

1. What does FDM stand for in 3D printing?

Fast Design Modeling

*Fused Deposition Modeling

Final Design Method

Functional Deposition Method

2. What is the purpose of a build plate?

To heat the filament

*To support the 3D model during printing

To control the printer's movements

To store the 3D model files

3. Which term describes the maximum size a 3D printer can print?

*Build Volume

Print Area

Print Capacity

Model Size

4. What is CAD an acronym for?

*Computer-Aided Design

Creative Application Development

Computerized Art Design

Constructive Advanced Design

5. What does the term "overhang" refer to in 3D printing?

*The part of a print that extends unsupported by the layer below

The excess material that must be removed after printing

The cooling process of a printed object

The initial layer of a print that adheres to the build plate

6. In 3D printing, what is an extruder?

The component that cools down the filament after printing

*The part that feeds filament into the nozzle for printing

The platform on which the object is built

The software used to design 3D models

7. What is "layer adhesion"?

The process of adding layers to a print

*The strength of the bond between successive layers in a printed object

The time it takes to print each layer

The thickness of each layer printed

8. Which technology uses light to cure liquid resin in 3D printing?

FDM (Fused Deposition Modeling)

*SLA (Stereolithography)

SLS (Selective Laser Sintering)

LOM (Laminated Object Manufacturing)

9. What is a "brim" in 3D printing?

A type of filament used for printing

*A thin layer printed around the base of an object to help with adhesion

A tool used to measure print dimensions

A cooling mechanism for printed objects

10. What does "G-Code" refer to in 3D printing?

A type of filament used in FDM printers

*A programming language used to control 3D printers and CNC machines

A software for designing 3D models

A measurement unit for print resolution

11. What is the primary process used in Fused Deposition Modeling (FDM)?

Sintering

*Layer-by-layer extrusion of thermoplastic material

Photopolymerization

Powder binding

12. Which emerging technology focuses on printing living tissues and organs?

Multi-material printing

*Bio-printing

Nano-scale printing

Stereolithography

13. What is a significant application of Direct Metal Laser Sintering (DMLS)?

Creating plastic prototypes

*Manufacturing metal parts for aerospace components

Printing textiles

Producing ceramics

14. Which of the following is a benefit of multi-material printing?

Reduced print time

Ability to use only one material type

*Creation of smart materials with programmable properties

Lower cost of printing

15. What does Industry 4.0 integration in 3D printing primarily involve?

Manual quality control processes

*AI-powered design optimization and automated production systems

Traditional manufacturing methods

Increased reliance on human labor

16. Which sustainability initiative is NOT associated with future 3D printing trends?

Use of biodegradable printing materials

Development of energy-efficient printing processes

*Increased waste generation in manufacturing

Recycling systems for print materials

17. What is one of the challenges faced by the 3D printing industry?

Unlimited material options

*High cost of equipment and materials

Excessive speed of production processes

Lack of applications in various industries

18. Which application area involves the use of 3D printing for custom prosthetics?

Aerospace components

*Healthcare revolution

Consumer markets

Architecture

19. What is the term used to describe the process of creating complex geometries that were previously unachievable?

Traditional manufacturing

*Additive manufacturing

Subtractive manufacturing

Mass production

20. In what way can 3D printing contribute to the DIY and maker movement?

By limiting access to manufacturing tools

*Through personalized home manufacturing capabilities

By increasing costs for small-scale projects

By reducing the variety of products available