

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

**IPE 207 (PROBABILITY AND STATISTICS)**

**Class Test 4** (Dec 01, 2020), Time: 20 minutes, Total Marks: 20

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1. A recent insurance industry report indicated that 40 percent of those persons involved in minor traffic accidents this year have been involved in at least one other traffic accident in the last five years. An advisory group decided to investigate this claim, believing it was too large. A sample of 200 traffic accidents this year showed 74 persons were also involved in another accident within the last five years. Use the 0.01 significance level. Compute the value of  $z$  and state your decision regarding the null hypothesis. Determine and interpret the  $p$ -value. **20**