

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

IPE 207 (PROBABILITY AND STATISTICS)

Class Test 1 (Sep 27, 2020), Time: 20 minutes, Total Marks: 20

1. One bag contains 4 white and 2 black balls. Another bag contains 3 white and 5 black balls. If one ball is drawn from each bag, find the probability that **08**
 - a) both are white,
 - b) both are black,
 - c) one is white and one is black.

2. Suppose that we roll a pair of fair dice, so each of the 36 Possible outcomes is equally likely. Let A denote the event that the first die lands on 3, let B be the event that the sum of the dice is 8, and let C be the event that the sum of the dice is 7. **12**
 - a) Are A and B independent?
 - b) Are A and C independent?