



**INNOVATIVE TEACHING-LEARNING (PEDAGOGY) REPORT**

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| <b>Title of the Activity</b>             | <b>“Preparation of Fruit Confection” – Simulation-Based Confectionery Formulation Challenge</b>  |
| <b>Subject</b>                           | <b>FT305E: Confectionery Technology</b>  |
| <b>Department</b>                        | <b>Food Technology</b>   |
| <b>Academic Year</b>                     | <b>2024-25</b>   |
| <b>Name of the Faculty</b>               | <b>Prasanna Prakash Bhalerao</b>   |
| <b>Objective(s)</b>                      | <ul style="list-style-type: none"> <li>✓ To simulate the formulation and design process of a confectionery product using realistic constraints.</li> <li>✓ To apply theoretical understanding of ingredients, processing techniques, and defects in confectionery.</li> <li>✓ To foster teamwork, innovation, and application-based thinking among students.</li> </ul>  |
| <b>Course Outcomes Addressed</b>         | <ul style="list-style-type: none"> <li>✓ <b>CO1</b> – Identify ingredients used in confectionery and explain their functional roles.</li> <li>✓ <b>CO2</b> – Describe processing techniques and equipment used in sugar and chocolate confectionery.</li> <li>✓ <b>CO3</b> – Analyze causes of common defects and formulate preventive measures.</li> <li>✓ <b>CO4</b> – Design and improve confectionery formulations based on sensory, nutritional, and process considerations.</li> </ul>   |
| <b>Materials/Resources Required</b>      | <ul style="list-style-type: none"> <li>✓ Fruits, sugar, glucose syrup, invert sugar, milk solids, , protein isolates, emulsifiers</li> </ul>   |
| <b>Brief Description of the Activity</b> | <p>Students are placed in teams and provided with:</p> <ul style="list-style-type: none"> <li>✓ <b>A Product Brief Card:</b> e.g., Protein-rich chewy bar or vitamin-C enriched jelly.</li> <li>✓ <b>Ingredient Cards:</b> sugar, glucose syrup, invert sugar, milk solids, cocoa, protein isolates, emulsifiers.</li> <li>✓ <b>Process Cards:</b> heating stages (e.g., soft ball, hard crack), tempering, mixing, cooling, aeration.</li> <li>✓ <b>Constraint Cards:</b> cost, shelf-life, dietary restriction, texture target.</li> </ul> |
| <b>Learning Outcome</b>                  | <ul style="list-style-type: none"> <li>✓ Better understanding of the interactions between ingredients and processes.</li> <li>✓ Enhanced ability to troubleshoot potential confectionery defects.</li> <li>✓ Application of scientific knowledge in creative product development.</li> </ul>   |



✓ Improved communication and collaboration among peers.

**Glimpses**

**Processing outline for Jam and Jelly**

