UPES
UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2020

Course: Programming for Analytics   Semester: III
Program: MBA BA   Time: 03 Hours
Course code: DSBA 8004   Max. Marks: 100
Instructions:

SECTION A

	Attempt all Questions	Marks	CO
	Select the most appropriate answer.	6 X 5=30	CO1
1.	How to represent the impossible values in R? (a) NA (b) NaN (c) NoN (d) none of these		
2.	Which function helps you perform sorting in R language? (a) Order () (b) Short() (c) Merge() (d) None of these		
3.	airquality$Ozone command used for (a) access the Ozone variable of airquality data (b) access the airquality variable of Ozone data (c) for multiplying both the variables (d) none of these		
4.	To find cumulative probability of Poisson distribution we use (e) dpois (f) rpois (g) ppois (h) none of these		
5.	What function is used to test the missing observation in data frame (a) Missing() (b) NA.miss() (c) na() (d) is.na		

6.	Which command is used to know the structure of the data frame in R (a) seq() (b) str() (c) structure() (d) none of these		

SECTION B

Q	**Attempt all the questions**	**10X 5=50**	CO₂ & CO₃
1.	How can you find the mean and variance for the data sets containing missing value in R? (write the R code using suitable example)		
2.	Simulate the process of tossing a coin 1000 times and find the probability of getting Head.		
3.	What is the difference between data frame and a matrix in R? **OR** Explain the method of setting the directory in R.		
4.	The factorial $n!$ counts how many ways n different objects could be ordered. It is defined as $n! = 1 \cdot 2 \cdot 3 \cdots (n-1) \cdot n$. Write R codes to calculate n factorial using For loop and find the value of 20! Using the same code.		
5.	Why these following commands / functions used in R ? a. head(newdata2) b. xtabs(~admit+rank,data=b) c. class(AirPassengers) d. abline(98.0054, 0.9528) **OR** Using **mpg data** set & visualization using ggplot2 package, answer the following Questions : (a) How are engine size and fuel economy related? (b) Has fuel economy improved in the last ten years?		

SECTION-C

Q	**Attempt the question :**	**20 X 1 =20**	CO₄
1.	Write an R code to prepare the colorful word cloud using suitable text speech. **OR** Write an R program to Generate 1000 random numbers and calculate their mean and variance. Take 5 samples of size 100 and calculate their mean and variance. What can you conclude by this exercise?		