

STA100

FINAL TERM MCQ,S

Special Made By: Amir Ahmadani

Semester 2nd MSc Zoology

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

In Statistics, we have MSE which is abbreviation of

Answer (Please select your correct option)

☐	Mean square error	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	Measured square error		
☐	Medical screening exam		
☐	Major sampling error		

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

The Chi- Square distribution is continuous distribution ranging from:

Answer (Please select your correct option)

☐	$-\infty \leq \chi^2 \leq \infty$
☐	$-\infty \leq \chi^2 \leq 1$
☐	$-\infty \leq \chi^2 \leq 0$
☐	$0 \leq \chi^2 \leq \infty$

correct answer
solved by hadi

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Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

Test Statistics χ^2 is equal to:

Answer (Please select your correct option)

☐ $\frac{n^2 S^2}{\sigma_a^2}$

☐ $\frac{n S^2}{\sigma_a^2}$ correct answer
solved by hadi

☐ $\frac{S^2}{2\sigma_a^2}$

☐ $\frac{n^2 S^2}{2\sigma_a^2}$

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If mean of χ^2 distribution is k then variance will be:

Answer (Please select your correct option)

☐	k^2		
☐	2k	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	1/k		
☐	k		

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As the degree of freedom increases, the t-distribution tends to coincide with:

Answer (Please select your correct option)

- ☐ Binomial distribution
- ☐ Uniform distribution
- ☐ Hypergeometric distribution
- ☐ Normal distribution

correct answer
solved by hadi

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Assuming that following is a probability distribution, then what is the value of 'a':

X	1	2	3
P(X)	0.1	a	0.1

Answer (Please select your correct option)

- ☐ 0.6
- ☐ 0.8

correct answer
solved by hadi
- ☐ 0.2
- ☐ 0.4

Rumour has reached the Trading Standards Officer that the manufacturer ABC is deliberately underfilling his cartons of orange juice. It is decided that a sample should be taken to check this claim. The stated contents on the carton are 100 ml on the average, then the null hypothesis is:

Answer (Please select your correct option)

☐	$H_0: \mu = 100$	correct answer solved by hadi
☐	$H_0: \mu > 100$	
☐	$H_0: \mu < 100$	
☐	$H_0: \mu \neq 100$	

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Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is true for the binomial distribution $b(x, n, p)$:

Answer (Please select your correct option)

☐	mean > variance	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	mean < variance		
☐	mean = variance		
☐	mean= standard deviation		

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The degrees of freedom for a t-test with sample size 'n' is:

Answer (Please select your correct option)

- ☐ n-1
- ☐ n+1
- ☐ n-2
- ☐ n+2
- correct answer
solved by hadi
- Correct answer solved by HADI
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Cell : 03228043306

The probability of drawing a spade card is:

Answer (Please select your correct option)

☐	1/52	
☐	4/52	
☒	13/52	correct answer solved by hadi
☐	26/52	

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The hyper geometric random variable is a(an):

Answer (Please select your correct option)

- ☐ Continuous variable
- ☐ Discrete variable

correct answer
solved by hadi
- ☐ Undefined
- ☐ Independent variable

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

If $f(x, y)$ is bivariate probability density function of continuous random variables X and Y then marginal density function of y i.e. $h(y)$ is:

Answer (Please select your correct option)

☐ $\int_{-\infty}^{\infty} f(x, y) dx$

correct answer
solved by hadi

Correct answer solved by HADI
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Cell : 03228043306

☐ $\int_{-\infty}^{\infty} f(x, y) dy$

☐ $\int_{-\infty}^{\infty} \int_{-\infty}^{\infty} f(x, y) dx dy$

☐ $\int_a^b \int_c^d f(x, y) dy dx$

What is the probability of drawing a red-queen card from a well shuffled pack of 52 playing cards?

Answer (Please select your correct option)

- ☐ 4/52
- ☐ 2/52

correct answer
solved by hadi
- ☐ 13/52
- ☐ 26/52

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For any two estimators T1 and T2, if $VAR(T1) < VAR(T2)$, then T1 is:

Answer (Please select your correct option)

☐	Unbiased	
☐	Sufficient	
☒	Efficient	correct answer solved by hadi
☐	Consistent	

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F- distribution is

Answer (Please select your correct option)

☐	Positively skewed	correct answer solved by hadi
☐	Negatively skewed	
☐	Normal	
☐	Symmetrical	

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Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

In a binomial experiment the total number of trials are:

Answer (Please select your correct option)

☐	Fixed in advance	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	Changeable according to situation		
☐	Unpredictable		
☐	Not independent		

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When $f(x)$ is continuous probability function, then $P(X = 1)$ is:

Answer (Please select your correct option)

- ☐ 1
- ☐ ∞
- ☐ $-\infty$
- ☐ 0
- correct answer
solved by hadi

The conditional probability function $f(x|1)$ = _____

Answer (Please select your correct option)

- ☐ $f(1,1)$
- ☐ $f(x,1)$
- ☐ $\frac{f(x,1)}{h(1)}$ correct answer
solved by hadi
- ☐ $\frac{f(x,1)}{h(x)}$

A judge can acquit a guilty person is the example of

Answer (Please select your correct option)

☐	Type I error		
☐	Type II error		
☐	Correct decision	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	No information regarding this		

_____ is a range of numbers inferred from the sample that has a certain probability of including the population parameter over the long run.

Answer (Please select your correct option)

Hypothesis

Lower limit

Confidence interval

not sure

Probability limit

If you draw all possible samples from some population, calculate the mean for each of the sample and construct the probability distribution of the sample means, what would you have?

Answer (Please select your correct option)

☐	A population distribution		
☐	A sample distribution		
☐	A sampling distribution	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	A parameter distribution		

The LSD test is applied when the null hypothesis is:

Answer (Please select your correct option)

☐	Rejected	correct answer solved by hadi
☐	Accepted	
☐	Finalized	
☐	Acknowledged	

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Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

$\text{Var}(4X + 5) =$ _____

Answer (Please select your correct option)

☐	16 $\text{Var}(X)$		
☐	16 $\text{Var}(X) + 5$		
☐	4 $\text{Var}(X) + 5$	correct answer solved by hadi	Correct answer solved by HADI Email : usmanraj20@gmail.com Cell : 03228043306
☐	12 $\text{Var}(X)$		

Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

When $f(x)$ is continuous probability function, then $P(X = 2)$ is:

Answer (Please select your correct option)

☐	1	
☐	0.5	
☐	0	correct answer solved by hadi
☐	0.25	

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If the sampling distribution of $\bar{X}$ is normal, we would expect 99% of the sample means to be within the interval:

Answer (Please select your correct option)

- ☐ $\mu_x \pm 2\sigma_x$
- ☐ $\mu_x \pm 1.96\sigma_x$
- ☒ $\mu_x \pm 2.58\sigma_x$ correct answer solved by hadi
- ☐ $\mu_x \pm \sigma_x$

A randomly selected sample of 400 students at university was asked whether or not they will participate in politics. Forty-six percent of the 400 student surveyed answered “yes”. Which one of the following statement about number 46% is correct?

Answer (Please select your correct option)

- ☐ It is a sample statistic.
- ☐ It is a population parameter.
- ☐ It is a margin of error.
- ☐ It is a standard error.
- correct answer solved by hadi
- but not sure

How many parameter(s) are in t-distribution?

Answer (Please select your correct option)

- ☐ 0
- ☐ 1

correct answer
solved by hadi
- ☐ 2
- ☐ 3

The proportion of males in Pakistan is at least 0.48, the alternative hypothesis H_1 is

Answer (Please select your correct option)

- ☐ $P \leq 0.48$
- ☐ $P = 0.48$
- ☒ $P < 0.48$ correct answer solved by hadi
- ☐ $P \geq 0.48$

A good way to get a small standard error is to use a _____.

Answer (Please select your correct option)

- ☐ Repeated sampling
- ☐ Small sample
- ☐ Large sample

correct answer
solved by hadi
- ☐ Large population

In normal distribution $\beta_1 = \dots\dots\dots$:

Answer (Please select your correct option)

- ☐ 0
- correct answer
solved by hadi
- Correct answer solved by HADI
Email : usmanraj20@gmail.com
Cell : 03228043306
- ☐ 1
- ☐ 2
- ☐ 3