

## Subject 23

**Please, don't write on the exam paper.**

### **Question 1**

Suppose that in a deck of 32 cards, two cards are chosen at random.

- 1) Find the probability that both are *spades*.
- 2) Find the probability that one is a spade and one is an ace.

Nota : *spades* : piques

### **Question 2**

There are two urns containing colored balls. The first urn contains 50 red balls and 50 blue balls. The second urn contains 30 red balls and 70 blue balls.

At random, an urn is chosen and a ball is drawn. Both urns are equally likely to be chosen.

Knowing that a red ball is drawn, what is the probability that it comes from the first urn?

### **Question 3**

A test consists of 6 multiple choice questions with five choices for each question. As an experiment, you guess on every answer without even reading the questions.

What is the probability of getting exactly 4 questions correct on this test?