5.2	5.9	2.7	4.3
4.5	4.9	4.9	2.9	3.8
4.1	4.7	4.6	3.9	5.2
3.8	4.6	4.3	4.3	4.4

Compute the mean number of hours of relief for D brand and determine the grand mean.

a) 4.28 and 3.5

b) 5.04 and 3.5

c) 4.90 and 4.40

d) 3.34 and 4.40

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 3.34 and 4.40

8) Estimate the population variance using the among column variance. ***1 point***

- a) 4.404
- b) 0.2942
- c) 2.2514
- d) 3.35

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 2.2514

9) Estimate the population variance using the within- column variance computed from the variance within the samples. ***1 point***

- a) 0.2942
- b) 0.3943
- c) 0.4248
- d) 0.1785

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 0.2942

10) Calculate the F ratio. ***1 point***

- a) 7.65
- b) 6.45
- c) 19.25
- d) 2.03

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 7.65

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Lesson-41 Hypothesis Testing: Two sample test-III

Lesson -42 Paired Sample Test

Lesson-43 Hypothesis Testing of Proportion

Lesson-44

Assignment 9

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-04-03, 23:59 IST.**

1) The t distribution are *1 point*

- a) Same as normal curve
- b) Skewed
- c) Symmetrical
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Symmetrical

2) Which of the following is true of the null and alternative hypotheses? *1 point*

- a) Exactly one hypothesis must be true
- b) both hypotheses must be true
- c) It is possible for both hypotheses to be true
- d) It is possible for neither hypothesis to be true

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Exactly one hypothesis must be true

3) Smaller p-values indicate more evidence in support of: *1 point*

- a) the null hypothesis
- b) the alternative hypothesis
- c) the quality of the researcher
- d) further testing

a) analyzing the difference between more than two population means
b) analyzing the results of a two-tailed test
c) analyzing the results from a large sample
d) analyzing the difference between two population means

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) analyzing the difference between more than two population means

5) Typically one-way ANOVA is used in which of the following situations? ***1 point***

I. there are several distinct populations
II. there are two sample populations over 4000
III. randomized experiments
IV. randomly selected populations

a) All of the above
b) II and III only
c) I, II, and III only
d) I, and III only

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) I, and III only

6) A p-value is considered “convincing” if it is: ***1 point***

a) less than 0.01
b) between 0.01 and 0.05
c) 0.05 and 0.10
d) greater than 0.10

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) less than 0.01

7) If a researcher takes a large enough sample, he/she will almost always obtain: ***1 point***

a) practically significant results
b) consequentially significant results
c) statistically significant results
d) virtually significant results

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) statistically significant results

8) The null and alternative hypotheses divide all possibilities into: ***1 point***

a) two sets that overlap
b) two non-overlapping sets
c) two sets that may or may not overlap
d) as many sets as necessary to cover all possibilities

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) two non-overlapping sets

9) The value set for is known as: ***1 point***

- a) the acceptance level
- b) the significance level
- c) the error in the hypothesis test
- d) the rejection level

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) the significance level

10) Which of the following tests are used to test for normality? ***1 point***

- a) A t-test and an ANOVA test
- b) An Empirical CDF test and an F-test
- c) A Chi-Square test and a Lilliefors test
- d) A Quantile-Quantile plot and a p-value test

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) A Chi-Square test and a Lilliefors test

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Lesson-36 Hypothesis Testing-One sample Test

Lesson-37 Hypothesis Testing using Minitab

Lesson-38 Hypothesis Testing of Proportions using Minitab

Lesson-39 Hypothesis

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-27, 23:59 IST.**

1) A sample of 87 professional working women showed that the average amount paid annually into a private pension fund per person was $3352. The population standard deviation is $1100. A sample of 76 professional working men showed that the average amount paid annually into a private pension fund per person was $5727, with a population standard deviation of $1700. A woman activist group wants to prove that women do not pay as much per year as men into private pension funds. Using 0.001 significance level and these sample data, is it true that women on an average pay less than men into private pension funds annually. ***1 point***

a) Yes
b) No
c) Data insufficient
d) Can't say

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Yes

2) Two independent samples of observations were collected. For the first sample of 60 elements, the mean was 86 and the standard deviation 6. The second sample of 75 elements had a mean of 82 and a standard deviation of 9. Compute the estimated standard error of the difference between the two means. ***1 point***

a) 2.256
b) 3.248
c) 1.296
d) 4.125

No, the answer is incorrect.
Score: 0

Accepted Answers:

c) Data insufficient
d) Can't say

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Yes

4) The t-test for the difference between the means of two independent populations assumes the respective ***1 point***

a) Sample sizes are equal
b) Sample variances are equal
c) Populations are approximately normal
d) All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Populations are approximately normal

5) In testing the differences between the means of two independent populations, the null hypothesis is: ***1 point***

a) Ho: μ1-μ2=2
b) Ho: μ1-μ2=0
c) Ho: μ1-μ2>0
d) Ho: μ1-μ2<2

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Ho: μ1-μ2=0

6) Null and alternative hypotheses are statements about: ***1 point***

a) population parameters
b) sample parameters
c) sample statistics
d) it depends - sometimes population parameters and sometimes sample statistics

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) population parameters

7) A result is called "statistically significant" whenever ***1 point***

a) The null hypothesis is true
b) The alternative hypothesis is true
c) The p-value is less or equal to the significance level
d) The p-value is larger than the significance level

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) The p-value is less or equal to the significance level

8) The average time in years to get an undergraduate degree in computer science was compared for men and women. Random samples of 100 male computer science majors and 100 female computer science majors were taken. Choose the appropriate parameter(s) for this situation. ***1 point***

a) One population proportion p

b) Difference between two population proportions p1 − p2

c) One population mean μ1

d) Difference between two population means μ1 − μ2

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Difference between two population means μ1 − μ2

9) A hypothesis test is done in which the alternative hypothesis is that more than 10% of a population is left-handed. The p-value for the test is calculated to be 0.25. Which statement is correct? ***1 point***

a) We can conclude that more than 10% of the population is left-handed

b) We can conclude that more than 25% of the population is left-handed

c) We can conclude that exactly 25% of the population is left-handed

d) We cannot conclude that more than 10% of the population is left-handed

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) We cannot conclude that more than 10% of the population is left-handed

10) Decision value to reject null hypothesis incase of a right tail test is said to be ***1 point***

a) Calculated t must be greater than critical value

b) Calculated t is less than negative of critical t-value

c) Calculated t must be less than critical value

d) Calculated t must be less than critical value in absolute form

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Calculated t must be greater than critical value

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Lesson-31 Hypothesis Testing Process-I

Lesson-32 Hypothesis Testing Process-II

Lesson-33 Hypothesis Testing Examples

Lesson-34 Hypothesis Testing of Proportions-I

Assignment 7

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-20, 23:59 IST.**

1) If the sample mean is far from the assumed population mean, the null hypothesis is ……..? ***1 point***

a) Accepted
b) Rejected
c) Retested
d) Does not depend on assumed mean

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Rejected

2) The error associated with rejecting a true null hypothesis is termed as ……..? ***1 point***

a) Type 1 Error
b) Type 2 Error
c) Type 3 Error
d) Random Error

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Type 1 Error

3) The area under curve that is in the rejection region beyond the critical values represents ……..? ***1 point***

a) Type 1 Error
b) Type 2 Error

4) The error caused when a researcher fails to reject a false null hypothesis is termed as …….? ***1 point***

a) Type 1 Error
b) Type 2 error
c) Type 3 Error
d) Random Error

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Type 2 error

5) The probability of a statistical test rejecting the null hypothesis, when the null hypothesis is false is called…….? ***1 point***

a) Type 1 Error
b) Type 2 Error
c) Type 3 Error
d) Power of statistical test

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Power of statistical test

6) The value of which of the following is set in advance by a researcher……? ***1 point***

a) Type 1 Error
b) Type 2 Error
c) Type 3 Error
d) Random Error

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Type 1 Error

7) The probability of not rejecting a null hypothesis when it is true is called ……? ***1 point***

a) Type 1 Error
b) Type 2 Error
c) Confidence Coefficient
d) Random Error

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Confidence Coefficient

8) If you are using a higher significance level for testing the hypothesis, the probability of rejecting a null hypothesis when it is true will ……? ***1 point***

a) Decrease
b) Increase
c) Will not change

d) Not dependent on significance level

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Increase

9) An automobile manufacturer claims that a particular model gets 28 miles to the gallon. The Environmental protection Agency, using a sample of 49 automobiles of this model, finds the sample mean to be 26.8 miles per gallon. From previous studies, the population standard deviation is known to be 5, miles per gallon. Could we reasonably expect (within 2 standard errors) that we could select such a sample if indeed the population mean is actually 28 miles per gallon? ***1 point***

a) Yes
b) No
c) Data insufficient
d) Can't say

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Yes

10) Hinton press hypothesizes that the average life of its largest web press is 14,500 hours. They know that the standard deviation of press life is 2,100 hours. From a sample of 25 presses, the company finds a sample mean of 13,000 hours. At a 0.01 significance level, should the company conclude that the average life of the presses is less than the hypothesized 14,500 hours? ***1 point***

a) Yes
b) No
c) Data insufficient
d) Can't say

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Yes

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Unit 7 - Week 6

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Lesson-26 Method of Estimation

Lesson-27 Interval Estimation

Lesson-28 Confidence Interval-I

Lesson-29 Confidence Interval-II

Lesson-30 Types of Hypothesis Testing

Quiz : Assignment 6

Assignment 6

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-13, 23:59 IST.**

1) Interval estimates is also called as ***1 point***

a) Confidence level
b) Confidence interval
c) Population level
d) Population interval

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Confidence interval

2) How can we define Confidence Interval (CI)? ***1 point***

a) CI = Point Estimate –(Critical Value)(Mean)
b) CI = Point Estimate – (Standard Error)(Mean)
c) CI = Point Estimate – (Critical Value)(Standard Error)
d) CI = Point Estimate – (Variance)(Standard Error)

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) CI = Point Estimate – (Critical Value)(Standard Error)

3) Which of the following provide more information about a population characteristics? ***1 point***

a) Interval Estimate
b) Point Estimate
c) Both provide same information
d) None of the above

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a) Small Sample
b) Large Sample
c) Medium Sample
d) Not dependent on sample

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Large Sample

5) The number of observations that are free to vary after sample mean has been calculated is called ……..? ***1 point***

a) Moment of freedom
b) Ratio of freedom
c) Degree of freedom
d) Interval of freedom

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Degree of freedom

6) Suppose you want to estimate the average age of all Boeing 727 airplanes now in active domestic U.S. service. You want to be 95% confident, and you want your estimate to be within two years of the actual figure. The 727 was first placed in service about 30 years ago, but you believe that no active 727s in the U.S. domestic fleet are more than 25 years old. How large a sample should you take? ***1 point***

a) 45
b) 48
c) 38
d) 35

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 38

7) A psychologist, surveyed 150 top executives and found that 42% of them were unable to add fractions correctly. Estimate the standard error of the proportion. ***0 points***

a) 10.54
b) 8.32
c) 2.33
d) 5.66

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 5.66

8) Seven homemakers were randomly sampled, and it was determined that the distances they walked in their housework had an average of 39.2 miles per week and a sample standard deviation of 3.2 miles per week. Construct a 95 % confidence interval for the population mean. ***1 point***

a) 42.521 ± 5.965

b) 32.452 ± 2.852

c) 39.200 ± 2.959

d) 45.421 ± 7.965

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 39.200 ± 2.959

9) Hewitt Associates conducted a national survey to determine the extent to which employers are promoting health and fitness among their employees. One of the questions asked was, does your company offer on-site exercise classes? Suppose it was estimated before the study that no more than 40% of the companies would answer yes. How large a sample would Hewitt Associates have to take in estimating the population proportion to ensure a 98% confidence in the results and to be within 0.03 of the true population proportion? ***1 point***

a) 1448

b) 1980

c) 1220

d) 2188

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 1448

10) Which hypothesis is always assumed to be true? ***1 point***

a) Null

b) Alternate

c) Mix

d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Null

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Unit 6 - Week 5

Register for Certification exam

Course outline

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Week 1

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Lesson-21 Chapter Concepts – Probability Distributions

Lesson-22 Sampling and Sampling Techniques

Lesson-23 Sampling Distribution-I

Lesson-24 Sampling Distribution-II

Lesson-25 Sampling Distribution-III

Quiz : Assignment 5

Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-06, 23:59 IST.**

1) Which of the following is not a non-probability sampling techniques? ***1 point***

a) Convenience sampling
b) Cluster sampling
c) Judgemental sampling
d) Quota sampling

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Cluster sampling

2) Sampling based on equal probability is called ……..? ***1 point***

a) Probability sampling
b) Systematic sampling
c) Simple random sampling
d) Stratified sampling

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Simple random sampling

3) The sampling distribution of the mean is a distribution of ……? ***1 point***

a) Individual population values
b) Individual sample values
c) Statistics
d) Parameters

a) The number of samples gets large enough
b) The sample size gets large enough
c) The size of the population standard deviation increases
d) The size of the sample standard deviation decreases

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) The sample size gets large enough

5) In statistical analysis, the sample size is considered large if.... ***1 point***

a) n > or = 30
b) n < or = 30
c) n > or = 50
d) n > or = 70

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) n > or = 30

6) Suppose that during any hour in a large departmental store, the average number of shoppers is 448, with a standard deviation of 21 shoppers. What is the probability that a random sample of 49 different shopping hours will yield a sample mean between 441 and 446 shoppers? ***1 point***

a) 15.2%
b) 18.52%
c) 24.15%
d) 32.45%

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 24.15%

7) A population is made up of groups that have wide variation within each group but little variation from group to group. The appropriate type of sampling for this population is? ***1 point***

a) Stratified
b) Systematic
c) Cluster
d) Judgement

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Cluster

8) Mary Bartel, an auditor for a large credit card company, knows that, on average, the monthly balance of any given customer is $112, and the standard deviation is $56. If Mary audits 50 randomly selected accounts, what will be the standard error? ***1 point***

a) 3.870
b) 7.920
c) 12.540

d) 15.330

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) 7.920

9) From a population of 125 items with a mean of 105 and a standard deviation of 17, 64 items were chosen. What is the standard error of the mean? ***1 point***

a) 1.490
b) 3.560
c) 5.890
d) 9.990

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 1.490

10) Method of sampling in which population is divided into mutually exclusive groups that have useful context in statistical research is classified as? ***1 point***

a) Stratified sampling
b) Regular group sampling
c) Irregular group sampling
d) Direct group sampling

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Stratified sampling

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Unit 5 - Week 4

Register for Certification exam

Course outline

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Week 1

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Lesson-16 Probability Distributions-Part 1

Lesson-17 Probability Distributions-Part 2

Lesson-18 Probability Distributions-Part 3

Lesson-19 Examples for Standardized Normal Distribution

Lesson-20 Evaluating Normality, Exponential Probability Distribution

Assignment 4

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-02-27, 23:59 IST.**

1) 1. The experiment called Bernoulli process is used to represent which of the following probability distributions? ***1 point***

- a) Uniform
- b) Binomial
- c) Poisson
- d) Hyper geometric

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Binomial

2) 2. Which of the following is not true for binomial experiment/distribution? ***1 point***

- a) The experiment consists of sequence of n identical trials.
- b) Two outcomes, success and failure are possible on each trial.
- c) The probability of success does not change from trial to trial.
- d) The trials are not independent.

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) The trials are not independent.

3) 3. In binomial distribution, the mean value is represented by ……. ***1 point***

- a) n/p
- b) p/n

*c) n*p*

4) 4. Which of the following distribution is referred to as law of improbable events? **1 point**

- a) Uniform
- b) Binomial
- c) Poisson
- d) Hyper geometric

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Poisson

5) 5. In case of poisson distribution, mean is equal to ……. **1 point**

- a) Standard deviation
- b) Variance
- c) Covariance
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Variance

6) 6. In which of the following distribution sampling is done without replacement? **1 point**

- a) Uniform
- b) Binomial
- c) Poisson
- d) Hyper geometric

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Hyper geometric

7) 7. In which of the following probability distributions, skewness is zero? **1 point**

- a) Binomial
- b) Normal
- c) Poisson
- d) Hyper geometric

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Normal

8) 8. In which of the following distributions mean, median and mode all are equal? **1 point**

- a) Binomial
- b) Normal

c) Poisson

d) Hyper geometric

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Normal

9) 9. In binomial distribution, formula of calculating standard deviation is…… ***1 point***

a) Square root of p.

b) Square root of pq.

c) Square root of npq.

d) Square root of np.

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Square root of npq.

10) 10. Mean of binomial probability distribution is 857.6 and probability is 67%, then number of values of binomial distribution are? ***0 points***

a) 1040

b) 1340

c) 1240

d) 1140

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) 1340

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Unit 4 - Week 3

Register for Certification exam

Course outline

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Week 1

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- Lesson-11 Numerical Descriptive Measures
- Lesson-12 Covariance and Coefficient of Correlation, Introduction to Probability
- Lesson-13 Probability-Part 1
- Lesson-14 Probability-Part 2
- Lesson-15 Probability-Part 3
- Quiz : Assignment 3
- Solution

Week 4

Assignment 3

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-02-20, 23:59 IST.**

1) 1. Approximately what % age of the data lies within three standard deviations of the mean in a bell shaped curve? ***1 point***

- a) 50%
- b) 68.27%
- c) 95.45%
- d) 99.73%

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 99.73%

2) 2. According to Chebyshev's rule, what % age of values will fall within 3 standard deviations of the mean? ***1 point***

- a) 54%
- b) 75%
- c) 89%
- d) 96%

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 89%

3) 3. For ranked data, the position of the second quartile can be determined through which of the following? ***1 point***

- a) (n+1)/4 ranked value

b) (n+1)/2 ranked value

4) 4. A value is considered as outlier if it is more than …….. times the interquartile rabge below Q1 or above Q2. **1 point**

- a) 0.5
- b) 1
- c) 1.5
- d) 2

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 1.5

5) 5. If covariance of two variables X and Y is < 0. What does it implies? **1 point**

- a) X and Y tend to move in the same direction
- b) X and Y tend to move in opposite direction
- c) X and Y are independent
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) X and Y tend to move in opposite direction

6) 6. What is the probability of obtaining total 5 in rolling of the two dice? **1 point**

- a) 0
- b) 1/36
- c) 4/36
- d) 5/36

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 4/36

7) 7. According to a survey the probability that a family owns two cars if it's annual income is greater than $35,000 is 0.75 of the households surveyed, 60 percent had incomes over $35,000 and 52 percent had two cars. What is the probability that a family has two cars an income over $35,000 a year? **1 point**

- a) 0.25
- b) 0.32
- c) 0.38
- d) 0.45

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 0.45

8) 8. In a throw of coin what is the probability of getting head? **1 point**

a) 1
b) 2
c) ½
d) 0

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) ½

9) 9. Two unbiased coins are tossed. What is the probability of getting at most one tail? ***1 point***

a) ½
b) 1/3
c) 3/2
d) ¾

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) ¾

10) 10. What is the probability of getting a sum of 9 from two throws of dice? ***1 point***

a) 1/3
b) 1/9
c) 1/12
d) 2/9

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) 1/9

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Unit 3 - Week 2

Register for Certification exam

Course outline

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Week 1

Week 2

- Lesson-6 Measures of Central Tendency- Part 2
- Lesson-7 Examples of introduction to data and data representation techniques
- Lesson-8 Measures of Variation
- Lesson-9 Applications of Measures of Central Tendency and Measures of Variation
- Lesson-10 Chapter concepts- Measures of central tendency and measures of

Assignment 2

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-02-13, 23:59 IST.**

1) 1. Which of the following is false about Mean? ***1 point***

- a) It may be affected by extreme values
- b) It is cannot be computed in case of categorical data
- c) It is used for open class
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) It is used for open class

2) 2. Which of the following is not a measure of central tendency for ungrouped data? ***1 point***

- a) Mean
- b) Median
- c) Mode
- d) Range

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Range

3) 3. Method used to compute average or central value of collected data is considered as ***1 point***

- a) Measures of positive variation

b) Measures of central tendency

4) 4. Measure of central tendency which represents over time multiplicative effects for inflation and compound interest is considered as **1 point**

- a) Deviation Square Mean
- b) Paired Mean
- c) Geometric Mean
- d) Harmonic Mean

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Geometric Mean

5) 5. Around central value of observations, extent to which values depart from normal distribution is classified as **1 point**

- a) Negative variation
- b) Positive variation
- c) Skewness
- d) Positive trailing

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Skewness

6) 6. Which of the following is false about the median? **1 point**

- a) Not affected by extreme values
- b) Can be computed in case of open class
- c) Can be computed in case of categorical variable
- d) Can easily be used to estimate population parameter

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Can easily be used to estimate population parameter

7) 7. Which of the following is false about mode? **1 point**

- a) It is the value that occurs the most
- b) It is affected by extreme values
- c) Can be used for both numerical and categorical data
- d) There can be no mode

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) It is affected by extreme values

8) 8. Coefficient of variation can be defined as the ratio of …… **1 point**

a) Mean to standard deviation

b) Mean to variance

c) Standard deviation to mean

d) Variance to mean

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Standard deviation to mean

9) 9. Which of the following is an example of a relative measure of dispersion? ***1 point***

a) Standard deviation

b) Variance

c) Coefficient of variation

d) All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Coefficient of variation

10) 10. The square of the variance of a distribution is the …….. ***1 point***

a) Standard deviation

b) Mean

c) Range

d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) None of the above

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Unit 2 - Week 1

Register for Certification exam

Course outline

Assignment 1

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-02-13, 23:59 IST.**

1) 1. The entities on which data is collected are called …….. ***1 point***

- a) Elements
- b) Variable
- c) Observations
- d) Estimate

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Elements

2) 2. Hypothesis testing is done in which of the following type of statistics? ***1 point***

- a) Descriptive Statistics
- b) Inferential Statistics
- c) Sequential Statistics
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Inferential Statistics

3) 3. Qualitative variables are also called as ……. ***1 point***

- a) Numerical Variables
- b) Homogeneous Variables
- c) Heterogeneous Variables
- d) Categorical Variables

a) Categorical Data
b) Discrete Data
c) Continuous Data
d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Continuous Data

5) 5. Labels or names are used to identify an attribute of the element in which of the following scales? ***1 point***

a) Nominal
b) Ordinal
c) Interval
d) All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) All of the above

6) 6. Which of the following scale always has numeric data? ***1 point***

a) Nominal
b) Ordinal
c) Interval
d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Interval

7) 7. Which of the following scales must always contain a zero value? ***1 point***

a) Nominal
b) Ordinal
c) Interval
d) Ratio

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Ratio

8) 8. Qualitative data uses which of the following scales? ***1 point***

a) Nominal
b) Ordinal
c) Interval
d) Both a and b

No, the answer is incorrect.

Score: 0

Accepted Answers:
d) Both a and b

9) 9. Quantitative data uses which of the following scales? ***1 point***

- a) Nominal
- b) Ordinal
- c) Interval
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Interval

10) 10. The data collected at the same or approximately same point in time is called as ……. ***1 point***

- a) Cross-Sectional Data
- b) Time Series Data
- c) Secondary Data
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Cross-Sectional Data

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