

# Priyadarshini College of Engineering, Nagpur

Sessional Examination (2022-23) EVEN Semester

B.Tech. Six Semester (Information Technology) (C.B.C.S)

Data Science (Open Elective)

P. Pages: 2

PCE/KS/23/BEIT605T.1

Duration : Three Hours

Max. Marks: 70

- Notes:
1. All questions carry marks as indicated.
  2. Solve Question 1 or Question 2.
  3. Solve Question 3 or Question 4.
  4. Solve Question 5 or Question 6.
  5. Solve Question 7 or Question 8.
  6. Solve Question 9 or Question 10.
  7. Due credit will be given to neatness and adequate dimensions.
  8. Assume suitable data wherever necessary.
  9. Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.	Question	CO	BT	Marks
Q1	a) Describe Term Data Science? with its Need?	CO1	2	7
	b) Explain first Phases Of Data Science Process .	CO1	2	7
	OR			
Q2	a) Explain Science Process in detail?	CO1	2	7
	b) Define term: 1. Data Science 2 .Data Exploration	CO1	1	7
Q3	a) Summarize importance of linear algebra in Data Science.	CO2	2	7
	b) Illustrate Probability theory and axioms .	CO2	4	7
	OR			
Q4	a) Explain Importance of Optimization for a Data Science perspective	CO2	2	7
	b) Describe in detail Structured Thinking of Data science	CO2	2	7
Q5	a) Explain data manipulation with Pandas	CO3	2	7
	b) Illustrate numpy arrays	CO3	4	7
	OR			
Q6	a) Summarize hierarchical indexing	CO3	2	7
	b) Write a program using pandas Series and pandas Datatframe	CO3	1	7
Q7	a) Discuss random forests in detail	CO4	2	7
	b) Explain entropy and entropy of a partition in detail	CO4	2	7

OR

- Q8 a) Write Python program to create a decision tree.  
b) Summarize density and contour plots.
- Q9 a) Construct neural networks as a sequence of layers in Python.  
b) Illustrate steps for making decision tree .

C04 2 7

C04 2 7

C05 5 7

C05 4 7

OR

- Q10 a) Explain Key features of mapreduce.  
b) Explain feedforward neural network

C05 2 7

C05 2 7

\*\*\* ALL THE BEST \*\*\*