SPRINT 3D PRINTING PRE-ASSESSMENT ANSWER KEY

1. What is another name for 3D printing?
   a) Subtractive manufacturing
   b) Additive manufacturing (correct)
   c) Injection molding
   d) CNC machining

2. Which of the following is a primary advantage of 3D printing?
   a) Best for mass production
   b) Creates a lot of material waste
   c) Allows for custom part creation with less waste (correct)
   d) Requires expensive molds

3. What is the primary material used in Fused Deposition Modeling (FDM) printing?
   a) Resin
   b) Liquid metal
   c) Plastic filament (correct)
   d) Concrete

4. Stereolithography (SLA) uses which of the following to harden resin?
   a) Heat
   b) UV laser (correct)
   c) Water
   d) Pressure

5. What is the purpose of supports in 3D printing?
   a) To prevent prints from overheating
   b) To create a stronger infill structure
   c) To hold up overhanging parts (correct)
   d) To increase print speed

6. What is an isometric drawing?
   a) A 2D sketch without depth
   b) A 3D drawing using 120-degree angles (correct)
   c) A perspective drawing
   d) A hand-drawn sketch without guidelines

7. What does CAD stand for?
   a) Computerized Automated Design
   b) Computer-Aided Drafting
   c) Computer-Aided Design (correct)
   d) Constructive Additive Design

8. What does slicing software do?
   a) Converts 3D models into 2D blueprints
   b) Converts 3D models into printer instructions (correct)
   c) Creates new designs
   d) Slices filament during printing

9.What is the function of an adhesion method like a skirt, brim, or raft?
a) To prevent overheating
b) To ensure the first layer sticks properly (correct)
c) To reduce material usage
d) To speed up printing

10.What is G-code?
a) A programming language for game development
b) A software that generates 3D designs
c) Instructions that tell the 3D printer what to do (correct)
d) A file format for CAD software

SPRINT 3D PRINTING POST-ASSESSMENT ANSWER KEY

1.What material does SLA 3D printing use?
a) Plastic filament
b) Liquid resin (correct)
c) Metal powder
d) Rubber

2.What software converts a 3D model into step-by-step printing instructions?
a) CAD software
b) Slicing software (correct)
c) Rendering software
d) Image editing software

3.What is a key feature of isometric drawings?
a) 90-degree angles
b) Uses 120-degree angles (correct)
c) Only used in hand sketches
d) Requires color coding

4.What causes bed adhesion failure?
a) Incorrect temperature settings (correct)
b) Too much filament
c) Printer moving too slowly
d) High infill percentage

5.Which of the following improves print accuracy?
a) Increasing the speed
b) Lowering the layer height (correct)
c) Reducing infill percentage
d) Using less support

6.What problem occurs if filament is under-extruded?
a) Voids and gaps in prints (correct)
b) Overheated layers
c) Warping
d) Excessive supports

7.Which CAD software is widely used by professionals?
a) Paint 3D
b) SolidWorks (correct)
c) MS Word
d) Excel

8.What type of 3D printing method is best for high-detail prints?
a) FDM
b) SLA (correct)
c) SLS
d) Injection molding

9.What happens if too much filament is extruded?
    a) The print becomes brittle
    b) The print has gaps
    c) The print becomes messy and bloated (correct)
    d) The printer stops working

10.Where can pre-made 3D models be downloaded?
    a) Wikipedia
    b) Thingiverse (correct)
    c) Google Drive
    d) YouTube