STATISTICS APPLIED TO BUSINESS ADMINISTRATION. ACADEMIC YEAR 2015-2016 PRACTICAL EXERCISES 1 AND 2 (20 MINUTES)

Date: _____

Complete name:_____ ID number:_____

EXERCISE 1 (10 POINTS)

Let Z be a r.v. such that it follows a $b(p, n)$ binomial distribution, with $p = 0.80$ and variance equal to 3.2.

1. **(3 points)** Compute the probability $P(Z = 20)$.

2. **(3 points)** What is the characteristic function for this r.v.?

3. **(4 points)** Compute the probability $P(Z \geq 15)$.

EXERCISE 2 (10 POINTS)

The number of people that arrive each minute at a given computer store follows a Poisson distribution with mean equal to 0.5. We assume independence between the different people arriving at the computer store.

1. **(3 points)** What is the probability that, in a given minute, exactly 2 people arrive at the computer store?

2. **(3 points)** What is (are) the most likely number(s) of clients that arrive, **in a given hour**, at the computer store?

3. **(4 points)** What is the probability that, in a period of one hour, at most 35 people arrive at the computer store?