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| **PS TEST** |
| **Q1.**  **Suppose X follows a continuous uniform distribution from 1 to 5. Determine the conditional probability .**  **Ans.)** 1/4 |
| **Q2**. **Calculate the 10% trimmed mean of the following data:**  **7, 3,-4,14,2,5,22,-7,9,5.**  Ans.)5.13 |
| **Q3.** **An electrical farm manufactures light bulbs that have a length of life approximately normally distributed, with mean 800hrs and standard deviation of 40 hrs. Compute the probability that a random sample of 16 balls will have an average life of less than 775 hrs.**  **Ans.)**0.63602 |
| **Q4.** **If the random variable X, has a Gamma distribution with and . Evaluate.**  Ans.)0.1544 |
| **Q5**. **The contents of seven similar containers of sulfuric acid are 9.8, 10.2, 10.4, 9.8, 10.0, 10.2 and 9.6 liters. Find a 95% confidence interval for the mean contents of all such containers, assuming an approximately normal distribution**  Ans.)9.79<mean(Mu)<10.21 |
| **Q6.** **Find the probability that a person flipping a coin gets**   1. **The third head on the seventh flip;**   Ans.)0.1171  B.)**The first head on the fourth flip**  Ans.)0.0652 |
| **Q7. Given the normally distribution random variable ‘X’ with mean 30 and standard deviation 6. Calculate the value of ‘x’ that has 80% of the normal curve area to the right.**  Ans.)so x=25 |
| **Q8. Given the normally distribution random variable ‘X’ with mean 5 and standard deviation 2. Calculate calculate P(X>1).**  Ans.)0.97725 |