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CUSTOMIZED ASSESSMENT BLUEPRINT

STRATASYS FDM CERTIFICATION

Test Code: 8649

Version: 01

Specific Competencies and Skills Tested in this Assessment:

Industry and Applications

Describe industry utilization for Fused Deposition Modeling (FDM)
Identify primary applications for FDM

Technology and Specifications

Identify key safety areas
Define system specifications for FDM Stratasys printers
Recognize system hardware
Describe FDM operations
Articulate performance of routine user-maintenance

Materials

Define American Society for Testing and Materials (ASTM) standards
Discuss material properties and performance by application
Identify support materials that can be used with associated model material
Identify compatible materials available for various platforms

Design and Fabrication

Describe additive general design considerations including MESH anatomy
Articulate impacts of CAD to STL export settings

Software Processing and Communication

Demonstrate GrabCAD Print workflow
Demonstrate Insight workflow and advanced processing

Post-Processing

Define post-processing, finishing, and tools used for post-processing
Define primary FDM processes
Define secondary FDM processes

Stratasys FDM Certification (continued)

Written Assessment:

Administration Time: 3 hours

Number of Questions: 100

Areas Covered:

- 11% Industry and Applications
- 24% Technology and Specifications
- 20% Materials
- 8% Design and Fabrication
- 24% Software Processing and Communication
- 13% Post-Processing

Sample Questions:

Using FDM for evaluating early concepts is called

- A. manufacturing
- B. inspection
- C. prototyping
- D. validation

When should the user manually calibrate the printer?

- A. at the start of each print job
- B. if part quality deterioration is noticeable
- C. on the start of every week
- D. in the morning before the first job is printed

The purpose of a Stratasys material data sheet is to give

- A. information on target applications for the material
- B. material safety information according to the Global Harmonized System
- C. detailed printer setup for the chosen material
- D. detailed material properties according to ASTM Testing Standards

Why is support material needed in 3D printing?

- A. it mixes with model material to improve build quality
- B. to support overhangs and internal cavities
- C. to improve the surface finish of models
- D. to strengthen build materials which would otherwise be brittle

The purpose of anchor pins is to

- A. make the part stronger
- B. prevent warping/curling
- C. stabilize tall geometries
- D. increase print speed