# IT2120 - Probability and Statistics

# Lab Sheet 06

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**Exercise**

01) i)

```
1  setwd("C:\\Users\\USER\\Desktop\\IT246108
2
3  #Question 1
4
5  #Part 1
6  #Binomial Distribution
7  n <- 50
8  p <- 0.85
```

```
> n <- 50
> p <- 0.85
> setwd("C:\\Users\\USER\\Desktop\\IT246108
```

```
10 #Part 2
11 #P(X >= 47) = 1-P(x <= 46)
12 1 - pbinom(46, n, p, lower.tail = TRUE)
13 #pbinom(46, n, p, lower.tail = FALSE)
```

```
> 1 - pbinom(46, n, p, lower.tail = TRUE)
[1] 0.04604658
```

ii)

```
#Question 2

#Part 1
#Number of calls a call center recieves per hour
```

02) i)

```
#Part 2
#Poisson Distribution
#Lambda = 12
```

ii)

iii)

```
#Part 3
lambda <- 12
dpois(15, lambda)
```

```
> lambda <- 12
> dpois(15, lambda)
[1] 0.07239112
```