Assignment 4

The due date for submitting this assignment was passed. As per our record, you have not submitted this assignment.

1. Select all the distributions which have that pair symmetric about mean?
   - Normal
   - Gamma
   - Poisson

2. Which of the following distributions can be used for modeling the distribution of “probability of any event” in an experiment?
   - Bernoulli
   - Exponential
   - Normal
   - Gamma

3. What is the expected number of samples used for estimating the mean of a random variable?
   - Mean
   - Variance
   - Standard deviation
   - None of the above

4. Which of the following distributions is generally used for modeling the time between arrivals?
   - Normal
   - Uniform
   - Exponential
   - Bernoulli

5. Suppose the weight of a new-born baby averages 7.3 lbs, with a standard deviation of 1.2 lbs. If weights are normally distributed, what fraction of babies are between 7 and 12 pounds?
   - .68
   - .46
   - .66
   - None of the above

6. Let $X$ be a random variable distributed as $Exp(3)$. What is the value of $P(3 < X < 7)$?
   - $\frac{1}{3}$
   - $\frac{1}{6}$
   - $\frac{1}{2}$
   - None of the above

7. Select all the statements which are true for two given density functions $f$ and $g$.
   - Convex combination of $f$ and $g$ is a valid density function
   - $f$ is a valid density function
   - $f$ is not necessarily a valid density function
   - Convex combination of $f$ and $g$ is not necessarily a valid density function

8. Let $X$ be a random variables distributed as $Exp(4)$. What is the value of $P(X > 6)$?
   - $\frac{1}{3}$
   - $\frac{1}{6}$
   - $\frac{1}{2}$
   - None of the above

9. Which distribution perfectly describes the total time span of the task in the description of above question?
   - Normal
   - Exponential
   - Gamma
   - None of the above

10. We have three devices $D1$, $D2$, and $D3$ having lifespans distributed as $N(10, 9)$, $N(8,5)$, and $N(8,5)$, respectively. We need a device which can be used for 10 hours, which one should we choose?
    - $D1$
    - Any of the three devices
    - $D2$
    - None of the above

Dedicated Tests

- As per our record, you have not submitted this assignment.