PS – Lab Sheet 06 – Answers – IT24103527 – De Silva S.N.D.D

01.)**I.) Distribution:** X follows a **Binomial Distribution** with n=50 (number of trials) and p=0.85 (probability of success).

II.)
```r
setwd("C:\\Users\\User\\Desktop\\IT24103527")
#Using 1 - P(X <= 46)
1 - pbinom(46, size = 50, prob = 0.85)
```

02.)I.) The random variable X is the **number of calls received in an hour.**

II.) Poisson Distribution with a rate parameter ($\lambda=12$).

III.)
```r
# P(X = 15)
dpois(15, lambda = 12)
```

Console Output

```r
> setwd("C:\\Users\\User\\Desktop\\IT24103527")
> #Using 1 - P(X <= 46)
> 1 - pbinom(46, size = 50, prob = 0.85)
[1] 0.04604658
> dpois(15, lambda = 12)
[1] 0.07239112
```