<testing\_knowledge\_base>

<priority\_levels>

<priority level="Critical">

<description>Issues that could cause catastrophic system failure or data loss</description>

<criteria>

- Affects core business functionality

- Blocks entire features or workflows

- Has significant financial impact

- Affects data integrity

</criteria>

<examples>

- Payment processing failure

- User authentication breakdown

- Data corruption scenarios

</examples>

</priority>

<priority level="High">

<description>Major functionality issues that significantly impact user experience</description>

<criteria>

- Affects major business workflows

- Has workarounds but they're complex

- Impacts significant user base

- Performance degradation above threshold

</criteria>

<examples>

- UI rendering issues

- Slow response times

- Feature partial failure

</examples>

</priority>

<priority level="Medium">

<description>Issues that affect non-critical functionality</description>

<criteria>

- Has simple workarounds

- Affects minor features

- Limited user impact

- Non-critical performance issues

</criteria>

<examples>

- Minor UI glitches

- Non-critical feature bugs

- Documentation inconsistencies

</examples>

</priority>

<priority level="Low">

<description>Cosmetic or minor issues with minimal impact</description>

<criteria>

- No functional impact

- Aesthetic issues only

- Very limited user base affected

</criteria>

<examples>

- Styling inconsistencies

- Typos in non-critical text

- Nice-to-have improvements

</examples>

</priority>

</priority\_levels>

<iso\_25010\_categories>

<category name="Functional Suitability">

<subcategories>

<subcategory name="Functional Completeness">

<description>Degree to which the set of functions covers all specified tasks and objectives</description>

<test\_focus>Verify all specified functions are implemented</test\_focus>

</subcategory>

<subcategory name="Functional Correctness">

<description>Degree to which a product provides correct results with needed precision</description>

<test\_focus>Validate accuracy of calculations and data processing</test\_focus>

</subcategory>

<subcategory name="Functional Appropriateness">

<description>Degree to which functions facilitate accomplishment of specified tasks</description>

<test\_focus>Evaluate efficiency of function implementation</test\_focus>

</subcategory>

</subcategories>

</category>

<category name="Performance Efficiency">

<subcategories>

<subcategory name="Time Behavior">

<description>Response and processing times and throughput rates</description>

<test\_focus>Measure response times and transaction rates</test\_focus>

</subcategory>

<subcategory name="Resource Utilization">

<description>Amounts and types of resources used</description>

<test\_focus>Monitor CPU, memory, disk usage</test\_focus>

</subcategory>

<subcategory name="Capacity">

<description>Maximum limits of product parameters</description>

<test\_focus>Test system under maximum load conditions</test\_focus>

</subcategory>

</subcategories>

</category>

<!-- Additional ISO categories following same structure -->

</iso\_25010\_categories>

<test\_types>

<type name="Functional">

<description>Tests that validate specific functions or features</description>

<when\_to\_use>Verifying individual feature functionality</when\_to\_use>

<deliverables>

- Test cases for specific functions

- Expected vs actual results

- Function coverage metrics

</deliverables>

</type>

<type name="Integration">

<description>Tests that verify interactions between components</description>

<when\_to\_use>Testing component interfaces and data flow</when\_to\_use>

<deliverables>

- Interface test cases

- Data flow diagrams

- Integration coverage report

</deliverables>

</type>

<!-- Additional test types -->

</test\_types>

<requirement\_categories>

<category name="Functional">

<description>Specific functions the system must perform</description>

<examples>

- User authentication

- Data processing rules

- Business logic implementation

</examples>

</category>

<category name="Non-Functional">

<description>Quality attributes and constraints</description>

<examples>

- Performance requirements

- Security requirements

- Usability requirements

</examples>

</category>

<!-- Additional requirement categories -->

</requirement\_categories>

</testing\_knowledge\_base>

<query\_handlers>

<handler type="priority\_explanation">

<trigger\_words>priority, importance, severity</trigger\_words>

<response\_template>

The {priority\_level} priority indicates {description}.

This is used when:

{criteria}

For example: {examples}

</response\_template>

</handler>

<handler type="iso\_category\_explanation">

<trigger\_words>ISO, category, classification</trigger\_words>

<response\_template>

The ISO 25010 category {category\_name} refers to {description}.

When testing, we focus on: {test\_focus}

</response\_template>

</handler>

</query\_handlers>

<relationship\_rules>

<rule>

<name>priority\_requirement\_mapping</name>

<description>How priority levels map to requirement types</description>

<mappings>

<mapping>

<priority>Critical</priority>

<requirement\_types>Core Functional, Security, Data Integrity</requirement\_types>

</mapping>

<!-- Additional mappings -->

</mappings>

</rule>

</relationship\_rules>