

**Priyadarshini College Of Engineering, Nagpur**

**Department Of Information & Technology**

**CAT-I Examination(2022-23)EVEN Semester**

**B.Tech Sixth Semester**

**Subject : Data Science**

**Duration: 1.5 Hrs**

**Max. Marks : 35**

Note: 1) All questions carry marks as indicated.

Q. NO.	Question	CO	BT	Marks
Q1.a (i)	Which of the following is not a part of the data science process? a) communication Building    b) Operationalize c) Model Building                d) Discovery	1	1	1
Q1.a(ii)	Choose whether the following statement is true or false: Unstructured data is not organized a) True                b) False	1	1	1
Q1.b	Explain Needs of Data Science?	1	2	5
Q1.c	Described Term Data Science & its Life Cycle?	1	2	7

**OR**

Q.NO	Question	CO	BT	Marks
Q2.a (i)	A column is a _____ - representation of data. a)Horizontal    b)Vertical c)Diagonal    d) Top	1	1	1
Q2.a(ii)	Data science is the process of diverse set of data through ? a) organizing data                b) processing data b) analysing data                d) All of the above	1	1	1
Q2.b	Define term: 1. Data Science 2. Data Exploration	1	2	5
Q2.c	Explain first Phases(Setting the goal) Of Data Science Process?	1	2	7

Q.NO.	Question	CO	BT	Marks
Q3.a (i)	The applications of Data Science are : a) Airline Route Planning                b) Healthcare c)Fraud and Risk Detection                d) All of the above	2	1	1
Q3.a(ii)	The process of evaluating data through analytical and statistical tools: a) Data Mining                c)Data Exploration b) Data Analysis                d)Data Visualization	2	1	1
Q3.b	Compare Discrete Data and continuous data. ?	1	2	5
Q3.c	Summarize importance of linear algebra in Data Science ?	1	2	7

**OR**

Q.NO.	Question	CO	BT	Marks
Q4.a (i)	What is the first step in linear algebra? a) Let's complicate problem    b) Solve the problem c) Visualise the problem        d) None Of the above	2	1	1
Q4.a(ii)	Which of the following is not a type of matrix? a) Square Matrix        b) Scalar Matrix c) Trace Matrix        d) Term Matrix	2	1	1
Q4.b	Define : 1 Hyperplane 2 .Half plane. 3.Eigenvector & Eigenvalues	2	3	5
Q4.c	Describe in detail Structured Thinking of Data science ?	2	1	7

Q.NO.	Question	CO	BT	Marks
Q5. a(i)	Which Function is used to open File a) open()        b)create() c)new()        d)None of the above	3	1	1
Q5.a(ii)	What is the purpose of NumPy in Python? a) To do numerical calculations b) To do scientific computing c) Both A and B d) None of the mentioned above	3	1	1
Q5	Explain in details: 1) Numpy 2) Pandas	3	2	5

OR

Q.NO.	Question	CO	BT	Marks
Q6.a(i)	Amongst which Python library is similar to Pandas? a) NPy        c)RPy b) NumPy    d)None of the mentioned above	3	1	1
Q6.a(ii)	NumPy arrays can be _____. a) Indexed        c) Sliced b) Iterated        d) All of the mentioned above	3	1	1
Q6.	Described in details computation on arrays ?	3	2	5