

India's First 3D Printed House

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In News: Union Finance Minister Nirmala Sitharaman recently inaugurated the country's first 3D printed house at IIT, Madras, conceived by former alumni and built in just five days.

About India's First 3D Printed House-

- With TVASTA Manufacturing Solutions using indigenous methodologies in design and construction till completion, Indian mind, Indian design and Indian creativity has been involved.
- The single-storey house has one bedroom, hall and kitchen, developed with 'Concrete 3D Printing' technology.
- It was **developed in association with Habitat for Humanity's Terwilliger Centre for Innovation in Shelter.**
- TVASTA Manufacturing Solutions co-founder Adithya V S said the concrete 3D printing technology is a '**ready to implement methodology**' with no lead time on **manufacturing**, thereby reducing construction time.
- This technology can **enable deep personalisation of construction for the ultimate target segment** – who is the individual.

3D Printing-

- 3D printing, **also known as additive manufacturing**, is a technique for creating prototypes or working models of structures by layering materials such as plastic, resin, thermoplastic, metal, fibre, or ceramic.
- The **model to be printed is created by the machine using software**, which then sends instructions to the 3D printer.
- The majority of 3D printing and the industry that surrounds it takes the form of additive manufacturing, in which companies create custom items for projects with very specific requirements, such as lightweight equipment.
 - **Medical and allied products** are one of the most popular uses for such products.
 - With a market share of more than 35%, the **United States remains the world pioneer in 3D printing**.
- China controls about half of the Asian economy, followed by Japan (30%) and South Korea (10%).