



GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu)
(Accredited by NAAC with "A" Grade, NBA (EEE,ECE & ME) & ISO9001:2008 Certified Institution)

QUESTION BANK(DESCRIPTIVE)

Subject Name with Code: Introduction to Data Science

Course & Branch: Year& Semester: II-I

Regulation: RG23

UNIT - I

S.No.	Question	[BT Level] [CO][Marks]
2 Marks Questions (Short)		
1.	What is project Charter?	L1, CO1,2M
2.	What is Data Cleaning?	L1, CO1,2M
3.	What is Data & Information in data science?	L1, CO1,2M
4.	List out the Benefits &Uses in data science?	L1, CO1,2M
5.	How does data science related to computer science?	L2, CO1,2M
6.	What is data science &where it comes from?	L1, CO1,2M
7.	Define Data Integration?	L1, CO1,2M
8.	What is Data Transformation?	L1, CO1,2M
9.	List Out the Facets of Data in Data Science?	L1, CO1,2M
10.	What is Labelled &Unlabelled Dataset?	L1, CO1,2M
Descriptive Questions (Long)		
11.	What is Data Science? How does data science related to other fields in real time?	L1, CO1,10M
12.	Write a short note on Information vs Data in Data Science?	L1, CO1,10M
13.	Explain Data Science Process Steps in Brief with an Example?	L1, CO1,10M
14.	Write a short Note on a) Defining Goals &Creating Project Charter b) Retrieving Data	L1, CO1,10M
15.	Differentiate between data science and computer science? and explain in detail?	L2, CO1,10M
16.	Write a short note on Data Cleaning &Integration Explain Them with an Example?	L1, CO1,10M
17.	Explain How Big Data Ecosystem is Used in Data Science with a Neat Sketch?	L1, CO1,10M
18.	Write a short note on EDA& Model Building Explain Them with an Example?	L2, CO1,10M
19.	Write a short note on Presenting Findings and Building Applications On Top of Them in Data Science Process?	L2, CO1,10M

UNIT - II

S.No.	Question	[BT Level] [CO][Marks]
2 Marks Questions (Short)		
1.	What is Machine Learning?	L1, CO1,2M
2.	List out the Applications of Machine learning in Data Science?	L2, CO2,2M
3.	List out some of the challenges of unstructured data in Data Science?	L1, CO2,2M
4.	What is Structured data in data science?	L1, CO2,2M
5.	Define Unstructured data in data science?	L1, CO2,2M
6.	Define Semi Structured data in Data science?	L2, CO2,2M

7.	Define validation & Prediction in ML?	L2, CO2,2M
8.	Define Semi supervised Learning in ML?	L2, CO2,2M
9.	What is Database?	L1, CO1,2M
Descriptive Questions (Long)		
10.	Briefly Explain Role of Machine learning in data Science??	L1, CO2,10M
11.	Write a short note on a) Semi-Supervised Learning b) Model Selection in ML?	L1, CO2,10M
12.	Explain briefly about the some of the Python Library Functions like Numpy,Pandas,SKlearn tools data science?	L1, CO2,10M
13.	What is structured and unstructured data? Compare them? & Explain in detail?	L3 CO2,10M
14.	Explain Briefly about the Different Types of Machine learning Techniques in detail?	L1, CO2,10M
15.	Write short note on Validation & Prediction in Machine Learning?	L2, CO2,10M
16.	Explain how handling large amount of data & Its techniques in Machine Learning?	L1, CO2,10M
17.	Write short note on Programming Tips for large Amount of Data in Machine Learning?	L2, CO2,10M
18.	Explain Briefly about the Problems & General Techniques for Handling Large Data in ML?	L2, CO2,10M
19.	Explain Briefly About the Modelling process for Process Engineering in Machine Learning?	L2, CO2,10M

UNIT - III

S.No.	Question	[BT Level] [CO][Marks]
2 Marks Questions (Short)		
1.	List out the Various steps involved in the data preprocessing?	L1, CO3,2M
2.	What are the techniques involved in the python library functions?	L2, CO3,2M
3.	Write a simple program by using pandas?	L1, CO3,2M
4.	Write a simple program by using Numpy ?	L1, CO3,2M
5.	Define Tensorflow with a simple example?	L2, CO3,2M
6.	Define Scrapy with a simple example?	L1, CO3,2M
Descriptive Questions (Long)		
7.	a) Explain some of the Techniques and library functions in Python in detail? b) Write a program by using pandas library function in Python?	L3, CO3,10M
8.	Differentiate between data reduction and data transformation in detail with a neat sketch?	L1, CO3,10M
9.	Write a short note on a) NumPy and b) Pandas in detail with some Examples?	L2, CO3,10M
10.	a) Describe basic tools like plots, graphs and summary statistics of EDA in detail with a neat sketch? b) Write a program by using Numpy library function in Python?	L1, CO3,10M
11.	write a short note on a) Matplotlib and b) EDA in detail with some Examples?	L2, CO3,10M
12.	a) Write a short note on a) Descriptive Statistics and b) Data Integration in detail with some Examples? b) Write a program by using scipy library function in Python?	L1, CO3,10M
13.	a) Explain briefly about the steps involved in the data preprocessing while running a program?	L1, CO3,10M

	b)Write a program by using both pandas& Numpy library function in Python?	
14.	What is discretization?&Explain its importance in real time Applications while plotting a graph?	L2, CO3,10M

UNIT - IV

S.No.	Question	[BT Level] [CO][Marks]
2 Marks Questions (Short)		
1.	List out the various types of regression models in machine learning?	L1, CO4,2M
2.	What is mean by simple linear regression in ML?	L1, CO4,2M
3.	What is mean by Multiple regression in ML?	L2, CO4,2M
4.	Write down the various features of Naïve Bayes Algorithm?	L1, CO4,2M
5.	What is mean by Regression?	L1, CO4,2M
6.	What is supervised machine learning Algorithm?	L2, CO4,2M
Descriptive Questions (Long)		
7.	What are the different models and methods we are used in the machine learning ?Explain it?	L1, CO4,10M
8.	Explain briefly about the supervised machine learning algorithm with an example?	L2, CO4,10M
9.	What is linear regression ?Explain with an example with dependent and independent variables and then plot the graph?	L1, CO4,10M
10.	a)What is regression? Explain briefly about various types of regression types in it? b)Take one example as green and white labels as independent and dependent variables solve it and then plot the graph?	L1, CO4,10M
11.	a)Write a short note on classification algorithms in machine learning? b)Explain briefly about the implementation of linear regression with variables?	L3, CO4,10M
12.	Write a short note on a)K-Nearest neighbours b)Naïve Bayes Algorithm with a neat sketch?	L1, CO4,10M
13.	Explain briefly about the support vector machine algorithm with an example?	L1, CO4,10M
14.	a)Explain briefly about the implementation of Multiple regression with variables? b) Explain briefly about the implementation of logistic regression with variables?	L2, CO4,10M

UNIT - V

S.No.	Question	[BT Level] [CO][Marks]
2 Marks Questions (Short)		
1.	List out the various types of Clustering Algorithms?	L1, CO5,2M
2.	How machine learning is used in data science?	L1, CO5,2M
3.	Define K-means Clustering with a neat sketch?	L1, CO5,2M
4.	Write down the features of the hierarchical clustering?	L2, CO5,2M
5.	What is Unsupervised machine learning Algorithm?	L1, CO5,2M
6.	What is Machine Learning algorithms & Models?	L1, CO5,2M
Descriptive Questions (Long)		
7.	Explain briefly about the unsupervised machine learning algorithms with an example?	L1, CO5,10M
8.	Define Clustering? Explain Various types clustering Algorithms in it?	L1, CO6,10M
9.	Write a short note on a) hierarchical Clustering b) k means clustering in machine learning?	L1, CO6,10M
10.	What is supervised and unsupervised algorithms? Explain it with an example?	L3, CO6,10M
11.	Differentiate between supervised and unsupervised algorithms with a neat sketch in detail?	L1, CO6,10M
12.	Explain briefly about the association between machine learning algorithms?	L2, CO6,10M
13.	what is Association? How machine learning is used in data science to solve the real time Applications?	L1, CO6,10M
14.	Differentiate between hierarchical and K-Means clustering algorithms with a neat sketch in detail?	L2, CO6,10M

Signature of the Staff: Mr.V.Chaithanya

Signature of Department Academic Committee Member 1:

Signature of Department Academic Committee Member 2:

Signature of Department Academic Committee Member 3: