



R20 Regulation

Subject code: 3E8EA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VIII Semester Regular Examinations, April 2024

DATA SCIENCE

(Computer Science and Engineering)

(Professional Elective)

Maximum Marks: 70

Date: 22.04.2024 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		CO	Bloom Tx
1	What is Data Science?	1	L1
2	What is Statistical modeling?	1	L1
3	Write about linear regression?	2	L1
4	Define Data Wrangling.	2	L1
5	What is role of domain expertise?	3	L1
6	List some selection algorithm?	3	L1
7	What is the about User-Facing Data Product?	4	L1
8	Write the features of Dimensionality Reduction?	4	L1
9	Define the Data Visualization?	5	L1
10	Write about Singular Value Decomposition?	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	A. Write a brief description about Data Science and Big Data? [5] B. Explain about R programming with an example. [5]	1	L2
OR			
12	A. Explain in detail the basic tools of EDA. [5] B. Describe about Data Analysis and Data Science Process. [5]	1	L2,L3
13	A. List the machine learning Algorithm and give a brief description of k-NN with an example? [5] B. Discuss about k-means and Filtering spam with suitable examples. [5]	2	L3,L4
OR			
14	A. Give a detail explanation on Naive Bayes Algorithm with example? [5] B. What is Data wrangling and others tools involved for scrapping the web? [5]	2	L3,L2

15	A. Explain about Feature Generation and Feature Selection of Data. [5] B. Explain decision tree searching algorithm with an example. [5]	3	L2
	OR		
16	A. Explain about Random forest with an example? [5] B. Discuss about Wrappers and Filters. [5]	3	L2,L3
17	A. Describe about Recommendation system in detail. [5] B. Discuss about Principal Component Analysis. [5]	4	L3
	OR		
18	A. Write about Recommendation Engine algorithmic ingredients? [5] B. Compare between Dimensionality Reduction and Singular Value decomposition? [5]	4	L2,L4
19	A. What is Mining ? Explain about Mining Social Network. [5] B. What is direct discovery of communities in graphs.Explain in detail? [5]	5	L2
	OR		
20	A. Describe the basic principles of data visualization. [5] B. What are the neighborhood properties in graph.Explain with an example? [5]	5	L2,L3