Technical Skills Evaluation Metrics

S. No.	Metrics	Weightage (%)	Description	Sub-Evaluation Metrics & Scoring Criteria	Score	Description	Standard Template	Scoring Guidelines
1	Technical Training & Assignments	5%	This metric will be scored based on the following 1. Participation in the Quiz at the end of each training session 2. Submission of completed assignments	Number of Tests / Quizzes Attempted (Total – 4 Nos.) Assignment-1 Assignment-2 Assignment-3 Assignment-4	2 2 2 2 2	Quiz will be of MCQ type with 10 questions. Weekly Assignment Weekly Assignment Weekly Assignment Weekly Assignment	No	Each Quiz Carries – 0.5 Score Completed - 2, Partial -1, Not Submitted -0 Completed - 2, Partial -1, Not Submitted -0 Completed - 2, Partial -1, Not Submitted -0 Completed - 2, Partial -1, Not Submitted -0
2	Innovation & Problem Solving	10%	This metric will be assessed and scored based on the unique innovative features included in the proposed solution. The team shall submit the following templates 1. Define the Problem Statement 2. Empathise & Discover 3. Brainstorm & Prioritize Ideas	1. Empathize & Discover	2	A problem statement often touches on the 5 w's (who, what, where, when, why) of the problem. Submit the template provided.	Yes	Completed - 2, Partial -1, Not Submitted -0
				2. Define the Problem Statement	4	When designing a solution to a problem, it's important to understand who you're designing for, so you can keep their needs, challenges, behaviors, and attitudes in mind while you design.	Yes	Completed - 4, Partial -2, Not Submitted -0
				3. Brainstorm & Prioritize Ideas	4	Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving.	Yes	Completed - 4, Partial -2, Not Submitted -0
3	Requirement Analysis using Critical Thinking	10%	This metric will be scored based on the Submission of Project Requirement Analysis Template with valid information	Determine the Requirements (Customer Journey Maps)	4	Create customer journey maps to understand the requirements of customer	Yes	Completed - 4, Partial -2, Not Submitted -0
				Requirement Analysis (Functional, Operational, Technical) / Flow Charts	4	Analyze the requirements, categorize them into Functional, Operations and technical. Flow charts can be prepared for each requirement.	Yes	Completed - 4, Partial -2, Not Submitted -0
				Interpretation & Modeling	2	Decide which of the categorized requirements can be achieved and how they will be delivered. Find out and document what is expected or wanted from the product, project, or application	No	Completed - 2, Partial -1, Not Submitted -0
4	Project Design using Design Thinking	10%	This metric will be assessed and scored based on the submission of project design template which includes 1. Proposed solution - Novelty - Feasibility of Concept - Social / Business Impact 2. Problem - Solution Fit 3. Solution Architecture	Proposed solution - Novelty - Feasibility of Concept - Social / Business Impact	2	Shall include the uniqueness of proposed solution, novelty, social or business impact and feasibility of concept.	Yes	Completed - 2, Partial -1, Not Submitted -0
				Problem - Solution Fit	4	It is a template to help identify solutions with higher chances of solution adoption, reduce time spent on testing and get a better overview of the current situation.	Yes	Completed - 2, Partial -1, Not Submitted -0
				Solution Architecture	4	Shall cover the architectural aspect of project from concept to deployment	Yes	Completed - 2, Partial -1, Not Submitted -0
5	Technology Stack	5%	This metric will be assessed and scored based on the utilization of technology in building the proposed solution	Technical Architecture - Is the system robust - Is it highly modifiable? - Is it scalable? - Is it buildable (wrt time & budget constraints)	4	Detailed technical architecture of the solution shall be developed. Samples of code patterns will be introduced here for the reference	No	Not Submitted – 0, Partial – 1 to 3 , Complete - 4
				Open Source Frameworks	2	Assess the utilization of opensource frameworks in the solution.	No	Open-source frameworks used Only one : 1 Mark More than 2: 2 Marks
				Third-party API's	2	Assess the number of APIs integrated in the solution	No	1 -2 API's : 1 Mark >2 API's : 2 Marks
				Cloud Deployment	2	Check wether the solution deployed on cloud or developed locally, Also check have they implemented cloud native acrchitecture.	No	Simple Architecture – 1 Kubernetes/Containers – 2
6.	Project Planning using Agile Methodologies	5%	This metric will be assessed and scored based on the detailed project planning template submitted by the project team. The template shall cover 1. Project Milestones & Tasks 2. Sprint Delivery Schedule 3. Distribution of Tasks among team members 4. Team management tool for agile planning	Project Milestones & Tasks	4	Ensure the detailed planning of project development, list down important features, dependencies, amount of work, list stories & epics, Add iterations.	Yes	Not Submitted – 0, Partial – 1 to 3 , Complete - 4
				Sprint Delivery Plan	2	Sprint planning is an event in scrum that kicks off the sprint. The purpose of sprint planning is to define what can be delivered in the sprint	Yes	Number of Sprint planning meetings organized. Minutes of meeting recorded. Stand-up Calls 0 – 4 : 0, 5 – 10 : 1 , >10 : 2
				Project Progress Tracking	2	Distribution of tasks to team members, Prioritization of tasks, Track the progress of all tasks, Submit velocity & burndown chart	No	Not Submitted – 0, Partial – 1, Complete - 2
				Team management tool for agile planning (e.g. Trello, Jira, etc.)	2	Utilization of project / team management tools for the project delivery.	No	No tools used – 0 marks Any one tool – 2 marks
7	Coding & Solutioning	15%	This metric will be scored based on the following parameters of the code 1.No. of Functional Features 2.Code Efficiency 3.Utilization of algorithms 4.Coding Layout (Self-explanation & reusability) 5.Debugging & Traceability 6.Exception Handling	No. of Functional Features included in the solution	2	Assess the feature presented vs. implemented	No	0 – 30% Mapping : 0 Marks 31 – 50 % Mapping : 1 Mark >50% Mapping : 2 Marks
				Code-Layout, Readability and Reusability	2	Assess the code layout, readability and reusability	No	Average - 0, Good - 1, Excellent - 2
				Utilization of Algorithms, Dynamic Programming, Optimal Memory Utilization	2	Assess the Utilization of Algorithms, Dynamic Programming, Optimal Memory Utilization	No	Average - 0, Good - 1, Excellent - 2
				Debugging & Traceability	2	Assess the Debugging & Traceability Capability in the code	No	Average - 0, Good - 1, Excellent - 2
				Exception Handling	2	Assess the Exception Handling capability of the code developed	No	Average - 0, Good - 1, Excellent - 2
8	Acceptance Testing	5%	This metric will be assessed and scored based on the following 1.UAT Initiation 2.UAT Design 3.UAT Execution 4.UAT Report Submission 5.Utilization of Test Management Tools	UAT Initiation	2	Ensure the availability of UAT checklist (Define Approach, test data requirements, etc.)	No	Not Submitted – 0, Partial – 1, Complete - 2
				UAT Design	2	Assess the UAT design document	No	Not Submitted – 0, Partial – 1, Complete - 2
				UAT Execution	2	Assess the list of bugs identified and fixes implemented	No	Not Submitted – 0, Partial – 1, Complete - 2
				UAT Report Submission	2	Assess the report submitted.	Yes	Not Submitted – 0, Partial – 1, Complete - 2
				Utilization of Test management Tools	2	Assess the utilization of Tools like Qase, Appium, Loadium etc.	No	Not Submitted – 0, Partial – 1, Complete - 2
9	Performance Testing	5%	This metric will be assessed and scored based on the following 1.Application Performance (for Cloud & IoT Projects) 2.Model Performance (for ML /AI Projects) 3.Dashboard & User Stories (for Data Analytics Projects)	Application Performance Metrics Error rates Response times Request rates Customer experience	10	Assess the application performance metrics submitted or verify using performance testing tools	Yes	Below Average – 0 - 25% Satisfactory – 26% - 50% Good – 51% - 75% Excellent – 76% - 100%
				Model Performance Metrics Confusion matrix Accuracy Precision Recall Specificity F1 score Precision-Recall or PR curve ROC (Receiver Operating Characteristics) curve PR vs ROC curve.	10	Assess the model performance metrics submitted or verify using model performance testing tools	Yes	Below Average – 0 - 25% Satisfactory – 26% - 50% Good – 51% - 75% Excellent – 76% - 100%
				Dashboard & User Story Metrics -Dashboard design -Data Responsiveness -Amount Data to Rendered -Utilization of Data Filters -Calculation Efficiency -Effective User Story	10	Assess the visualization dashboard based on the metrics provided.	Yes	Below Average – 0 - 25% Satisfactory – 26% - 50% Good – 51% - 75% Excellent – 76% - 100%