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	[Attempt 1](#)	60 minutes	4.5 out of 5

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

Score for this quiz: **4.5** out of 5
Submitted Mar 12 at 20:03
This attempt took 60 minutes.

Question 1	0.5 / 0.5 pts

If mean=62.6, median=62.5 then mode=?

- ○ 61.3
- ◉ 62.3
- ○ 63.3
- ○ 62.8

Question 2

0 / 0.5 pts

A bag contains two white shoes, 2 brown shoes and 3 black shoes. Two shoes are drawn at random then find the probability that they are in same color.

- ◉ 9/21
- ○ 5/21
- ○ 5/7
- ○ 1/7

Question 3

0.5 / 0.5 pts

25% of the children in a school have a dog.60% have a cat and 15 % have a dog and a cat. What is the probability of those who have a dog also have a cat?

- ○ 4/5
- ◉ 3/5
- ○ 1/5
- ○ 2/5

Question 4

0.5 / 0.5 pts

If mean and variance of Binomial distribution are 8,4 respectively. Then P(X=1) is

○ 1/4096

○ 1/2

○ 1/16

○ 1/8

Question 5   0.5 / 0.5 pts

The number of customers arriving at a grocery store can be modelled by a poisson process with $\lambda=8$ customers per hour. What is the probability that there are 3 customers between 9.30 A.M and 9.45 A.M?

○ $\frac{4e^{-4}}{3}$

○ $\frac{e^{-2}}{3}$

◉ $\frac{4e^{-2}}{3}$

○ $\frac{2e^{-3}}{3}$

Question 6   0.5 / 0.5 pts

A fair and an unfair coin with$P(T)=3/4$ are tossed three times simultaneously . Let X be a random variable which denote the number of heads shown by fair coin and Y denotes the number of heads shown by unfair coin then $P(X=Y)$ is _____

○ 1/2

◉ 136/512

○ 128/512

○ None of these

Question 7   0.5 / 0.5 pts

Let the random variable 'X' follows normal distribution with mean 70 and standard deviation 13. What is the value of P(60<X<90)?

○ 0.1717

○ 0.8716

◉ 0.7176

○ 0.1617

Question 8   0.5 / 0.5 pts

Random samples of size 100 are drawn from a population with mean 100 and standard deviation 25. what is the standard deviation of sample mean?

○ 4.5

○ 3.5

○ 1.5

◉ 2.5

Question 9

0.5 / 0.5 pts

A survey is conducted on 1300 students in a school to find the proportion of students who are interested in taking a music course. The upper and lower limits are 0.746 and 0.582. Calculate the point estimate and margin of error.

- ○ 0.464 and 0.282
- ◉ 0.664 and 0.082
- ○ 0.264 and 0.482
- ○ 0.364 and 0.382

Question 10

0.5 / 0.5 pts

If you want to test the null hypothesis that the mean is 100 versus the alternative that it is greater than 100 and you get a sample mean of 90, which is true?

- ◉ Cannot say anything, because the standard deviation and the sample size are needed
- ○ Never reject the null hypothesis
- ○ Always reject the null hypothesis
- ○ Reject the null if n > 30, otherwise fail to reject

Quiz Score: **4.5** out of 5