



Laxmi Singh Charitable Trust's (Regd.)

## THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

Autonomous College Affiliated to University of Mumbai

Approved by All India Council for Technical Education (AICTE) and Government of Maharashtra (GoM)

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. A.Y. 2019-20

Amongst Top 200 Colleges in the Country, Ranked 193<sup>rd</sup> in NIRF India Ranking 2019 in Engineering College category

• ISO 9001:2015 Certified • Programmes Accredited by National Board of Accreditation (NBA), New Delhi

• Institute Accredited by National Assessment and Accreditation Council (NAAC), Bangalore

Website : www.tcemumbai.in

### IN-SEMESTER EXAMINATION (ISE-II) Mar, 2023 SE (Semester-IV) CBCGS-HME 2020 INTRODUCTION TO DATA SCIENCE

Branch: AI & DS  
Div.: A  
Duration: 60 Minutes  
Instructions –

Date: 28 / 03 /2023  
Timing: 10 to 11 Am  
Maximum Marks: 20

1. All questions are compulsory.
2. Assume suitable data wherever necessary and state the assumptions made.
3. Diagrams / sketches should be given wherever necessary.
4. Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
5. Figures to the right indicate full marks

		Marks	CO	LO
Q.1	Solve any 5 Questions.			
a.	Draw diagram of Reinforcement Machine Learning.	02	3	C
b.	Explain in short: Association Technique.	02	3	U
c.	Elaborate some Feature selection techniques in Python.	02	4	R
d.	Explain Boxplot.	02	4	U
e.	Explain the correlation between Intrinsic and Wrapper method	02	4	R
f.	Explain 3 ways of Reducing Dimensionality?	02	4	U
g.	Explain role of Regression Technique in Machine Learning	02	3	U
Q.2.	a. What is Unsupervised Machine Learning? Explain Clustering.	05	3	U
	OR			
	b. Explain working principles of Factor Analysis	05	4	U
Q.3	a. Calculate Correlation Between Two Columns in Pandas, consider any dataset by your own and define it.	05	4	A
	OR			
	b. What is Supervise Machine Learning? Explain Classification technique with Example	05	3	U