

# Quiz 3

**Due** Mar 12 at 23:59**Points** 5**Questions** 10**Available** Mar 11 at 18:00 - Mar 12 at 23:59**Time Limit** 60 Minutes

## Instructions

Quiz 3 is scheduled from 11th March 2023, 6:00 pm to 12th March 2023, 11:59 pm.

- Number of questions - 10
- Each question carries 0.5 M
- Time duration - 1 Hour
- Read the question properly and answer.

All the best!!!!

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	42 minutes	5 out of 5

❗ Correct answers will be available on Mar 13 at 18:00.

Score for this quiz: **5** out of 5

Submitted Mar 12 at 21:00

This attempt took 42 minutes.

### Question 1

**0.5 / 0.5 pts**

The mean of ten numbers is 58 if one of the numbers is 40, what is the mean of other nine

☐ 120

☐ 15

☒ 60☐ 88**Question 2****0.5 / 0.5 pts**

In a school, 40% of the children like music and 24% of the children like dance. Given that 30% of those children like music also like dance, what percent of those children that like dance also like music?

☒ 50%☐ 20%☐ 70%☐ 30%**Question 3****0.5 / 0.5 pts**

In a job placement event, there are 1000 aspirants attending a company interview, out of which 500 are females. It is familiar that out of 500, 25% are eligible. Determine the probability that aspirant selected is eligible given that the selected aspirant is a female.

☐ 1/2☒ 1/4☐ 1/8☐ 1

**Question 4****0.5 / 0.5 pts**

The probability of Arjun hitting a target is 0.10. If he fires 7 times then the probability of hitting the target at least once is \_\_\_\_\_

- ☒ 0.5217
- ☐ 0.6423
- ☐ None of these
- ☐ 0.4563

**Question 5****0.5 / 0.5 pts**

If the probability of defective items made by a factory is 0.004, then the probability that less than 2 items are defective in the sample of 1000 items is

- ☒  $5e^{-4}$
- ☐  $4e^{-6}$
- ☐  $4e^{-4}$
- ☐  $4e^{-\frac{1}{4}}$

**Question 6****0.5 / 0.5 pts**

Let X and Y have joint probability density function ,  $f(x, y) = 4xy$  for  $0 < x < 1$  and  $0 < y < 1$ . Find  $P(Y < X)$

☐ 2/3☐ 1/6☒ 1/2☐ 0**Question 7****0.5 / 0.5 pts**

Let X be a random variable which represents the length of time that a Laptop will work before it needs charging . Assume X is normally distributed with variance 225 hrs and mean 100 hrs . If  $P(X < b) = 0.10$  then b is equal to

☐ 84.33☐ 92.44☐ None of these☒ 80.77**Question 8****0.5 / 0.5 pts**

Consider the population proportion is 0.35 and the sample size is 60. Find the probability that the sampling distribution of proportion is less than 0.33.

☐ 0.2998

☐ 0.4708

☐ 0.5886

☒ 0.3745

### Question 9

0.5 / 0.5 pts

An estimator is a random variable because it varies from:

☐ Population to population

☒ Sample to sample

☐ Population to sample

☐ Sample to population

### Question 10

0.5 / 0.5 pts

A T-test sample has 8 pairs of samples. The distribution should contain

☒ 7 degrees of freedom

- ☐ 6 degrees of freedom
- ☐ 5 degrees of freedom
- ☐ 16 degrees of freedom

Quiz Score: **5** out of 5