


<b>Name:</b> <b>Enrolment No:</b>			
<b>UPES</b> <b>End Semester Examination, May 2024</b>			
<b>Course: Application of ML in industries</b> <b>Program: BTech CSE AIML (H/NH)</b> <b>Course Code: CASI3006</b>		<b>Semester: VI</b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>Instructions: Attempt all Questions</b>			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
S. No.		Marks	CO
Q 1	Evaluate the effectiveness of machine learning-driven fraud detection systems in reducing insurance fraud.	4	CO1
Q 2	Evaluate the advantages and limitations of using machine learning for credit risk assessment.	4	CO2
Q 3	Examine the role of machine learning in content recommendation systems within the media industry.	4	CO3
Q 4	Evaluate the benefits and challenges of using machine learning for demand forecasting, including concerns about data quality, model accuracy, and scalability.	4	CO4
Q 5	Discuss the role of machine learning in predictive analytics for public policy and governance.	4	CO1
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 6	Critically evaluate the role of machine learning in optimizing supply chain and logistics operations. Discuss specific machine learning applications and algorithms used to improve inventory management, demand forecasting, and transportation logistics.	10	CO2
Q 7	Evaluate the implications of machine learning-driven content curation and recommendation systems on user engagement, content discovery, and media consumption patterns.	10	CO3
Q 8	Discuss the potential of machine learning in transforming teaching and learning practices in education. Analyze how machine learning algorithms are applied in areas such as personalized learning, adaptive assessment, and educational analytics to enhance teaching effectiveness and improve learning outcomes.	10	CO4

	<b>OR</b>		
Q 8	Critically examine the use of machine learning in government decision-making and policy formulation. Discuss how machine learning techniques are utilized to analyze government data, forecast trends, and inform policy interventions in areas such as healthcare, transportation, and public safety.	<b>10</b>	<b>CO4</b>
Q 9	Evaluate the potential benefits and challenges of using machine learning-driven precision medicine approaches in clinical practice, including concerns about data privacy, model interpretability, and algorithmic bias.	<b>10</b>	<b>CO1</b>
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q 10	<p>Consider a scenario where a healthcare organization is aiming to implement machine learning solutions to enhance patient care and operational efficiency. The organization has access to vast amounts of patient data, including electronic health records (EHR), medical imaging studies, genomic data, and wearable device metrics. Based on the scenario:</p> <ul style="list-style-type: none"> <li>• Describe the key steps involved in developing and deploying machine learning solutions in healthcare.</li> <li>• Critically analyze the potential applications of machine learning in disease diagnosis and treatment planning</li> <li>• Propose strategies for addressing ethical concerns and ensuring responsible use of patient data</li> </ul>	<b>20</b>	<b>CO2</b>
Q 11	Discuss specific machine learning applications and algorithms used across various government domains, such as healthcare, education, transportation, and public safety. Evaluate the challenges and opportunities of deploying machine learning solutions in government, including concerns about ethical considerations, regulatory compliance, and the role of human judgment in policy formulation.	<b>20</b>	<b>CO3</b>
	<b>OR</b>		
Q 11	Analyze the impact of machine learning on logistics efficiency, cost reduction, and customer satisfaction, considering factors such as data quality, scalability, and interoperability among supply chain partners. Evaluate the challenges and opportunities of deploying machine learning solutions in logistics, including concerns about data privacy, regulatory compliance, and algorithmic bias.	<b>20</b>	<b>CO3</b>