... **Question 05**

... **Semester End Bonus**

... **Run the following code in R and paste the final graph.**

```
# ...   -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
# ...   -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

    t<-seq(0,10,length=1000)
    x<-sqrt(t)*cos(2*pi*t)
    y<-sqrt(t)*sin(2*pi*t)

    plot(x,y,axes=F,type="l",lwd=3,xlab="x(t)",ylab="y(t)",col="red")
    axis(1,at=seq(-3,3,by=0.5),labels=seq(-3,3,by=0.5))
    axis(2)

    box()

    title(main=expression(
    paste("(x(t),y(t)) with polar coordinates",
    (list(sqrt(t),2*pi*t))
    )))
```