K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

April – May 2023
(B.Tech.) Program: Information Technology Scheme: II
Examination: LY   Semester: VIII
Course Code:ITDLC8031 and   Course Name: Explainable AI and Responsible AI

Date of Exam: 18/05/2023	Duration: 2.5 Hours	Max. Marks: 60

Instructions:
(1)All questions are compulsory.
(2)Draw neat diagrams wherever applicable.
(3)Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	Explain the need of Explainability of AI Model.	2	CO1	Understand
ii)	Discuss the problems in Linear Regression Model.	2	CO2	Understand
iii)	Discuss Interpretability of LIME Model.	2	CO3	Understand
iv)	Explain ALE Plot.	2	CO3	Understand
v)	List Properties of counterfactual algorithms.	2	CO4	Understand
vi)	List various pros and cons of prototypes.	2	CO4	Understand
vii)	Why ethical decision making is needed. Give reasons.	2	CO5	Understand
viii)	Explain main aim of Responsible AI.	2	CO6	Understand
Q.2	Solve any four questions out of six.	16		
i)	Explain properties of good Explanations.	4	CO1	Understand
ii)	Interpret Feature Importance in Linear Regression Algorithm.	4	CO2	Apply
iii)	Interpret the information from the PDP plot of cervical cancer prediction problem.	4	CO3	Apply
iv)	Illustrate methods and examples of Adversarial Interpretation.	4	CO4	Analyze
v)	Explain various parameters contributing to ethical decision	4	CO5	Understand

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	making.			
vi)	Give Responsible AI requirements and challenges.	**4**	CO6	Understand
Q.3	Solve any two questions out of three.	16		
i)	Compare results of PDP plot with ILE plot with the help of suitable example.	**8**	CO3	Analyze
ii)	Analyze methods and examples of Adversarial Interpretation.	**8**	CO4	Analyze
iii)	Discuss responsible AI framework of any MNC.	**4**	CO6	Understand
Q.4	Solve any two questions out of three.	16		
i)	Interpret decisions made by tree-based algorithms with suitable examples.	**8**	CO2	Evaluate
ii)	List and explain the various ways of representing results of the interpretation methods.	**8**	CO1	Evaluate
iii)	Explain the challenges triggered by ethical decision making.	**8**	CO5	Understand

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