

Quiz 3 Results for SHIBINKUMAR KRISHNA KUMAR

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

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

Submitted Mar 12 at 18:11

This attempt took 24 minutes.

Question 1

0.5 / 0.5 pts

The shape of the distribution is symmetrical if

- ☐ Mean < Median
- ☐ Shape does not depend on mean and median
- ☒ Mean = Median
- ☐ Mean > Median

Question 2

0.5 / 0.5 pts

In a box, there are 5 orange, 8 mango, and 9 apples. If a fruit is picked up randomly, what is the probability that it is neither orange nor mango?

- ☐ 13/22
- ☒ 9/22
- ☐ 8/22
- ☐ 5/22

Question 3**0.5 / 0.5 pts**

There are 3 red balls, 4 green balls, and 5 black balls in a basket. The probability of not getting the red balls is

☐ 5/12☐ 1/4☒ 3/4☐ 1/3**Question 4****0.5 / 0.5 pts**

Let X be a random variable that follows Binomial distribution with expectation $E(X) = 7$ and variance $V(X) = 6$. Then the probability of success p is

☐ 6/7☐ 36/49☒ 1/7☐ 1/49**Question 5****0.5 / 0.5 pts**

A computing system manager states that the rate of interruptions to the internet service is 0.2 per week. Find the probability of one interruption in 3 weeks using Poisson distribution.

☒ 0.3292

☐ 0.1637

☐ 0.5678

☐ 0.4235

Question 6

0.5 / 0.5 pts

For two random variables X and Y with joint PMF given in the table below, $P(X=0, Y \leq 1) =$ _____

| | Y=0 | Y=1 | Y=2 |
|-----|-----|-----|-----|
| X=0 | 1/6 | 1/4 | 1/8 |
| X=1 | 1/8 | 1/6 | 1/6 |

☐ 1/6

☒ 5/12

☐ 1/4

☐ 6/13

Question 7

0.5 / 0.5 pts

Let X be a normal random variable with mean zero and variance 9. If $a = P(X > 3)$, then $P(|X| \leq 3)$ equals:

☒ 1 - 2a

☐ 2a

☐ 1 - a

☐ a

Question 8

0.5 / 0.5 pts

In which of the following types of sampling the information is carried out under the opinion of an expert?

☐ quota sampling

☐ purposive sampling

☐ convenience sampling

☒ judgement sampling

Question 9

0.5 / 0.5 pts

A single value used to estimate a population values is called:

☒ Point estimate

- ☐ Degrees of freedom
- ☐ Interval estimate
- ☐ Level of confidence

Question 10**0.5 / 0.5 pts**

A doctor claims that average age of his patients is less than 33. A random sample of 38 patients has an average age of 34. A test is conducted to test the claim. Given that the standard deviation is 8 and level of significance is 0.04. Identify whether the test is one tailed or two tailed.

- ☐ Since the null hypothesis less than type, the test is two tailed.
- ☐ Since the alternative hypothesis less than type, the test is two tailed.
- ☒ Since the alternative hypothesis less than type, the test is one tailed
- ☐ Since the null hypothesis less than type, the test is one tailed.

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