3D printed Post Office

Published On: 19-08-2023

Why is in news? PM hails India's first 3D printed Post Office at Cambridge Layout, Bengaluru

The Prime Minister has called **India's first 3D printed Post Office at Cambridge Layout, Bengaluru**, a testament to our nation's innovation and progress.

3D-printing:

3D printing or additive manufacturing is a **process of making three-dimensional solid objects** from a digital file.

The creation of a 3D printed object is achieved **using additive processes**.

In an additive process, an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object.

3D printing enables yoto produce complex shapes using less material than traditional manufacturing methods.

Where an inkjet printer sprays liquid ink and a laser printer uses solid powder, a 3D printer uses neither.

The 3-D printer **deposits layers of molten plastic or powder and fuses them together** (and to the existing structure) **with adhesive or ultraviolet light**.

The most common 3D printing raw materials are the **commodity thermoplastic polymers**:Acrylonitrile butadiene styrene (ABS), Polylactic acid (PLA), Polyethylene terephthalate glycol-modified (PETG).

These materials, made in huge quantities by the global chemicals and plastics industry, are readily available, relatively inexpensive.

Benefits of 3 D Printing:

Potentially reduces overall construction cost significantly

Order of magnitude difference in overall construction time

Brings down the related carbon footprint

Increases productivity of labour involved

Offers raw material flexibility/utilisation of eco-friendly materials.