UNIT-1- INTRODUCTION

Rapid Prototyping to Additive Manufacturing

Rapid prototyping and additive manufacturing are closely related but different. **Rapid prototyping means producing a prototype rapidly. Additive manufacturing refers to any manufacturing process which makes products by gradually adding materials**. Rapid prototyping is usually achieved by additive manufacturing process.

What is the difference between additive manufacturing and rapid prototyping?

The term rapid prototyping is different from 3D printing/additive manufacturing. Rapid prototyping is the technique of fabricating a prototype model from a CAD file. In other words, **3D printing/additive manufacturing is the process, and rapid prototyping is the end result**.

What is the difference between prototyping and rapid prototyping?

Conventional prototyping is a process that usually takes more time to complete, while rapid-prototyping is a process that is completed quickly.

Different types of rapid prototyping

The types of rapid prototyping technology available for engineering product designers: Additive manufacturing – Stereo lithography (SLA), Selective laser sintering (SLS), Direct metal laser sintering(DMLS), Fused Deposition Modeling (FDM), MJF, Binder jetting and Poly jetting.

Is there a difference between 3D printing and additive manufacturing?

The main difference between 3D printing and additive manufacturing is that 3D printing specifically involves the creation of objects by building layers of material. In comparison, additive manufacturing involves the creation of objects by adding material, which may or may not come in layers.

What is an example of rapid prototyping?

Rapid Prototyping Example for Mobile App - **Kitchen Stories** (App, Food) .This is an interactive prototype of a mobile app. Loved by millions of users; Kitchen Stories enables users to find delicious recipes with beautiful pictures.

Why is 3D printing better than prototyping?

A 3D printer can precisely create your next iteration from a slightly tweaked design file much faster than could any traditional tooling-based prototyping process. Speeding the design cycle inherently improves time-to-market for a new product.

Why is additive manufacturing called 3D printing?

As 3D printing has grown in popularity in recent years, you may be wondering, why is it called additive manufacturing? **The term additive manufacturing comes from the process of how objects are created in 3D printing**. As we mentioned, 3D printers build the object, layer by layer, by continuously adding resin.

Why rapid prototyping is called as additive manufacturing?

Rapid prototyping means producing a prototype rapidly. **Additive manufacturing refers to any manufacturing process which makes products by gradually adding materials**. Rapid prototyping is usually achieved by additive manufacturing process.

What is rapid prototyping also known as?

Rapid prototyping (RP), also known as **additive manufacturing or three-dimensional (3D) printing**, is a group of evolving technologies that create 3D objects additively in a layer-by-layer manner from a predefined 3D computer model.