# **Functional & Performance Testing**

**Model Performance Test**

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| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID59561 |
| Project Name | HealthAI: Intelligent Healthcare Assistant Using IBM Granite |
| Maximum Marks |  |

**Functional & Performance Testing Report – HealthAI**

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| **Test Case ID** | **Scenario (What to test)** | **Test Steps (How to test)** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| **FT-01** | Text Input Validation (e.g., symptoms, condition input, queries) | Enter valid and invalid health-related text in input fields (e.g., “fever”, “cold”) | Valid inputs accepted, errors shown for invalid or empty inputs | Valid text accepted, error shown for symbols and empty input | Pass |
| **FT-02** | Number Input Validation (e.g., age, vitals) | Enter valid and out-of-range values (e.g., age = -5, 200) | Accept valid range, reject invalid inputs | Out-of-range inputs flagged, correct range accepted | Pass |
| **FT-03** | Content Generation (Patient Chat, Treatment Plans, Predictions) | Provide sample inputs and generate response | Correct, contextual content generated for each input | Relevant AI-generated outputs shown based on patient data | Pass |
| **FT-04** | API Connection Check | Load .env with valid and invalid API key, test model connection | API should respond only when valid key is present | Invalid key returns error, valid key initiates model successfully | Pass |
| **PT-01** | Response Time Test | Measure time between request and AI-generated response | Response should be under 3 seconds | Avg: 2.4 seconds | Pass |
| **PT-02** | API Speed Test | Send multiple simultaneous symptom-based queries | API handles concurrency without timeout | API responded within limits under moderate load (5+ users) | Pass |
| **PT-03** | File Upload Load Test (Health Metrics CSV/JSON upload) | Upload multiple health logs in supported format | Files upload and process without crash | All test files processed successfully | Pass |