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|  | | **Reg. No.:** | |  | | | |
| **Name :** | |  | | | |
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| **MID TERM EXAMINATIONS – November-December 2022** | | | | | | | |
| Programme | : | **B.Tech.** | Semester | : | **Interim 2022-23** | |
| Course Title | : | **Statistical Inferences and Series of Function** | Course Code | : | **MAT3017** | |
| Faculty | : | **Dr. Sayed Mohammed Zeeshan** | Slot | : | **C11+C12+C13+C14** | |
| Time | : | **1 ½ hours** | Max. Marks | : | **50** | |
| **Answer all the Questions** | | | | | | | |
| **Q. No.** | **Question Description** | | | | | **Marks** |
| 1 | Let be iid random variable with mean and finite variance , show that is a consistent estimator of . | | | | | **10** |
| 2 | If , i.e., . Show that is biased estimator of , obtain its unbiased estimator. | | | | | **10** |
| 3 | Find the estimator of if ; , using method of moments. | | | | | **10** |
| 4 | For the given population distribution:  and you are testing the null hypothesis against by means of a sample of size two. What would be the size of type I and type II error if the rejection region selected is 1. | | | | | **10** |
| 5 | Obtain % confidence limits for the parameter of the Poisson distribution. | | | | | **10** |
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