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GANDHINAGAR INSTITUTE OF TECHNOLOGY

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A Report on

A Competition

on

“3D Printing Workshop”

Organized by

Mechanical Engineering Dept.

&

GIT-IQAC

on

02/12/2021

Gandhinagar Institute of Technology

Academic Year 2021-22



Level:- Departmental

Category:- Workshop

Date:- 02/12/2021 (1 Day)

No. of Resource Person: 2

No. of Participants:- 28

Coordinator and Co-coordinator name:

Prof. Jatin M Patel (Coordinator)

Prof. Dhaval P Patel (Co-Coordinator)

Mode:- Offline

Objective:

3D Printing technology is one of the most popular manufacturing process in the industry. As a mechanical engineer, a student should be aware of advanced manufacturing process like 3D printing. To fulfill this skill in the students, a training workshop on programming in Ultimaker Cura and operate modeling software Solidworks and practical session on 3D printing machine to make different part as application has been organized. This program will help students with their projects, competitions and create better career profiles.

About Workshop:

This workshop was organized by the Mechanical Engineering Department and GIT-IQAC Cell of Gandhinagar Institute of Technology. 28 students have participated in this workshop. The goal of the workshop was to enhance the caliber of students for a recent requirement in the field of Manufacturing Process. The event has been divided into three expert sessions. The first session is about introduction of different additive manufacturing processes and introduction of 3D Printer. The second session is about SolidWorks CAD tool in which how to operate different part modeling commands to make 3D part as per requirement. The third session is about practical on 3D Printer to make different mechanical parts or articles like key chain and understand how to operate the machine.

Session wise content:

Session-1: Introduction

In the first session, the session was started by Prof. Jatin M Patel by delivering the introduction of 3D Printer and their importance in the industry. Prof. Jatin M Patel introduced the additive manufacturing to the student and aware them of the importance and application of the 3D Printer.



Prof. Jatin M Patel has given the basic introduction



Prof. Jatin M Patel delivered the introductory session regarding the importance of 3D Printer in the industry.

Session-2: Solidworks CAD Tool

In the second session, the session was started by Prof. Dhaval P Patel and Prof. Amit Patel by delivering the introduction of modeling tools and their importance in the industry. Prof. Dhaval Patel introduced the SolidWorks software to the student and aware them of the importance and application of the SolidWorks. Participants have been given 60 minutes to complete the part modeling. Based on the time taken to complete the part modeling points have been given to the participants.



Prof. Dhaval P Patel has given the basic on Solidworks



Making different 3D Model component on Solidworks

Session-3: Practical on 3D Printer

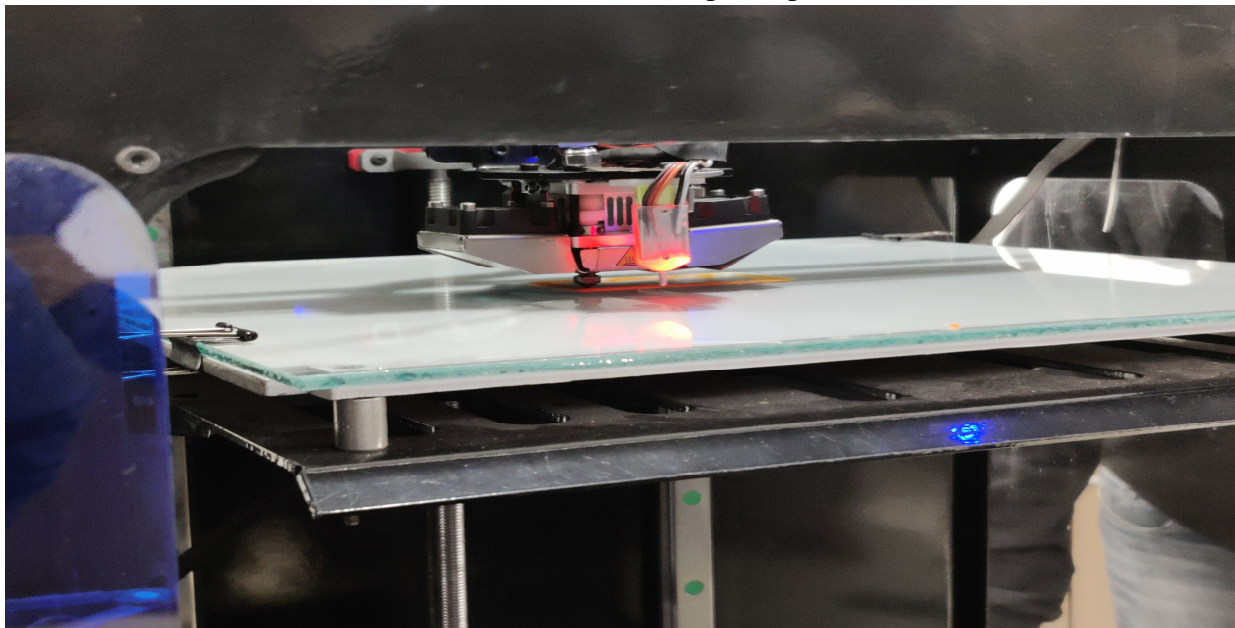
The third round was started by making key chain on 3D printing machine. Students were awaired about how to operate 3D printer? What are key point required to maintanining machine? Make key chain as per practice on second session in Solidwork.



Participants understanding the 3D Printer Machine



After successful completion of the event participants with the co-ordinators



3D Printing process

Outcome:-

After completion of the workshop, students were come to know about the use of 3D Printer for industrial applications. They have studied all the fundamental modules of the 3D Printer, such as cura and solidwork software. Very good feedback has been obtained from the students regarding their gain during the workshop.