SET - 10

1)

```
serial_no<-seq(1:8)
x<-seq (145,185,5)
lower_limit<-seq(145,180,5)
f<-c(4,6,28,58,64,30,5,5)
n<-sum(f)
cf<-cumsum(f)
class_interval<-c("145-150","150-155","155-160","160-165","165-170","170-175","175-180","180-185")
df<-data.frame(serial_no,class_interval,lower_limit,f,cf)
df
s1<-min(which(cf>=n/2))
f1<-f[s1]
h<-5
c<-cf[s1-1]
L<-x[s1]
median<-L+((n/2-c)/f1)*h
median
```

2)

```
# install below packages if its not installed
#install.packages("caTools")
#install.packages("caret")
library(e1071)
library(caTools)
library(caret)
data(iris)
str(iris)
split <- sample.split(iris,SplitRatio=0.7)
train_cl <- subset(iris,split=="TRUE")
test_cl <- subset(iris,split=="FALSE")
train_scale <- scale(train_cl[,1:4])
test_scale <- scale(test_cl[,1:4])
set.seed(120)
classifier_cl <- naiveBayes(Species ~ ., data = train_cl)
classifier_cl
y_pred <- predict(classifier_cl,newdata = test_cl)
cm <- table(test_cl$Species, y_pred)
cm
confusionMatrix(cm)
```

3)

```
today <- Sys.Date()
print(today)
```

4)

```
# Load the mtcars dataset
data(mtcars)
# Create a boxplot of "mpg" by "cyl"
boxplot(mpg ~ cyl, data = mtcars, xlab = "Miles per Gallon", ylab = "Number of Cylinders")
```