

## Statistics– WORKSHEET 4

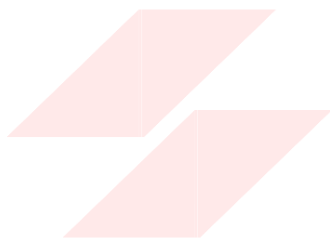
**Q1 to Q9 have only one correct answer. Choose the correct option to answer your question.**

1. Bernoulli random variables take (only) the values 1 and 0.
  - a) True
  - b) False
2. Which of the following theorem states that the distribution of averages of iid variables, properly normalized, becomes that of a standard normal as the sample size increases?
  - a) Central Limit Theorem
  - b) Central Mean Theorem
  - c) Centroid Limit Theorem
  - d) All of the mentioned
3. Which of the following is incorrect with respect to use of Poisson distribution?
  - a) Modeling event/time data
  - b) Modeling bounded count data
  - c) Modeling contingency tables
  - d) All of the mentioned
4. Point out the correct statement.
  - a) The exponent of a normally distributed random variables follows what is called the log-normal distribution
  - b) Sums of normally distributed random variables are again normally distributed even if the variables are dependent
  - c) The square of a standard normal random variable follows what is called chi-squared distribution
  - d) All of the mentioned-
5. \_\_\_\_\_ random variables are used to model rates.
  - a) Empirical
  - b) Binomial
  - c) Poisson
  - d) All of the mentioned
6. 10. Usually replacing the standard error by its estimated value does change the CLT.
  - a) True
  - b) False
7. 1. Which of the following testing is concerned with making decisions using data?
  - a) Probability
  - b) Hypothesis
  - c) Causal
  - d) None of the mentioned
8. 4. Normalized data are centered at \_\_\_\_ and have units equal to standard deviations of the original data.
  - a) 0
  - b) 5
  - c) 1
  - d) 10

9. Which of the following statement is incorrect with respect to outliers?
- a) Outliers can have varying degrees of influence
  - b) Outliers can be the result of spurious or real processes
  - c) Outliers cannot conform to the regression relationship
  - d) None of the mentioned

**Q10 and Q15 are subjective answer type questions, Answer them in your own words briefly.**

- 10. What do you understand by the term Normal Distribution?
- 11. How do you handle missing data? What imputation techniques do you recommend?
- 12. What is A/B testing
- 13. Is mean imputation of missing data acceptable practice?
- 14. What is linear regression in statistics?
- 15. What are the various branches of statistics?



**FLIP ROBO**

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