# **Functional & Performance Testing Template**

**Model Performance Test**

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| Date | 7 June 2025 |
| Team ID | LTVIP2025TMID60699 |
| Project Name | Sustainable Smart City Assistant Using IBM Granite LLM |
| Maximum Marks |  |

## **Test Scenarios & Results**

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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., city search, feedback) | Enter valid and invalid city names, blank fields, special characters | Valid inputs accepted, error messages shown for invalid/empty input | App accepts correct input, shows “Invalid City” for wrong input | Pass |
| **FT-02** | Number Input Validation (e.g., AQI range, filters) | Enter AQI values manually or simulate inputs beyond limits (e.g., -5 or 600) | Accepts values within 0–500, shows alert for out-of-range inputs | Correctly handled edge cases, showed warnings | Pass |
| **FT-03** | Dashboard Content Generation | Select a city, wait for data to load, and check widgets (AQI, traffic, water, etc.) | All cards should populate with relevant, real-time data | Cards updated correctly with live data and visual elements | Pass |
| **FT-04** | API Connection Check | Disconnect internet, test retry mechanism, or wrong API key | Shows error if connection fails or invalid key | Displayed “No Internet / Check API Key” properly | Pass |
| **PT-01** | Response Time Test | Time how long it takes from selecting city to loading dashboard | Should complete in under 3 seconds on standard network | Average load time was 2.1 seconds | Pass |
| **PT-02** | API Speed Test | Open app in multiple tabs or simulate parallel API calls | App should not slow down or crash | No noticeable delay, app handled concurrent calls | Pass |
| **PT-03** | Mobile Responsiveness | Test app on different devices: phone, tablet, desktop | Should adapt layout and scale elements properly | Responsive across devices and resolutions | Pass |
| **FT-05** | Notification Behavior | Trigger alerts (e.g., AQI > 200) and verify notification delivery | Notifications should be smart, relevant, and non-repetitive | Sent alerts accurately without spam | Pass |
| **FT-06** | Theme Switching & UI Consistency | Switch between multiple themes, check readability, contrast, and color consistency | Theme applied consistently with correct font, dark mode respected | All themes worked as expected, no UI glitches | Pass |
| **FT-07** | Language Toggle (if implemented) | Change app language from English to another (e.g., Telugu, Hindi) and verify UI | Text should reflect new language without breaking layout | Language switch functional, some strings remain in English | Partial |