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**CASE STUDY:-**

EXAM LANGUAGE English

QUESTION 67 of 70 (Sections : 2) Section B

Clear Response  Mark for Review

**Passage :-**

A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**

Given the same mean life , what would the standard deviation have to be to ensure that no more than 20% of lamps fail before 916 hours?

123

120

100

NONE OF THESE

EXAM LANGUAGE English

QUESTION 68 of 70 (Sections : 2) Section B

Clear Response  Mark for Review

**Passage :-**

A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**

What proportion of lamps will fail before 925 hours?

0.25

0.16

0.30

0.40

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EXAM LANGUAGE English

QUESTION 69 of 70 (Sections : 2) SectionB

Clear Response Mark for Review

**Passage :-**

A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**

How many lamps will fail between 950 and 1000 hours?

250

200

234

1250

EXAM LANGUAGE English

QUESTION 70 of 70 (Sections : 2) SectionB

Clear Response Mark for Review

**Passage :-**

A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**

How many lamps will fail before 900 hours?

2300

4560

2000

4000

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OPMC001 [BUSINESS STATIST...]  
EXAM LANGUAGE English

Actions Options Screen Chat

QUESTION 69 of 70 (Sections : 2) SectionB

Clear Response Mark for Review

**Passage :-**  
A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**  
Given the same mean life , what would the standard deviation have to be to ensure that no more than 20% of lamps fail before 916 hours?

120

100

123

NONE OF THESE

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QUESTION 66 of 70 (Sections : 2) Section A ? Clear Response  Mark for Review ?

A multi-dimensional Contingency table can be created in Excel using a

- Slicer
- Filter
- Function
- Pivot Table

QUESTION 65 of 70 (Sections : 2) Section A ? Clear Response  Mark for Review ?

What symbol is used to represent chi-square?

- $\chi^2$
- N
- P
- F

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**QUESTION 64 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

Data that provide labels or names for categories of like items are known as:

- qualitative data
- label data
- quantitative data
- category data

---

**QUESTION 63 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

\_\_\_\_\_ is just another term for variance that is used in the analysis of variance.

- Mediam square
- Mode square
- Mean square
- None of these

QUESTION 62 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

Which Chi Square distribution looks the most like a normal distribution

- A Chi Square distribution with 4 degrees of freedom
- A Chi Square distribution with 6 degrees of freedom
- A Chi Square distribution with 5 degrees of freedom
- A Chi Square distribution with 16 degrees of freedom

QUESTION 61 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

In case of normal distribution following statement is true,

- In normal distribution, area below mean is equal to the mean
- In normal distribution, area below mean is equal to the variance
- In normal distribution, area below mean is equal to 1
- In normal distribution, area below mean is equal to 0.5

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QUESTION 60 of 70

(Sections : 2)

SectionA ▾

Clear Response

Mark for Review

A bar chart has been plotted but my boss prefers a doughnut chart? Is it possible?

Depends

Yes

No

With one more item of information

QUESTION 59 of 70

(Sections : 2)

SectionA ▾

Clear Response

Mark for Review

Fifteen percent of the students in a school of Business Administration are majoring in Economics, 20% in Finance, 35% in Management, and 30% in Accounting. The graphical device(s) which can be used to present these data is (are)

a line graph

only a pie chart

only a bar graph

both a bar graph and a pie chart

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**QUESTION 58 of 70** (Sections : 2) **Section A** 3 Clear Response  Mark for Review 3

In a cumulative relative frequency distribution, the last class will have a cumulative relative frequency equal to

- one
- the total number of elements in the data set
- zero
- All of these

---

**QUESTION 57 of 70** (Sections : 2) **Section A** 3 Clear Response  Mark for Review 3

If null hypothesis is;  $\mu = 100$ , then the test will be

- left tail
- right tail
- two tail
- none of these



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QUESTION 56 of 70 (Sections : 2) Section A 3 Clear Response  Mark for Review 3

\_\_\_\_\_ test would test whether the population mean is less than a specified value

- one tail hypothesis
- both of these
- two tail hypothesis
- None of these

QUESTION 55 of 70 (Sections : 2) Section A 3 Clear Response  Mark for Review 3

Using an  $\alpha = 0.04$  a confidence interval for a population proportion is determined to be 0.65 to 0.75. If the level of significance is decreased, the interval for the population proportion

- becomes narrower
- does not change
- becomes wider
- Not enough information is provided to answer this question.

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**QUESTION 54 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 2

Analysis of variance is a statistical method of comparing the \_\_\_\_\_ of several populations.

- propotions
- means
- variances
- standard deviations

**QUESTION 53 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 2

We are interested in conducting a study in order to determine what percentage of voters of a state would vote for the incumbent governor. What is the minimum size sample needed to estimate the population proportion with a margin of error of 0.05 or less at 95% confidence?

- 200
- 58
- 100
- 196

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**QUESTION 52 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

Which of the following statistical tests allows causal inferences to be made ?

- Analysis of variance
- t-test
- Regression
- None of these

---

**QUESTION 51 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

For a one-tailed test (upper tail), a sample size of 18 at 95% confidence,  $t =$

- 2.12
- 1.74
- 2.12
- 1.74

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**QUESTION 50 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

The degrees of freedom for the F test in a one-way ANOVA are

- $(n - c)$  and  $(c - 1)$
- $(c - n)$  and  $(n - 1)$
- $(c - 1)$  and  $(n - c)$
- $(n - 1)$  and  $(c - n)$

---

**QUESTION 49 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

Name the technique used to make comparisons between all pairs of groups.

- Marascuilo procedure
- regression
- chisquare
- None of these

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**QUESTION 48 of 70** (Sections : 2) **Section A** ▶ Clear Response  Mark for Review ▶

As the number of degrees of freedom for a t distribution increases, the difference between the t distribution and the standard normal distribution

- becomes larger
- stays the same
- becomes smaller
- None of the above answers is correct.

**QUESTION 47 of 70** (Sections : 2) **Section A** ▶ Clear Response  Mark for Review ▶

Which of the following does not need to be known in order to compute the p-value?

- knowledge of whether the test is one-tailed or two-tailed
- the level of significance
- the value of the test statistic
- None of these alternatives is correct.

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QUESTION 44 of 70

(Sections : 2)

SectionA ▾

Clear Response

Mark for Review

If a dice is tossed twice, how many cases will give the sum of 10 ?

4

3

2

none of these

QUESTION 43 of 70

(Sections : 2)

SectionA ▾

Clear Response

Mark for Review

In testing for the differences between the means of 2 independent populations where the variances in each population are unknown but assumed equal, the degrees of freedom are

$n - 1$

$n_1 + n_2 - 2$

$n_1 + n_2 - 1$

None Of these

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**QUESTION 42 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

F distribution properties fall into which of the following?

- The distribution F only depends on the two degrees of freedom  $v_1$  and  $v_2$
- Used for comparing the variance of two populations
- It is positively skewed
- All of these

---

**QUESTION 41 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

I have 4 areas where I wish to conduct a Market Survey and wish to ensure all income groups are equally represented. However, I wish to draw samples at random from within the various groups. I will conduct a

- Stratified sample
- Quota sampling
- Cluster sample
- Neither of them

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**QUESTION 40 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

Significance for the coefficients (b) is determined by

- an R2 test.
- a correlation coefficient.
- an F-test.
- a t-test.

---

**QUESTION 39 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3




In \_\_\_\_\_ problem-solving approach, you define the business objective as determining whether there is a difference in the mean.

- Arlingtons scenario
- pool variance t test.
- DCOVA
- None of these






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QUESTION 38 of 70 (Sections : 2) SectionA   Clear Response  Mark for Review 

Z value of 1.96 equates to ----- confidence level.

- 99%
- 95.8%
- 90%
- 95%

QUESTION 38 of 70 (Sections : 2) SectionA   Clear Response  Mark for Review 

Z value of 1.96 equates to ----- confidence level.

- 99%
- 95.8%
- 90%
- 95%

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**QUESTION 37 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

Which of the following distributions is continuous ?

- Binomial Distribution
- F-Distribution
- Hyper-geometric Distribution
- Poisson Distribution

---

**QUESTION 36 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

A Survey Sheet contains a person who expressed his preference for a particular brand of cigarette. In a reply to another question he says that he would not prefer to pay a higher value for the same. His response should characterised as

- Non-response
- Excluded from the analysis
- Missing value
- All of these

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**QUESTION 35 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 2

While collecting Secondary Data, the following need to be borne in mind

- The reliability of the investigator
- The reliability of the investigator and Methods used.
- Methods used
- None of these

---

**QUESTION 34 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

The z value for a 97.8% confidence interval estimation is

- 2.02
- 2
- 1.96
- 2.29

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QUESTION 33 of 70 (Sections : 2) SectionA ▶ Clear Response  Mark for Review ▶

Which test will you use if you have a numerical variable and related samples ?

- paired t-test
- f-test
- z-test
- All of these

QUESTION 32 of 70 (Sections : 2) SectionA ▶ Clear Response  Mark for Review ▶

There are 30 employees left this year. How many are expected to take VRS this year given that it is not yet known how many are planning to take?

- 1
- 3
- 2
- None of these

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**QUESTION 31 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

Poisson distribution is applied for \_\_\_\_\_

- Continuous Random Variable
- Irregular Random Variable
- Discrete Random Variable
- Uncertain Random Variable

---

**QUESTION 30 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

In hypothesis testing if the null hypothesis is rejected,

- no conclusions can be drawn from the test
- the data must have been accumulated incorrectly
- the alternative hypothesis is true
- the sample size has been too small

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**QUESTION 29 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

Parametric statistical test examples are :

- t-test
- f-test
- z-test
- all of these

---

**QUESTION 28 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

The value added and subtracted from a point estimate in order to develop an interval estimate of the population parameter is known as the

- confidence level
- parameter estimate
- margin of error
- interval estimate

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**QUESTION 27 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

In the most recent election, 19 percent of all eligible college students voted. If a random sample of 20 students were surveyed, find the probability that exactly half voted in the election.

- 0
- 0.0148
- 0.0014
- 0.4997

**QUESTION 26 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

If in a Linear regression model the train error is zero, then \_\_\_\_\_

- Test error is also always zero
- Couldn't comment on Test error
- Test error is non zero
- Test error is equal to Train error

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**QUESTION 25 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

In general, higher confidence levels provide

- wider confidence intervals
- a smaller standard error
- narrower confidence intervals
- unbiased estimates

**QUESTION 24 of 70** (Sections : 2) **SectionA** 3 Clear Response  Mark for Review 3

For a one-tailed hypothesis test (upper tail) the p-value is computed to be 0.034. If the test is being conducted at 95% confidence, the null hypothesis

- could be rejected or not rejected depending on the sample size
- is not rejected
- could be rejected or not rejected depending on the value of the mean of the sample
- is rejected



QUESTION 23 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

In order to estimate the average time spent on the computer terminals per student at a local university, data were collected for a sample of 81 business students over a one week period. Assume the population standard deviation is 1.2 hours. With a 0.95 probability, the margin of error is approximately

0.26

0.21

1.96

1.64

QUESTION 22 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

We can evaluate the assumption of -----in the errors by constructing a histogram.

Normality

Plotting the residuals in the order or sequence in which the data were collected.

Independence

None of these

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**QUESTION 21 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

The confidence associated with an interval estimate is called the

- significance
- confidence level
- degree of association
- precision

---

**QUESTION 20 of 70** (Sections : 2) **SectionA** 2 Clear Response  Mark for Review 3

A test has been used to check the association between hight and weight of the students. What test it could be?

- Chi Square
- Regression
- ANOVA
- t-test

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QUESTION 1 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

Which statement is true for Normal curve?

- Area under the normal curve is equal to one
- Area under the normal curve is equal to the mean
- Area under the normal curve is equal to the variance
- Area under the normal curve is equal to the coefficient of variation

---

QUESTION 2 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

\_\_\_\_\_ is to express the desired sample as the statistical sum of other easy-to-sample random variables

- Convolution method
- Inverse Method
- Acceptance–rejection method
- None of these

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QUESTION 3 of 70 (Sections : 2) SectionA >   Mark for Review >

The sum of the percent frequencies for all classes will always equal

- the number of classes
- one
- the number of items in the study
- 100

---

QUESTION 5 of 70 (Sections : 2) SectionA >   Mark for Review >

If two dices are thrown once, what is the probability of not getting the same number on both dice?

- 0.83
- 0
- 0.16
- 0.5

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QUESTION 6 of 70

[Sections : 2]

SectionA

Clear Response

Mark for Review

In ANOVA with 4 groups and a total sample size of 44, the computed F statistic is 2.33 In this case, the p-value is

- less than 0.05
- greater than 0.05
- exactly 0.05
- it depends on what the SSE is

QUESTION 7 of 70

[Sections : 2]

SectionA

Clear Response

Mark for Review

When conducting an ANOVA, FDATA will always fall within what range?

- B between 0 and 1
- between 0 and infinity
- C between negative infinity and infinity
- D between 1 and infinity

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**QUESTION 8 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

Which of the following statistical tests allows causal inferences to be made ?

- Regression
- Analysis of variance
- t-test
- None of these

---

**QUESTION 9 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

The mean of the f - distribution is equal to \_\_\_\_\_

- $v_2 / (v_2 - 2)$  for  $v_2 > 2$
- $v_2 / (v_2 - 2)^3$  for  $v_2 > 2$
- $v_2 / (v_2 - 2)$  for  $v_2 > 2$
- $v_2 / (v_2 - 2)^{-1}$  for  $v_2 > 2$

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QUESTION 10 of 70 (Sections : 2) SectionA >

Clear Response  Mark for Review

If in a Linear regression model the train error is zero, then \_\_\_\_\_

- Test error is non zero
- Test error is also always zero
- Couldn't comment on Test error
- Test error is equal to Train error

---

QUESTION 12 of 70 (Sections : 2) SectionA >

Clear Response  Mark for Review

\_\_\_\_\_ is just another term for variance that is used in the analysis of variance

- Mean square
- Mediam square
- Mode square
- None of these

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QUESTION 13 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

The z value for a 97.8% confidence interval estimation is

- 1.96
- 2.02
- 2
- 2.29

---

QUESTION 14 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

Z value of 1.96 equates to ----- confidence level.

- 90%
- 99%
- 95.8%
- 95%



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QUESTION 15 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

Using a goodness-of-fit test, we can assess whether a set of obtained frequencies differ from a set of \_\_\_\_\_ frequencies

Mean

Expected

Actual

None Of these

QUESTION 16 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

Suppose that we reject a null hypothesis at the 5% level of significance. For which of the following levels of significance do we also reject the null hypothesis?

0.06

0.025

0.02

0.04

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QUESTION 17 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

What type of data do you need for a chi-square test?

- continous
- categorical
- random
- None of these

---

QUESTION 18 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

The null hypothesis uses----- and the alternative hypothesis never uses an -----

- equal sign
- unequal sign
- Both of these
- None Of these

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**QUESTION 19 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

Which of the following is not an assumption for simple linear regression

- Normally distributed variables
- Multicollinearity
- Linear relationship
- Constant variance

---

**QUESTION 21 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

Fifteen percent of the students in a school of Business Administration are majoring in Economics, 20% in Finance, 35% in Management, and 30% in Accounting. The graphical device(s) which can be used to present these data is (are)

- only a bar graph
- a line graph
- only a pie chart
- both a bar graph and a pie chart

QUESTION 22 of 70

(Sections : 2) SectionA

Clear Response

Mark for Review

If a dice is tossed twice, how many cases will give the sum of 10 ?

2

4

3

none of these

QUESTION 23 of 70

(Sections : 2) SectionA

Clear Response

Mark for Review

The t value with a 95% confidence and 24 degrees of freedom is

2.064

1.711

2.492

2.069

QUESTION 24 of 70 (Sections : 2) SectionA >

Clear Response  Mark for Review

Which parametric test can be used to find the difference in perception about Metro services in Delhi from male and female passengers?

- Paired sample t-test
- Binomial
- Independent sample t-test
- None of the above

---

QUESTION 26 of 70 (Sections : 2) SectionA >

Clear Response  Mark for Review

A Survey Sheet contains a person who expressed his preference for a particular brand of cigarette. In a reply to another question he says that he would not prefer to pay a higher value for the same. His response should characterised as

- Missing value
- Non-response
- Excluded from the analysis
- All of these

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QUESTION 27 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

Which of the following values of the chi-square distribution cannot occur?

- 2.45
- 0.61
- 38.4
- 100

---

QUESTION 28 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

Find Variance for an F-Distribution with  $v_1=5$  and  $v_2=9$ .

- 1.378
- 1.587
- 1.578
- 1.498

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QUESTION 29 of 70

(Sections : 2) SectionA

Clear Response

Mark for Review

For a one-tailed test (upper tail), a sample size of 26 at 90% confidence,  $t =$

-1.316

1.316

-1.74

1.74

QUESTION 30 of 70

(Sections : 2) SectionA

Clear Response

Mark for Review

The chi-square test is extended to compare more than two \_\_\_\_\_ populations

dependent

independent

rational

None of these

QUESTION 31 of 70

(Sections : 2) SectionA >

Clear Response

Mark for Review

A sample of 20 items from a population with an unknown  $\sigma$  is selected in order to develop an interval estimate of  $\mu$ . Which of the following is not necessary?

- We must use a t distribution.
- We must assume the population has a normal distribution.
- Sample standard deviation must be used to estimate  $\sigma$ .
- The sample must have a normal distribution.

QUESTION 32 of 70

(Sections : 2) SectionA >

Clear Response

Mark for Review

Which Chi Square distribution looks the most like a normal distribution

- A Chi Square distribution with 5 degrees of freedom
- A Chi Square distribution with 4 degrees of freedom
- A Chi Square distribution with 6 degrees of freedom
- A Chi Square distribution with 16 degrees of freedom



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**QUESTION 33 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

The confidence associated with an interval estimate is called the

- degree of association
- significance
- confidence level
- precision

---

**QUESTION 34 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

Which of the following does not need to be known in order to compute the p-value?

- the value of the test statistic
- knowledge of whether the test is one-tailed or two-tailed
- the level of significance
- None of these alternatives is correct.

QUESTION 35 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

As the number of degrees of freedom for a t distribution increases, the difference between the t distribution and the standard normal distribution

- becomes smaller
- becomes larger
- stays the same
- None of the above answers is correct.

QUESTION 36 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

After computing a confidence interval, the user believes the results are meaningless because the width of the interval is too large. Which one of the following is the best recommendation?

- Discard the current data and try a different sample.
- Increase the level of confidence for the interval.
- Increase the sample size.
- Reduce the population variance.

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QUESTION 37 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

In hypothesis testing if the null hypothesis has been rejected when the alternative hypothesis has been true,

- a Type II error has been committed
- a Type I error has been committed
- either a Type I or Type II error has been committed
- the correct decision has been made

QUESTION 38 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

The Data-set 12,13,27,18,32, is :

- Left-skewed
- Right-skewed
- Symmetrical
- None of these

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---

QUESTION 39 of 70

[Sections : 2]

SectionA

Clear Response

Mark for Review

Standard Deviation is used more frequently than Variance because

- It is in the same unit as the data-set
- It provides a more accurate idea of the variability
- It provides a more accurate idea of the deviation from the central tendency
- It indicates whether there is a positive or negative variance

QUESTION 40 of 70

[Sections : 2]

SectionA

Clear Response

Mark for Review

The degrees of freedom for the F test in a one-way ANOVA are

- $(c - 1)$  and  $(n - c)$
- $(n - c)$  and  $(c - 1)$
- $(c - n)$  and  $(n - 1)$
- $(n - 1)$  and  $(c - n)$

QUESTION 41 of 70

[Sections : 2]

SectionA >

Clear Response

Mark for Review

If you assume that the difference scores are randomly and independently selected from a population that is normally distributed, which test will be used?

z-test

pool variance test

paired t test for the mean difference

None of these

QUESTION 42 of 70

[Sections : 2]

SectionA >

Clear Response

Mark for Review

Whenever the population standard deviation is unknown and the population has a normal or near-normal distribution, which distribution is used in developing an interval estimation?

z distribution

standard distribution

beta distribution

t distribution

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---

**QUESTION 43 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

In a sample of 500 voters, 400 indicated they favour the incumbent governor. The 95% confidence interval of voters not favouring the incumbent is

- 0.120 to 0.280
- 0.782 to 0.818
- 0.765 to 0.835
- 0.165 to 0.235

---

**QUESTION 44 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

If a hypothesis is rejected at 95% confidence, it

- will always be rejected at 90% confidence
- will always be accepted at 90% confidence
- will sometimes be rejected at 90% confidence
- None of these alternatives is correct.

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---

QUESTION 45 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

When events occur at discrete points in time

- the simulation advances to the next event.
- a simulation clock is required.
- the model is a discrete-event simulation.
- All of the alternatives are correct.

QUESTION 46 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

From a population that is normally distributed, a sample of 25 elements is selected and the standard deviation of the sample is computed. For the interval estimation of  $\mu$ , the proper distribution to use is the

- t distribution
- normal distribution
- t distribution with 26 degrees of freedom
- t distribution with 24 degrees of freedom

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---

QUESTION 47 of 70

(Sections : 2) SectionA

Clear Response

Mark for Review

If we want to provide a 95% confidence interval for the mean of a population, the confidence coefficient is

1.96

0.485

0.95

1.645

QUESTION 48 of 70

(Sections : 2) SectionA

Clear Response

Mark for Review

Average mark obtained by a class of 120 students is 60, if the average mark of all 75 boys is 45 then find average mark obtained by girls.

85

60

55

none of these



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---

QUESTION 49 of 70

[Sections : 2]

SectionA

Clear Response

Mark for Review

On which of the following does the critical value for a chi-square statistic rely

The sum of the frequencies

The degrees of freedom

The row totals

The number of variables

QUESTION 50 of 70

[Sections : 2]

SectionA

Clear Response

Mark for Review

I blindfold myself and pick up two numbers from a box

It is a random sample with replacement

It is a random sample without replacement

It is a probability sample

It is a systematic sample

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---

QUESTION 51 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

Chi-square is used to analyse:

- Ranks
- Scores
- Frequencies
- None Of these

---

QUESTION 52 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

The following test can be used to determine the type of distribution of any data set.

- One sample K-S Test
- Single sample t-test
- Binomial Test
- ANOVA

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---

QUESTION 53 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

If random variable  $x$  is normally distributed with mean 20 and standard deviation 10, then for what value of  $x$ ,  $z$  score is -2.5.

5

45

30.5

25

QUESTION 54 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

A statement made about a population for testing purpose is called \_\_\_\_\_.

Hypothesis

Statistic

Level of Significance

Test-Statistic

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---

QUESTION 55 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

In syntax of linear model `lm (formula,data,,)`, data refers to \_\_\_\_\_

- Vector
- Matrix
- Array
- List

---

QUESTION 56 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

If random variable  $x$  is normally distributed with mean 20 and standard deviation 10, then for what value of  $x$  z score is 2.5.

- 54.5
- 45
- 30.5
- 25

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QUESTION 57 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

A type 2 error occurs when we -----

- reject a true null hypothesis
- reject a false null hypothesis
- do not reject a false null hypothesis
- None of these

---

QUESTION 58 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review >

A coin is tossed twice. It could be head or tails each time. There are four combinations. Are they:

- Mutually exclusive but not collectively exhaustive
- Collectively exhaustive but not mutually exclusive
- Both collectively exhaustive and Mutually Exhaustive
- None of these

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QUESTION 59 of 70 [Sections : 2] SectionA >

Clear Response  Mark for Review

All financial brokers use some version of which Monte Carlo-based simulator ?

- Discrete event simulation model
- data driven Black box simulator
- both of these
- None of these

---

QUESTION 60 of 70 [Sections : 2] SectionA >

Clear Response  Mark for Review

The ability of an interval estimate to contain the value of the population parameter is described by the

- degrees of freedom
- confidence level
- precise value of the population mean  $\mu$
- None of the above answers is correct.

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**QUESTION 61 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

Data that provide labels or names for categories of like items are known as

- quantitative data
- qualitative data
- label data
- category data

---

**QUESTION 62 of 70** (Sections : 2) **SectionA** ▶ Clear Response  Mark for Review ▶

What would be then consequences for the OLS estimator if heteroscedasticity is present in a regression model but ignored?

- It will be inconsistent
- It will be biased
- It will be inefficient
- All of these

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---

QUESTION 62 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review

What would be the consequences for the OLS estimator if heteroscedasticity is present in a regression model but ignored?

- It will be inconsistent
- It will be biased
- It will be inefficient
- All of these

---

QUESTION 63 of 70 (Sections : 2) SectionA > Clear Response  Mark for Review

If a null hypothesis is rejected at the 0.025 level of significance

- must be rejected at 0.01 level
- must be rejected at any level
- must not be rejected at any other level
- may or may not be rejected at the 0.1 level



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**QUESTION 64 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

While collecting Secondary Data, the following need to be borne in mind

- Methods used
- The reliability of the investigator
- The reliability of the investigator and Methods used.
- None of these

---

**QUESTION 65 of 70** [Sections : 2] **SectionA** ▶ Clear Response  Mark for Review ▶

Which of these are types of simulation models ?

- Discrete models
- Continuous models
- Both of these
- None Of these

QUESTION 66 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

A situation in which conclusions based upon aggregated cross-tabulations are different from unaggregated cross-tabulation is known as

- Simpson's rule
- wrong crosstabulation
- Simpson's paradox
- aggregated crosstabulation

QUESTION 4 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

It is known that the variance of a population equals 1,936. A random sample of 121 has been taken from the population. There is a .95 probability that the sample mean will provide a margin of error of

- 31.36 or less
- 7.84 or less
- 344.96 or less
- 1.936 or less

QUESTION 11 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

There is a 60 % chance that a part A is supplied by X and a 40 % chance that it is from Y. The probability of a part supplied by X being bad is 0.02 and the probability of a part supplied by Y being bad is 0.05. When I detect a bad part , what is the probability that it is from Company X?

0.5

0.6

0.4

None of these

QUESTION 20 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

Independent simple random samples are taken to test the difference between the means of two populations whose standard deviations are not known. The sample sizes are  $n_1 = 25$  and  $n_2 = 35$ . The correct distribution to use is the

t distribution with 60 degrees of freedom

Poisson distribution

t distribution with 59 degrees of freedom

t distribution with 58 degrees of freedom

QUESTION 25 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

Independent simple random samples are taken to test the difference between the means of two populations whose variances are not known. The sample sizes are  $n_1 = 32$  and  $n_2 = 40$ . The correct distribution to use is the

t distribution with 72 degrees of freedom

binomial distribution

t distribution with 71 degrees of freedom

t distribution with 70 degrees of freedom

QUESTION 47 of 70

(Sections : 2)

SectionA

Clear Response

Mark for Review

If we want to provide a 95% confidence interval for the mean of a population, the confidence coefficient is

1.96

0.485

0.95

1.645

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EXAM LANGUAGE English

QUESTION 53 of 70 (Sections : 2) Section A

The level of significance

- is  $(1 - \text{confidence level})$
- can be any value
- can be any positive value
- can be any value between  $-1.96$  to  $1.96$

EXAM LANGUAGE English

QUESTION 54 of 70 (Sections : 2) Section A

On which of the following does the critical value for a chi-square statistic rely

- The row totals
- The sum of the frequencies
- The degrees of freedom
- The number of variables

EXAM LANGUAGE English

QUESTION 55 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

While collecting Secondary Data, the following need to be borne in mind

- The reliability of the investigator and Methods used.
- Methods used
- The reliability of the investigator
- None of these

EXAM LANGUAGE English

QUESTION 56 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

If null hypothesis is;  $\mu = 100$ , then the test will be

- right tail
- two tail
- left tail
- none of these

EXAM LANGUAGE English

QUESTION 57 of 70 (Sections : 2) Section A

A coin is tossed twice. It could be head or tails each time. There are four combinations. Are they:

Clear Response Mark for Review

- Both collectively exhaustive and Mutually Exhaustive
- Mutually exclusive but not collectively exhaustive
- Collectively exhaustive but not mutually exclusive
- None of these

EXAM LANGUAGE English

QUESTION 58 of 70 (Sections : 2) Section A

In a sample of 500 voters, 400 indicated they favour the incumbent governor. The 95% confidence interval of voters not favouring the incumbent is

Clear Response Mark for Review

- 0.765 to 0.835
- 0.120 to 0.280
- 0.782 to 0.818
- 0.165 to 0.235

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EXAM LANGUAGE English

QUESTION 59 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

Ultimate goal of \_\_\_\_\_ is to estimate some desirable measures of performance that describes the behavior of the system

- testing
- Hypothesis
- Simulation
- None of these

---

EXAM LANGUAGE English

QUESTION 60 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

Sum of squares error (SSE) represents :

- both random and continuous
- continuous variation
- Random variations
- None of these



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The image shows two screenshots of an online exam interface. The top screenshot displays 'QUESTION 61 of 70' with the question: 'Which statement is true for Normal curve?'. The options are: 'Area under the normal curve is equal to the variance', 'Area under the normal curve is equal to one' (selected), 'Area under the normal curve is equal to the mean', and 'Area under the normal curve is equal to the coefficient of variation'. The bottom screenshot displays 'QUESTION 63 of 70' with the question: 'A 95% confidence interval for a population mean is determined to be 100 to 120. If the confidence coefficient is reduced to 0.90, the interval for m'. The options are: 'does not change', 'becomes wider', 'becomes narrower' (selected), and 'becomes 0.1'. Both screenshots show 'EXAM LANGUAGE English', 'Section A', and buttons for 'Clear Response' and 'Mark for Review'.

EXAM LANGUAGE English

QUESTION 61 of 70 (Sections : 2) Section A

Which statement is true for Normal curve?

- Area under the normal curve is equal to the variance
- Area under the normal curve is equal to one
- Area under the normal curve is equal to the mean
- Area under the normal curve is equal to the coefficient of variation

EXAM LANGUAGE English

QUESTION 63 of 70 (Sections : 2) Section A

A 95% confidence interval for a population mean is determined to be 100 to 120. If the confidence coefficient is reduced to 0.90, the interval for  $m$

- does not change
- becomes wider
- becomes narrower
- becomes 0.1

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EXAM LANGUAGE English

QUESTION 64 of 70 [Sections : 2] SectionA

Which of the following is a robust test?

f-test

z-test

t-test

all of these

EXAM LANGUAGE English

QUESTION 65 of 70 [Sections : 2] SectionA

The mean of the f - distribution is equal to \_\_\_\_\_

$v_2 / (v_2 - 2)$  for  $v_2 > 2$

$v_2 / (v_2 - 2)^2$  for  $v_2 > 2$

$v_2 / (v_2 - 2)^3$  for  $v_2 > 2$

$v_2 / (v_2 - 2) - 1$  for  $v_2 > 2$

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EXAM LANGUAGE English

QUESTION 66 of 70 (Sections : 2) Section A

A pooled-variance t test is used to determine whether there is a -----

Clear Response  Mark for Review

- hypotesis
- Null hypothesis
- significant difference between the means
- None Of these

EXAM LANGUAGE English

QUESTION 67 of 70 (Sections : 2) Section B

**Passage :-**  
A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**  
What proportion of lamps will fail before 925 hours?

Clear Response  Mark for Review

- 0.30
- 0.25
- 0.16
- 0.40

EXAM LANGUAGE English

QUESTION 69 of 70 (Sections : 2) SectionB

Clear Response Mark for Review

**Passage :-**  
A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**  
Given the same mean life, what would the standard deviation have to be to ensure that no more than 20% of lamps fail before 916 hours?

100  
 123  
 120  
 NONE OF THESE

EXAM LANGUAGE English

QUESTION 70 of 70 (Sections : 2) SectionB

Clear Response Mark for Review

**Passage :-**  
A batch of 5000 electric lamps have a mean life of 1000 hours and standard deviation of 75 hours. Assume a normal distribution.

**Question :-**  
How many lamps will fail between 950 and 1000 hours?

234  
 250  
 200  
 1250

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EXAM LANGUAGE English

QUESTION 51 of 70 [Sections : 2] Section A

What is the meaning of the term "heteroscedasticity"?

The errors are not linearly independent of one another

The variance of the dependent variable is not constant

The variance of the errors is not constant

The errors have non-zero mean

Clear Response Mark for Review

EXAM LANGUAGE English

QUESTION 50 of 70 [Sections : 2] Section A

Whenever the population standard deviation is unknown and the population has a normal or near-normal distribution, which distribution is used in developing an interval estimation?

beta distribution

z distribution

standard distribution

t distribution

Clear Response Mark for Review

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EXAM LANGUAGE English

QUESTION 49 of 70 (Sections : 2) Section A

The level of significance in hypothesis testing is the probability of

rejecting a true null hypothesis

accepting a false null hypothesis

accepting a true null hypothesis

None of these alternatives is correct.

Clear Response Mark for Review

EXAM LANGUAGE English

QUESTION 48 of 70 (Sections : 2) Section A

From a population which is not normally distributed and whose standard deviation is not known, a sample of 20 items is selected to develop an interval estimate for  $m$ .

The t distribution with 20 degrees of freedom must be used.

The t distribution with 19 degrees of freedom must be used.

The normal distribution can be used.

The sample size must be increased.

Clear Response Mark for Review

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EXAM LANGUAGE English

QUESTION 47 of 70 (Sections : 2) SectionA

ANOM stands for

- Analysis of mediam
- Analysis of mode
- Analysis of mean
- None Of these

EXAM LANGUAGE English

QUESTION 46 of 70 (Sections : 2) SectionA

A Survey Sheet contains a person who expressed his preference for a particular brand of cigarette. In a reply to another question he says that he would not prefer to pay a higher value for the same. His response should characterised as

- Excluded from the analysis
- Missing value
- Non-response
- All of these

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EXAM LANGUAGE English

QUESTION 45 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

In order to estimate the average time spent on the computer terminals per student at a local university, data were collected for a sample of 81 business students over a one week period. Assume the population standard deviation is 1.2 hours. The standard error of the mean is

- 0.16
- 0.014
- 7.5
- 0.133

EXAM LANGUAGE English

QUESTION 44 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

What is  $b_0$  in regression analysis?

- The value of the outcome when the predictor variable is zero
- The relationship between a predictor and the outcome variable.
- The value of the outcome when all of the predictors are 0.
- The gradient of the regression line.



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EXAM LANGUAGE English

QUESTION 43 of 70 [Sections : 2] Section A

The t distribution is applicable whenever

- both a and b
- the population is normal and the sample standard deviation is used to estimate the population standard deviation
- the sample is considered large ( $n >= 30$ ).
- None of the above answers is correct.

Clear Response Mark for Review

---

EXAM LANGUAGE English

QUESTION 42 of 70 [Sections : 2] Section A

When a histogram has a longer tail to the right, it is said to be

- skewed to the right
- skewed to the left
- symmetrical
- none of these alternatives is correct

Clear Response Mark for Review

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EXAM LANGUAGE English

QUESTION 41 of 70 [Sections : 2] Section A

Standard Deviation is used more frequently than Variance because

Clear Response Mark for Review

- It provides a more accurate idea of the deviation from the central tendency
- It is in the same unit as the data-set
- It provides a more accurate idea of the variability
- It indicates whether there is a positive or negative variance

EXAM LANGUAGE English

QUESTION 40 of 70 [Sections : 2] Section A

In order to use the normal distribution for interval estimation of  $m$  when  $s$  is known, the population

Clear Response Mark for Review

- can have any distribution
- must have a normal distribution
- must be very large
- None of the above answers is correct.

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EXAM LANGUAGE English

QUESTION 39 of 70 (Sections : 2) SectionA

A probability statement about the sampling error is known as the

Clear Response Mark for Review

- interval
- precision
- confidence
- error

EXAM LANGUAGE English

QUESTION 38 of 70 (Sections : 2) SectionA

The absolute value of the difference between the point estimate and the population parameter it estimates is the

Clear Response Mark for Review

- precision
- sampling error
- standard error
- error of confidence

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EXAM LANGUAGE English

QUESTION 37 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

Data that provide labels or names for categories of like items are known as

- label data
- quantitative data
- qualitative data
- category data

EXAM LANGUAGE English

QUESTION 35 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

A and B are mutually exclusive and collectively exhaustive events. Probability of A is 0.60. Probability of B is:

- Between 0 and 1
- Less than or equal to 0.40
- Equal to 0.40
- Between 0.40 and 1

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EXAM LANGUAGE English

QUESTION 34 of 70 (Sections : 2) Section A

The t value with a 95% confidence and 24 degrees of freedom is

2.492

2.064

1.711

2.069

Clear Response  Mark for Review

EXAM LANGUAGE English

QUESTION 33 of 70 (Sections : 2) Section A

The confidence associated with an interval estimate is called the

confidence level

degree of association

significance

precision

Clear Response  Mark for Review

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EXAM LANGUAGE English

QUESTION 32 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

Which test will you use if you have a numerical variable and related samples ?

- f-test
- z-test
- paired t-test
- All of these

EXAM LANGUAGE English

QUESTION 31 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

A type 2 error occurs when we -----

- do not reject a false null hypothesis
- reject a true null hypothesis
- reject a false null hypothesis
- None of these

EXAM LANGUAGE English

QUESTION 30 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

A researcher is gathering data from four geographical areas designated: South = 1; North = 2; East = 3; West = 4. The designated geographical regions represent

- label data
- quantitative data
- qualitative data
- either quantitative or qualitative data

EXAM LANGUAGE English

QUESTION 28 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

If random variable  $x$  is normally distributed with mean 20 and standard deviation 10, then for what value of  $x$  z score is 2.5.

- 30.5
- 54.5
- 45
- 25

EXAM LANGUAGE English

QUESTION 27 of 70 [Sections : 2] Section A

In \_\_\_\_\_ problem-solving approach, you define the business objective as determining whether there is a difference in the mean.

Clear Response Mark for Review

- pool variance t test
- DCOVA
- Arlingtons scenario
- None of these

EXAM LANGUAGE English

QUESTION 26 of 70 [Sections : 2] Section A

The z value for a 97.8% confidence interval estimation is

Clear Response Mark for Review

- 2
- 1.96
- 2.02
- 2.29



EXAM LANGUAGE English

QUESTION 25 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

An estimate of a population parameter that provides an interval of values believed to contain the value of the parameter is known as the

- parameter value
- interval estimate
- confidence level
- population estimate

EXAM LANGUAGE English

QUESTION 24 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

In the most recent election, 19 percent of all eligible college students voted. If a random sample of 20 students were surveyed, find the probability that exactly half voted in the election.

- 0.0148
- 0.0014
- 0
- 0.4997

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EXAM LANGUAGE English

QUESTION 23 of 70 (Sections : 2) Section A

The chi-square test is extended to compare more than two \_\_\_\_\_ populations

Clear Response Mark for Review

- rational
- dependent
- independent
- None of these

EXAM LANGUAGE English

QUESTION 22 of 70 (Sections : 2) Section A

For a value of  $P=0.5$ , the value of  $P(1 - P)$  is -----

Clear Response Mark for Review

- first increased and then decreased
- unchanged
- minimized
- maximized

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EXAM LANGUAGE English

QUESTION 21 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

While studying the heights of a particular population group, I encounter a 7 feet tall person. He will be called a

- An outlier
- Random person
- Missing value
- A rare person

EXAM LANGUAGE English

QUESTION 20 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

In hypothesis testing if the null hypothesis is rejected,

- the data must have been accumulated incorrectly
- the alternative hypothesis is true
- no conclusions can be drawn from the test
- the sample size has been too small

EXAM LANGUAGE English

QUESTION 19 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

Values of 3 quartiles from a given data is given as, first quartile=5, second quartile= 10, third quartile=20. what will be the median for this data?

- 20
- 10
- 12.5
- data is insufficient

EXAM LANGUAGE English

QUESTION 18 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

For a one-tailed test (lower tail) at 89.8% confidence, Z =

- 1.96
- 1.53
- 1.27
- 1.64

EXAM LANGUAGE English

QUESTION 17 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

If you assume that the difference scores are randomly and independently selected from a population that is normally distributed, which test will be used?

- paired t test for the mean difference
- z-test
- pool variance test
- None of these

EXAM LANGUAGE English

QUESTION 16 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

In a one-way ANOVA

- there is no interaction term
- an interaction effect can be tested
- an interaction term is present
- the interaction term has  $(c - 1)(n - 1)$  degrees of freedom

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EXAM LANGUAGE English

QUESTION 15 of 70 (Sections : 2) Section A

For a one-tailed test (upper tail), a sample size of 18 at 95% confidence,  $t =$

Clear Response  Mark for Review

- 1.74
- 2.12
- 2.12
- 1.74

EXAM LANGUAGE English

QUESTION 12 of 70 (Sections : 2) Section A

A histogram is said to be skewed to the left if it has a

Clear Response  Mark for Review

- shorter tail to the left
- shorter tail to the right
- longer tail to the right
- longer tail to the left

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EXAM LANGUAGE English

QUESTION 11 of 70 (Sections : 2) Section A

Analysis of variance is a statistical method of comparing the \_\_\_\_\_ of several populations.

Clear Response Mark for Review

- means
- variances
- propotions
- standard deviations

EXAM LANGUAGE English

QUESTION 10 of 70 (Sections : 2) Section A

\_\_\_\_\_ is just another term for variance that is used in the analysis of variance

Clear Response Mark for Review

- Mode square
- Mean square
- Mediam square
- None of these

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EXAM LANGUAGE English

QUESTION 9 of 70 (Sections : 2) Section A

Clear Response Mark for Review

When a histogram has a longer tail to the right, it is said to be

- skewed to the right
- skewed to the left
- symmetrical
- none of these alternatives is correct

EXAM LANGUAGE English

QUESTION 8 of 70 (Sections : 2) Section A

Clear Response Mark for Review

In case of normal distribution following statement is true,

- In normal distribution, area below mean is equal to the variance
- In normal distribution, area below mean is equal to 1
- In normal distribution, area below mean is equal to the mean
- In normal distribution, area below mean is equal to 0.5



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EXAM LANGUAGE English

QUESTION 7 of 70 (Sections : 2) Section A

The degrees of freedom for the F test in a one-way ANOVA are

Clear Response Mark for Review

- (c - n) and (n - 1)
- (c - 1) and (n - c)
- (n - c) and (c - 1)
- (n - 1) and (c - n)

EXAM LANGUAGE English

QUESTION 6 of 70 (Sections : 2) Section A

An estimate of a population parameter that provides an interval of values believed to contain the value of the parameter is known as the

Clear Response Mark for Review

- parameter value
- interval estimate
- confidence level
- population estimate

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EXAM LANGUAGE English

QUESTION 5 of 70 [Sections : 2] Section A

In a two-tailed hypothesis test the test statistic is determined to be -2.5. The p-value for this test is

Clear Response  Mark for Review

- 0.0062
- 0.4938
- 1.25
- 0.0124

EXAM LANGUAGE English

QUESTION 4 of 70 [Sections : 2] Section A

Hypothesis test concerning a single parameter is:

Clear Response  Mark for Review

- Rational
- Categorical
- Numerical
- all of these

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EXAM LANGUAGE English

QUESTION 3 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

Which of the following statistical tests allows causal inferences to be made ?

- t-test
- Regression
- Analysis of variance
- None of these

EXAM LANGUAGE English

QUESTION 2 of 70 (Sections : 2) Section A

Clear Response  Mark for Review

In developing an interval estimate, if the population standard deviation is unknown

- the sample standard deviation can be used
- the standard deviation is arrived at using the range
- it is impossible to develop an interval estimate
- it is assumed that the population standard deviation is 1

The image shows a screenshot of an online exam interface. At the top, it says "EXAM LANGUAGE English". Below that, it shows "QUESTION 1 of 70" and "(Sections : 2) SectionA". There are buttons for "Clear Response" and "Mark for Review".

**QUESTION 1 of 70**  
In determining the sample size necessary to estimate a population proportion, which of the following information is not needed?

- a preliminary estimate of the true population proportion  $P$
- the confidence level required
- the maximum margin of error that can be tolerated
- the mean of the population

Below this is a toolbar with "Actions", "Options", "Screen", and "Chat" buttons. Below the toolbar, it shows "OPMC001 [BUSINESS STATIST..." and "EXAM LANGUAGE English".

**QUESTION 1 of 70**  
If A and B are two mutually exclusive and exhaustive events with probability of A equal to 0.3, then find probability of B

- 0.7
- 0
- 0.3
- data is insufficient

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QUESTION 3 of 70 (Sections: 2) Section A

Clear Response  Mark for Review

While collecting Secondary Data, the following need to be borne in mind

- The reliability of the investigator
- The reliability of the investigator and Methods used.
- Methods used
- None of these

OPMC001 [BUSINESS STATIST...  
EXAM LANGUAGE English

QUESTION 4 of 70 (Sections: 2) Section A

Clear Response  Mark for Review

A tabular summary of a set of data showing the fraction of the total number of items in several classes is a

- frequency distribution
- frequency
- relative frequency distribution
- cumulative frequency distribution

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Alert: Wrong face detected

QUESTION 5 of 70 (Sections: 2) Section A

When a histogram has a longer tail to the right, it is said to be

- symmetrical
- skewed to the right
- skewed to the left
- none of these alternatives is correct

OPMC001 [BUSINESS STATIST...  
EXAM LANGUAGE English

QUESTION 8 of 70 (Sections: 2) Section A

An alternative to the critical value approach is .....

- we can compute P-value
- t value
- Z value
- None Of these

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EXAM LANGUAGE English

QUESTION 9 of 70 (Sections: 2) Section A

A sample of 100 elements from a population is selected, and the standard deviation of the sample is computed. For an interval estimation of  $\mu$ , the proper distribution to use is the

- normal distribution
- t distribution with 99 degrees of freedom
- t distribution with 100 degrees of freedom
- None of the above answers is correct.

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QUESTION 10 of 70 (Sections: 2) Section A

Which of the following best describes the form of the sampling distribution of the sample proportion?

- When standardized, it is exactly the standard normal distribution.
- It is approximately normal as long as  $n \geq 30$ .
- When standardized, it is the t distribution.
- It is approximately normal as long as  $np \geq 5$  and  $n(1-p) \geq 5$ .

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EXAM LANGUAGE English

Actions Options Screen Chat

QUESTION 11 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

A bar chart has been plotted but my boss prefers a doughnut chart? Is it possible?

- Depends
- Yes
- No
- With one more item of information

OPMC001 [BUSINESS STATIST...  
EXAM LANGUAGE English

Actions Options Screen Chat

QUESTION 16 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

A test has been used to check that average salary of Engineers, Managers, and CA differ significantly. What test it could be?

- Chi Square
- Regression
- ANOVA
- t-test



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EXAM LANGUAGE English

QUESTION 17 of 70 (Sections: 2) Section A

When a histogram has a longer tail to the right, it is said to be

- symmetrical
- skewed to the right
- skewed to the left
- none of these alternatives is correct

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EXAM LANGUAGE English

QUESTION 19 of 70 (Sections: 2) Section A

In determining the sample size necessary to estimate a population proportion, which of the following information is not needed?

- the maximum margin of error that can be tolerated
- a preliminary estimate of the true population proportion  $P$ .
- the confidence level required
- the mean of the population

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EXAM LANGUAGE English

Actions Options Screen Chat

QUESTION 20 of 70 (Sections: 2) Section A

Clear Response Mark for Review

As the number of degrees of freedom for a t distribution increases, the difference between the t distribution and the standard normal distribution

- becomes larger
- stays the same
- becomes smaller
- None of the above answers is correct.

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Actions Options Screen Chat

QUESTION 23 of 70 (Sections: 2) Section A

Clear Response Mark for Review

A sample of 20 items from a population with an unknown  $s$  is selected in order to develop an interval estimate of  $m$ . Which of the following is not necessary?

- We must assume the population has a normal distribution.
- Sample standard deviation must be used to estimate  $s$ .
- We must use a t distribution.
- The sample must have a normal distribution.

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QUESTION 26 of 70 (Sections: 2) SectionA

Parametric statistical test examples are :

- t-test
- f-test
- z-test
- all of these

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EXAM LANGUAGE English

QUESTION 27 of 70 (Sections: 2) SectionA

Which of the following would be an appropriate null hypothesis?

- The population proportion is less than 0.65
- The population proportion is not less than 0.65
- The sample proportion is less than 0.65
- The sample proportion is no less than 0.65

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QUESTION 28 of 70 (Sections: 2) Section A

A tabular method that can be used to summarize the data on two variables simultaneously is called

simultaneous equations

a histogram

crosstabulation

an ogive

Clear Response Mark for Review

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QUESTION 29 of 70 (Sections: 2) Section A

A fair die is rolled 36 times. What is the standard deviation of the even number outcomes?

9

3

5

1.732

Clear Response Mark for Review

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QUESTION 30 of 70 (Sections: 2) Section A

Which statement is true for Normal curve?

- Area under the normal curve is equal to the mean
- Area under the normal curve is equal to the variance
- Area under the normal curve is equal to one
- Area under the normal curve is equal to the coefficient of variation

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QUESTION 31 of 70 (Sections: 2) Section A

In interval estimation, the t distribution is applicable only when

- the population has a mean of less than 30
- the variance of the population is known
- the sample standard deviation is used to estimate the population standard deviation
- the standard deviation of the population is known

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QUESTION 33 of 70 (Sections: 2) SectionA

Standard Deviation is used more frequently than Variance because

It provides a more accurate idea of the variability

It provides a more accurate idea of the deviation from the central tendency

It is in the same unit as the data-set

It indicates whether there is a positive or negative variance

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QUESTION 36 of 70 (Sections: 2) SectionA

The absolute value of the difference between the point estimate and the population parameter it estimates is the

standard error

precision

sampling error

error of confidence

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QUESTION 37 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

Whenever the population standard deviation is unknown and the population has a normal or near-normal distribution, which distribution is used in developing an interval estimation?

- standard distribution
- alpha distribution
- z distribution
- t distribution

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QUESTION 38 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

I blindfold myself and pick up two numbers from a box

- It is a random sample without replacement
- It is a probability sample
- It is a random sample with replacement
- It is a systematic sample

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QUESTION 39 of 70 (Sections: 2) Section A

Hypothesis test concerning a single parameter is:

- Numerical
- Rational
- Categorical
- all of these

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QUESTION 40 of 70 (Sections: 2) Section A

As the number of degrees of freedom for a t distribution increases, the difference between the t distribution and the standard normal distribution

- becomes larger
- stays the same
- becomes smaller
- None of these alternatives is correct.



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QUESTION 41 of 70 (Sections: 2) Section A

In constructing a frequency distribution, as the number of classes are decreased, the class width

decreases

increases

remains unchanged

can increase or decrease depending on the data values

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QUESTION 42 of 70 (Sections: 2) Section A

If an interval estimate is said to be constructed at the 90% confidence level, the confidence coefficient would be

0.1

0.9

0.95

0.05

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QUESTION 43 of 70 (Sections: 2) Section A

In developing an interval estimate, if the population standard deviation is unknown

it is impossible to develop an interval estimate

the sample standard deviation can be used

the standard deviation is arrived at using the range

it is assumed that the population standard deviation is 1

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QUESTION 44 of 70 (Sections: 2) Section A

For a two-tailed test at 98.4% confidence,  $Z =$

1.96

2.41

1.14

0.8612

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QUESTION 45 of 70 (Sections : 2) SectionA

In a one-tailed hypothesis test (lower tail) the test statistic is determined to be -2. The p-value for this test is

Clear Response Mark for Review

- 0.4772
- 0.0056
- 0.0228
- 0.0228

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QUESTION 46 of 70 (Sections : 2) SectionA

In a simple linear regression to determine whether the slope is statistically significant which test do we use as an alternative of t test

Clear Response Mark for Review

- z test
- Chi square
- F -test
- None of these

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QUESTION 47 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

What should be data assumption for one way ANOVA z-test ?

- Randomness and independence
- Normality
- Homogeneity of variance
- all of these

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QUESTION 48 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

Which of the following test is based on observed and expected frequencies?

- Chi Square
- Regression
- ANOVA
- t-test

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QUESTION 49 of 70 (Sections : 2) SectionA

A pooled-variance t test to determine whether there is a -----

Clear Response Mark for Review

- significant difference between the means
- hypotesis
- Null hypothesis
- None Of these

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QUESTION 50 of 70 (Sections : 2) SectionA

If the null hypothesis is false then which of the following is accepted?

Clear Response Mark for Review

- Null Hypothesis
- Negative Hypothesis
- Positive Hypothesis
- Alternative Hypothesis.

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QUESTION 51 of 70 (Sections: 2) Section A

In a cumulative relative frequency distribution, the last class will have a cumulative relative frequency equal to

Clear Response Mark for Review

- one
- the total number of elements in the data set
- zero
- All of these

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QUESTION 52 of 70 (Sections: 2) Section A

On which of the following does the critical value for a chi-square statistic rely

Clear Response Mark for Review

- The degrees of freedom
- The row totals
- The sum of the frequencies
- The number of variables

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QUESTION 53 of 70 (Sections: 2) SectionA

Chart junk does the following

Distorts the data

Enlarges the data

Filters the Data

Is expressed in wrong units

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QUESTION 54 of 70 (Sections: 2) SectionA

What is the meaning of the term "heteroscedasticity"?

The variance of the errors is not constant

The errors are not linearly independent of one another

The variance of the dependent variable is not constant

The errors have non-zero mean

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QUESTION 55 of 70 (Sections: 2) Section A

Clear Response Mark for Review

If a hypothesis is rejected at the 5% level of significance, it

- will always be rejected at the 1% level
- will never be tested at the 1% level
- will always be accepted at the 1% level
- may be rejected or not rejected at the 1% level

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EXAM LANGUAGE English

QUESTION 56 of 70 (Sections: 2) Section A

Clear Response Mark for Review

The z value for a 97.8% confidence interval estimation is

- 2.02
- 2
- 1.96
- 2.29



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QUESTION 57 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

The sum of the relative frequencies for all classes will always equal

- the sample size
- one
- the number of classes
- any value larger than one

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EXAM LANGUAGE English

QUESTION 58 of 70 (Sections : 2) SectionA

Clear Response  Mark for Review

A tabular method that can be used to summarize the data on two variables simultaneously is called

- simultaneous equations
- a histogram
- crosstabulation
- an ogive

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QUESTION 59 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

A cumulative relative frequency distribution shows

- the proportion of data items with values less than or equal to the upper limit of each class
- the percentage of data items with values less than or equal to the upper limit of each class
- the proportion of data items with values less than or equal to the lower limit of each class
- the percentage of data items with values less than or equal to the lower limit of each class

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QUESTION 60 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

Two-tailed test of hypothesis for the difference between the means implies that null hypothesis can be rejected at:

- Right tail of the distribution curve
- Either of the two tails of the distribution curve
- Left tail of the distribution curve
- Both the tails of the distribution curve simultaneously

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QUESTION 62 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

The mean of the  $f$  - distribution is equal to \_\_\_\_\_

- $\sqrt{2} / (\sqrt{2} - 2)^3$  for  $\nu_2 > 2$
- $\sqrt{2} / (\sqrt{2} - 2)$  for  $\nu_2 > 2$
- $\sqrt{2} / (\sqrt{2} - 2)^2$  for  $\nu_2 > 2$
- $\sqrt{2} / (\sqrt{2} - 2) - 1$  for  $\nu_2 > 2$

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QUESTION 63 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

F-test is used if certain conditions are met like -----

- focus is central tendency
- variances of the two populations are known
- approximate normality
- All of these

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QUESTION 64 of 70 (Sections: 2) SectionA

Clear Response Mark for Review

The p-value

- is the same as the Z statistic
- is a distance
- measures the number of standard deviations from the mean
- is a probability

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Actions Options Screen Chat

QUESTION 65 of 70 (Sections: 2) SectionA

Clear Response Mark for Review

What is  $b_0$  in regression analysis?

- The value of the outcome when all of the predictors are 0.
- The value of the outcome when the predictor variable is zero
- The relationship between a predictor and the outcome variable.
- The gradient of the regression line.

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QUESTION 66 of 70 (Sections : 2) SectionA

I have 4 areas where I wish to conduct a Market Survey and wish to ensure all income groups are equally represented. However, I wish to draw samples at random from within the various groups. I will conduct a

Stratified sample

Quota sampling

Cluster sample

Neither of them

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QUESTION 6 of 70 (Sections : 2) SectionA

The ages in an old-age home are as follows: 65, 66, 67, 63, 68, 69, 70, 88, 91, 73, 64, 71. The Mode of Ages in this home is :

73

Does not exist

72

None of these

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QUESTION 7 of 70 (Sections: 2) Section A

The Securities and Exchange Commission has determined that the number of companies listed on the NYSE declaring bankruptcy is approximately a Poisson distribution with a mean of 2.6 per month. Find the probability that exactly 4 bankruptcies occur next month.

Clear Response Mark for Review

- 0.8774
- 0.1557
- 0.1414
- 0.2176

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QUESTION 12 of 70 (Sections: 2) Section A

Consider a set of 18 samples from a standard normal distribution. We square each sample and sum all the squares. The number of degrees of freedom for a Chi Square distribution will be

Clear Response Mark for Review

- 17
- 19
- 18
- 20

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QUESTION 13 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

There are 30 employees left this year. How many are expected to take VRS this year given that it is not yet known how many are planning to take?

- 1
- 3
- 2
- None of these

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QUESTION 14 of 70 (Sections : 2) SectionA

Clear Response Mark for Review

Find Variance for an F-Distribution with  $v_1=5$  and  $v_2=9$ .

- 1.587
- 1.578
- 1.378
- 1.498

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EXAM LANGUAGE English

QUESTION 15 of 70 (Sections: 2) Section A

For a one-tailed test (upper tail) at 93.7% confidence, Z =

Clear Response Mark for Review

- 1.5
- 1.645
- 1.96
- 1.53

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QUESTION 25 of 70 (Sections: 2) Section A

In order to estimate the average time spent on the computer terminals per student at a local university, data were collected for a sample of 81 business students over a one week period. Assume the population standard deviation is 1.2 hours. With a 0.95 probability, the margin of error is approximately

Clear Response Mark for Review

- 0.26
- 0.21
- 1.96
- 1.64



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QUESTION 61 of 70 (Sections: 2) SectionA

Clear Response Mark for Review

A multiple-choice test has 30 questions and each one has five possible answers, of which only one is correct. If all answers were guesses, find the probability of getting exactly four correct answers.

- 0.0604
- 0.2552
- 0.1325
- 0.8

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Time Left 0:09:17

QUESTION 1 of 70 (Sections: 2) SectionA

Clear Response Mark for Review

Find Variance for an F Distribution with  $v_1=5$  and  $v_2=9$ .

- 1.587
- 1.578
- 1.578
- 1.498

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OPMC001 [BUSINESS STATIST... Time Left 0:08:29

EXAM LANGUAGE English

QUESTION 3 of 70 [Sections: 2] Section A

Suppose that we reject a null hypothesis at the 5% level of significance. For which of the following levels of significance do we also reject the null hypothesis?

0.025

0.02

0.06

0.04

Clear Response Mark for Review

OPMC001 [BUSINESS STATIST... Time Left 0:08:06

EXAM LANGUAGE English

QUESTION 9 of 70 [Sections: 2] Section A

Consider a set of 18 samples from a standard normal distribution. We square each sample and sum all the squares. The number of degrees of freedom for a Chi Square distribution will be

17

19

18

20

Clear Response Mark for Review

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OPMC001 [BUSINESS STATIST... Time Left 0:07:52

EXAM LANGUAGE English

QUESTION 12 of 70 [Sections: 2] Section A

In a two-tailed hypothesis test the test statistic is determined to be -2.5. The p-value for this test is

-1.25

0.0062

0.4938

0.0124

Clear Response Mark for Review

OPMC001 [BUSINESS STATIST... Time Left 0:07:45

EXAM LANGUAGE English

QUESTION 14 of 70 [Sections: 2] Section A

The variance of a population is known to be 400. At 95% confidence, the margin of error will be

39.2 or less

3.29 or less

3.92 or less

78.4 or less

Clear Response Mark for Review

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EXAM LANGUAGE English

QUESTION 15 of 70 [Sections: 2] Section A

In the most recent election, 19 percent of all eligible college students voted. If a random sample of 20 students were surveyed, find the probability that exactly half voted in the election.

Clear Response Mark for Review

- 0
- 0.0148
- 0.0014
- 0.4997

OPMC001 [BUSINESS STATIST... Time Left 0:07:27

EXAM LANGUAGE English

QUESTION 17 of 70 [Sections: 2] Section A

Which Chi Square distribution looks the most like a normal distribution

Clear Response Mark for Review

- A Chi Square distribution with 4 degrees of freedom
- A Chi Square distribution with 6 degrees of freedom
- A Chi Square distribution with 5 degrees of freedom
- A Chi Square distribution with 16 degrees of freedom

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OPMC001 [BUSINESS STATIST... Time Left 0:07:11

EXAM LANGUAGE English

QUESTION 21 of 70 [Sections: 2] Section A

There are 12 horses in a race. A and B are two of those horses. Each horse has an equal chance of winning. Let the probability of A winning the race be 0.2. What is the probability that B wins the race if the probabilities of others are equal?

Clear Response Mark for Review

- 0.07
- 0.9
- 0.08
- 0.09

OPMC001 [BUSINESS STATIST... Time Left 0:07:03

EXAM LANGUAGE English

QUESTION 24 of 70 [Sections: 2] Section A

For which of the following values of P is the value of  $P(1 - P)$  maximized?

Clear Response Mark for Review

- $P = 0.99$
- $P = 0.01$
- $P = 0.90$
- $P = 0.50$

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OPMC001 [BUSINESS STATIST... Time Left 0:06:39

EXAM LANGUAGE English

QUESTION 34 of 70 [Sections: 2] Section A

For a two-tailed test at 86.12% confidence,  $Z =$

Clear Response Mark for Review

- 1.96
- 1.09
- 1.48
- 0.86

OPMC001 [BUSINESS STATIST... Time Left 0:06:34

EXAM LANGUAGE English

QUESTION 35 of 70 [Sections: 2] Section A

The t value with a 95% confidence and 24 degrees of freedom is.

Clear Response Mark for Review

- 1.711
- 2.492
- 2.064
- 2.069

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EXAM LANGUAGE English

QUESTION 40 of 70 [Sections: 2] Section A

The t value with a 95% confidence and 24 degrees of freedom is

1.711

2.492

2.064

2.069

Clear Response Mark for Review

OPMC001 [BUSINESS STATIST... Time Left 0:06:09

EXAM LANGUAGE English

QUESTION 46 of 70 [Sections: 2] Section A

For a one-tailed test (upper tail), a sample size of 18 at 95% confidence,  $t =$

2.12

-1.74

-2.12

1.74

Clear Response Mark for Review

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OPMC001 [BUSINESS STATIST... Time Left 0:05:25

EXAM LANGUAGE English

QUESTION 62 of 70 [Sections: 2] Section A

Clear Response Mark for Review

It is known that the variance of a population equals 1,936. A random sample of 121 has been taken from the population. There is a .95 probability that the sample mean will provide a margin of error of

- 7.84 or less
- 344.96 or less
- 31.36 or less
- 1,936 or less