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Mid Term Examinations - October 2026

Date: 07/10/2026 **Time:** 09:30 AM - 11:00 AM

Course Code: CSA3805 **Course Name:** Responsible AI and Bias Auditing

Semester: Fifth Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	44	46

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Explain any two ethical principles that should be considered while developing a Responsible AI system.	2	CO1	BT1
2	Explain the role of AI governance in ensuring responsible development and deployment of AI systems?	2	CO1	BT2
3	What is algorithmic bias and explain when bias can become discrimination.	2	CO2	BT1
4	Differentiate between demographic parity and equal opportunity in machine learning.	2	CO2	BT2
5	What is ethical AI auditing? Mention any two aspects that are examined during an AI audit.	2	CO2	BT2

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Explain fairness, accountability, transparency and privacy in Responsible AI and discuss their importance in high-impact AI decisions.	10	CO1	BT2
7	A university uses an AI admission system. Some applicants are rejected without clear explanation, and applicants are not informed about how their personal data is used. Apply Responsible AI principles to identify the ethical concerns and suggest suitable measures.	10	CO1	BT3

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Explain any five types of bias in AI systems with suitable examples.	10	CO2	BT2
9	A credit-scoring system uses ZIP code, employment information, spending behaviour and geographic information. It rejects applicants from certain groups at a higher rate even though their creditworthiness is similar. Apply the concepts of bias and fairness to this case.	10	CO2	BT3

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Explain AI governance and the role of global regulations in ensuring responsible AI development and deployment.	10	CO1	BT2

11	A hospital uses an AI system to support medical diagnosis. The system produces different results for different demographic groups, and doctors cannot understand why some predictions were generated. Apply Responsible AI principles to this situation.	10	CO1	BT3

PART E: Answer Any 1 Following Questions. 10 M				
Q.N.	**Questions**	**M**	**CO**	**BT**
12	Explain Demographic Parity, Equal Opportunity, Equalized Odds, Predictive Parity and Individual Fairness. Also explain why fairness definitions may conflict.	10	CO2	BT2
13	A criminal justice AI risk-assessment system produces different false-positive rates for different groups. Its internal decision-making logic is also not disclosed. Apply the concepts of fairness, transparency and accountability to this case and explain how an ethical audit and human oversight can help.	10	CO2	BT3