

**King Fahd University Of Petroleum & Minerals**  
**Department of Mathematics & Statistics**  
**STAT416 : Stochastic Processes for Actuaries (142)**  
**Assignment # 1 (Due February 8, 2015)**

Problem.1 Urn I contains three red and seven black balls, Urn II contains five red and two black balls, all balls are of the same size. One ball from Urn I is selected at random and placed in Urn II, then a ball is selected randomly from Urn II.

- a. Write the sample space.(4-Points)
- b. what is the probability that the second ball selected is red?(6-Points)

Problem.2 Solve problem 9 page 87 of your text book. (5-Points)

Problem.3 Solve problem 38 page 90 of your text book. (4+4=8-Points)

Problem.4 Solve problem 13 page 174 of your text book. (7-Points)