

8. Performance Testing :

Performance testing for college food can be interpreted in a few different ways depending on the goal — whether you're evaluating the quality and efficiency of food services or running an actual test process like in software/operations terms.

Here's a practical framework tailored to a real-world, data-backed evaluation of college food systems, inspired by performance testing principles:

Performance Testing Framework for College Food Services

Objective:

To evaluate the efficiency, quality, and satisfaction level of the food provided to students by the college mess/canteen.

Key Performance Indicators (KPIs):

1. Food Quality Metrics

Taste rating (survey-based)

Freshness & hygiene inspection scores

Nutritional value per meal

2. Service Efficiency

Average wait time per student

Meal serving time (from entry to plate)

Queue length over time (peak vs off-peak)

3. Capacity Handling

Max students served per meal period

Meal prep time vs actual serving time

% of food wastage

4. Student Satisfaction

Net Promoter Score (NPS): “Would you recommend this food service?”

Complaint frequency & resolution time

Variety score (menu rotation frequency)

5. Cost Efficiency

Cost per meal vs value received (student perception)

Monthly cost breakdown (raw materials, staff, utilities)

Food waste as % of total food prepared

Test Scenarios

Test Case Methodology Tools/Technique

Taste Consistency Test Blind testing across different days
Sensory evaluation survey

Load Test (Peak Hours) Track serving time for 100+ students
Manual observation, stopwatch, video analysis

Stress Test Simulate a power cut or delayed delivery Drill/Mock test

Food Safety Audit Surprise hygiene inspection Checklist + photo evidence

Satisfaction Survey Anonymous Google Form or Tableau dashboard Sentiment analysis + NPS

Inventory Waste Test Compare planned meals vs leftover volume
Weighing, food logs




Performance Testing Report Format (Sample):

Category	Metric	Target Value	Actual Value	Status
Food Quality	Avg Taste Rating (1–5)	≥ 4.0	3.2	● FAIL
Efficiency	Avg Wait Time (min)	≤ 10	7.5	● PASS

Capacity Handling Max Students Served (1 hour) ≥ 200 160

 WARNING

Student Satisfaction NPS Score ≥ 30 12  FAIL

Cost Efficiency Cost per Meal (₹) ≤ 50 ₹48  PASS

Recommendations After Testing

Automate queue tracking via RFID/mess card systems.

Introduce rotating menus every 2 weeks to increase satisfaction.

Conduct feedback surveys weekly and show action taken.

Invest in training kitchen staff for better consistency.

Implement portion control to reduce food waste.
