**King Fahd University of Petroleum & Minerals**

Electrical Engineering Department

EE315: Probabilistic Methods in Electrical Engineering (112)

**In Class Practice**

Names:

Given the following BSC with discrete memoryless (independent) source

Let the source probabilities be given by  and .

0.9

0.9

0.1

0.1

0

1

0

1

1. What is the probability of correctly receiving the generated sequence of length *4* bits?
2. What is the probability that a generated 4 bits sequence is 1111?
3. Given that 1111 is transmitted what is the probability of receiving it as 0101?
4. What is the probability of receiving 1111 irrespective of what was transmitted?

Good Luck, **Dr. Ali Muqaibel**