||JAI SRI GURUDEV||

# SJC INSTITUTE OF TECHNOLOGY

## Department of Aeronautical Engineering

The project work titled **"ENHANCEMENT OF AERODYNAMIC EFFICIENCY OF CORRUGATED AIRFOIL BY ACTIVE AND PASSIVE FLOW CONTROL TECHNIQUE".** Which is a final year student major project which is funded by Karnataka State Council for Science and Technology **(KSCST)** during 45$^{th}$ series of students programme during the AY: 2021-2022, Project Proposal Reference No: **45S_BE_2205 and the sanctioned amount is of Rs. 10000/- which was sanctioned for fulfilment of the project.**

This project was carried out by Mr. Chavali Bhima Sankaram **(1SJ18AE014)**, Mr. Prasad Belgundkar **(1SJ18AE042)**, Mr. Umesh Rana **(1SJ18AE054)** and Mr. Narinder Kumar **(1SJ18AE064)** are the bonafied students of SJC institute of technology Chickballapur under the guidance of prof. Vidyashree K.R. assistant professor department of aeronautical engineering.

The main aim of the project is to modify corrugated airfoil for better enhancement in the aerodynamic performance of the base line airfoil (NACA0018) as it is very well that the conventional NACA 4 digit airfoil cannot give more lift at very low speed. And this is basically achieved by the high lift devices which are mechanically driven. And hence there are lot of chances of failure of the mechanical mechanism. Which can be avoided and also **lift can be increased upto 90%** when compared to the conventional airfoil. Objectives of the project are to optimize the best possible airfoil with number of slots and understand the aerodynamic efficiency of the airfoil when compared to the conventional airfoil which will also **decrease the landing and take-off distance** of the aircraft and hence reducing the fuel usage. This shall take the aircraft to the moto of **Green Aviation.**