

No	Question	Marks
1	<p><b>Given a Boolean function:</b></p> $F(A,B,C)=A'B+AC$ <p><b>Implement</b> the function using NAND gate only (Logical Diagram).</p>	5
2	<p>Given some real-life problems:</p> <ol style="list-style-type: none"> <li>1. An online shopping platform like Amazon wants to understand different types of customers to recommend products and improve marketing strategies.</li> <li>2. A university wants to predict whether a student will pass or fail a course based on attendance, internal marks, and assignment scores.</li> <li>3. A photo storage company wants to reduce image file sizes without losing much visual quality.</li> <li>4. A real estate company wants to predict house prices based on different features.</li> <li>5. Doctors want to automatically detect whether a patient has diabetes or heart disease based on test result.</li> <li>6. A city's transport department wants to predict the severity of a traffic accident based on road and vehicle conditions.</li> <li>7. A supermarket wants to find products that are frequently bought together.</li> <li>8. Medical researchers study thousands of genes to find hidden biological relationships.</li> <li>9. A cybersecurity system monitors network traffic to detect new or unknown types of attacks.</li> <li>10. An AI tutor adapts lessons based on a student's learning speed and accuracy.</li> </ol> <p><b>Suggest a machine learning</b> model to solve each problem.</p>	8
3	<b>Compare</b> between <b>Google Docs</b> and <b>Microsoft word</b> .	2

No	Question	Marks
1	<p><b>Given a Boolean function:</b></p> $F(A,B,C)=(A+B')C+A'B$ <p><b>Implement the function using NOR gate only (Logical Diagram).</b></p>	5
2	<p><b>Given some real-life problems:</b></p> <ul style="list-style-type: none"><li>a. A music streaming app wants to recommend songs based on the user's listening history.</li><li>b. A bank wants to detect fraudulent credit card transactions in real-time.</li><li>c. A weather department wants to forecast rainfall using past temperature and humidity data.</li><li>d. A company wants to group employees based on their skill levels and project performance.</li><li>e. A hospital wants to classify medical images into normal or abnormal categories.</li><li>f. A logistics company wants to optimize delivery routes to minimize travel time.</li><li>g. A movie rating platform wants to identify fake reviews automatically.</li><li>h. A smart home system adjusts lighting and temperature based on user behavior.</li><li>i. A language learning app personalizes lessons based on user progress.</li><li>j. A telecom company wants to predict customer churn based on service usage patterns.</li></ul> <p><b>Suggest a machine learning model to solve each problem.</b></p>	8
3	<p><b>Compare between Google Sheets and Microsoft Excel.</b></p>	2