Technologies in Additive Manufacturing /3D Printing

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

Technologies Used:

A. Powder bed fusion technology:
1. Selective Laser Sintering (SLS)
2. Selective Laser Melting (SLM)
3. Direct Metal Laser Sintering (DMLS)
4. Electron Beam Melting (EBM)
5. Selective Heat Sintering (SHS)

B. Light Polymerization technology:
1. Stereolithography (SLA)
2. Digital Light Processing (DLP)

C. Fused Deposition Modelling (FDM) Technology

D. Direct Energy Deposition Technology
1. Electron Beam Direct Manufacturing (EBDM)
2. Ion Fusion Formation (IFF)
3. Laser Powder Forming (LPF)

E. Sheet Lamination Technology
1. Laminated Object Manufacturing (LOM)
2. Ultrasonic Additive Manufacturing (UAM)

F. Binder Jetting Technology (BJT) or Inkjet Powder Printing (IPP)

G. Material Jetting Technology

References:

The following is a non-exhaustive and suggestive list of resources on the concept of digital literacy:

Resource Description	
Video - SLS	Link
Video - SLM	Link
Video - DMLS	Link
Video - SHS	Link
Video - SLA	Link
Video - FDM	Link
Video - LOM	Link
Video – BJT/IPP	Link

Note:

1. Mentors are recommended to build their content and deliver to their audience in the ATLs and not plagiarize.
2. Mentors are encouraged to explore resources and share critical observations within communities and with AIM.
3. Please note these are third party links and AIM or NITI Aayog does not endorse any person(s) or organizations mentioned on or related to these links.
4. The opinions and views expressed by the mentor during her/his interaction are of their own and do not necessarily reflect the views of AIM, NITI Aayog.
5. Mentors are aware that the engagement with the ATLs is treated as a community service and there shall be no financial transactions between any stakeholder and mentor for any official ATL related activity.