Functional & Performance Testing Template

Model Performance Test

Date	13 February 2026
Team ID	LTVIP2026TMIDS62350
Project Name	Civil Engineering Insight Studio
Maximum Marks	4 Marks

Test Scenarios & Results

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
FT-01	Text Input Validation (Structural Analysis Request)	Enter valid and empty analysis request in input field	Valid input accepted; error shown if field is empty	As Expected	Pass
FT-02	Image Upload Validation	Upload valid image file and unsupported file type	Valid image accepted; error shown for invalid format	As Expected	Pass
FT-03	AI Structural Analysis Generation	Upload image + enter request and click 'Generate'	Structured engineering report generated (materials, components, stage)	As Expected	Pass
FT-04	Gemini API Integration Check	Verify API key configuration and send request	Gemini API responds with generated content	As Expected	Pass
PT-01	Response Time Test	Measure time from request submission to report generation	Response within 3–10 seconds (depending on API latency)	As Expected	Pass
PT-02	Concurrent API Request Test	Send multiple analysis requests sequentially	System handles requests without crashing	As Expected	Pass
PT-03	Large Image Load Test	Upload high-resolution construction image	System processes image without failure	As Expected	Pass

| PT-04 | Error Handling Test | Simulate API failure (invalid key/network issue) | System shows user-friendly error message | As Expected | Pass |