A Project Report on

"SMALL SCALE CHICKPEA HARVESTER"

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Submitted in partial fulfillment of the requirement for the degree of

Bachelor of Engineering in

INDUSTRIAL AND PRODUCTION ENGINEERING

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Successful model designing begins with a logical and systematic plan. Model design is a five steps problem solving process. The following is a detailed analysis of each step.

Problem Statement: To initiate the design process, we clearly state the problem to be solved. State the requirements as broadly as possible, but specifically enough to define the scope of the design project.

Literature Survey: Finding whether there exist any solution to the problem and finding the advantaged and disadvantages related to existing equipment or solution. Collect all the relevant data regarding problem and assemble for evaluation. Design considerations need to be taken into account. Considering all the operational scenarios design should be done so that it ensures correct usage. Additional factors include operator fatigue, efficiency, and economy of motion and the speed of the motion. The design should also comply with general aspects of design safety.

Objectives and Scope: Analyzing the problem and making the deep study and preparing the objectives of proposed solution and identifying the limitation and constraints of the project

Generation of Alternatives: A brainstorming session should be conducted to come up with several good design alternatives. In the interest of economy, alternative designs should be developed only far enough to make sure they are feasible.

Analysis and estimation: The fourth phase of the design process is analysis of different options using evaluation matrix. The design concept that satisfies requirements is chosen. Detailed designing of the each parts involved in the assembly and estimation of cost by bill of materials

Fabrication: This phase of the design process consists of turning the chosen design approach into reality. In this phase analysis of the design is carried out and the design considerations are studied. Final details are decided and final drawings are made. The model is then fabricated as per specifications and checked if all the mechanisms work efficiently.

Testing: The equipment is tested to check if it meets all the objectives. Finally the equipment is checked again if there are improvements or alterations to be made. After testing the model completely it is then implemented.

Conclusion & Recommendation: Concluding with the documents and specifying to what percentage the product has met the requirements.