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# **PolyJet™ Certification**

## General Assessment Information

### Blueprint Contents

General Assessment Information  
Written Assessment Information

Specific Competencies Covered in the Test  
Sample Written Items



Stratasys, a company with over three decades of experience in driving change in 3D printing technologies, partnered with NOCTI for development of its FDM Certification to assist in ensuring knowledge and skills in technologies, applications, materials, operations, software, design, and post processing. Available for secondary and post-secondary programs, and industry professionals seeking certification, the certification is available to verified Stratasys sites.

**Test Type:** This certification assessment has been customized by Stratasys. In partnership with NOCTI for development services and delivery through NOCTI's online testing system, this written assessment measures occupational technical skills and theoretical knowledge.

**Development Team:** Subject Matter Experts recruited by Stratasys served as the development team.



15.1307 - 3-D Modeling and Design  
Technology/Technician



Science, Technology,  
Engineering, and Mathematics



17-2199.00 - Engineers, All Other

## Written Assessment

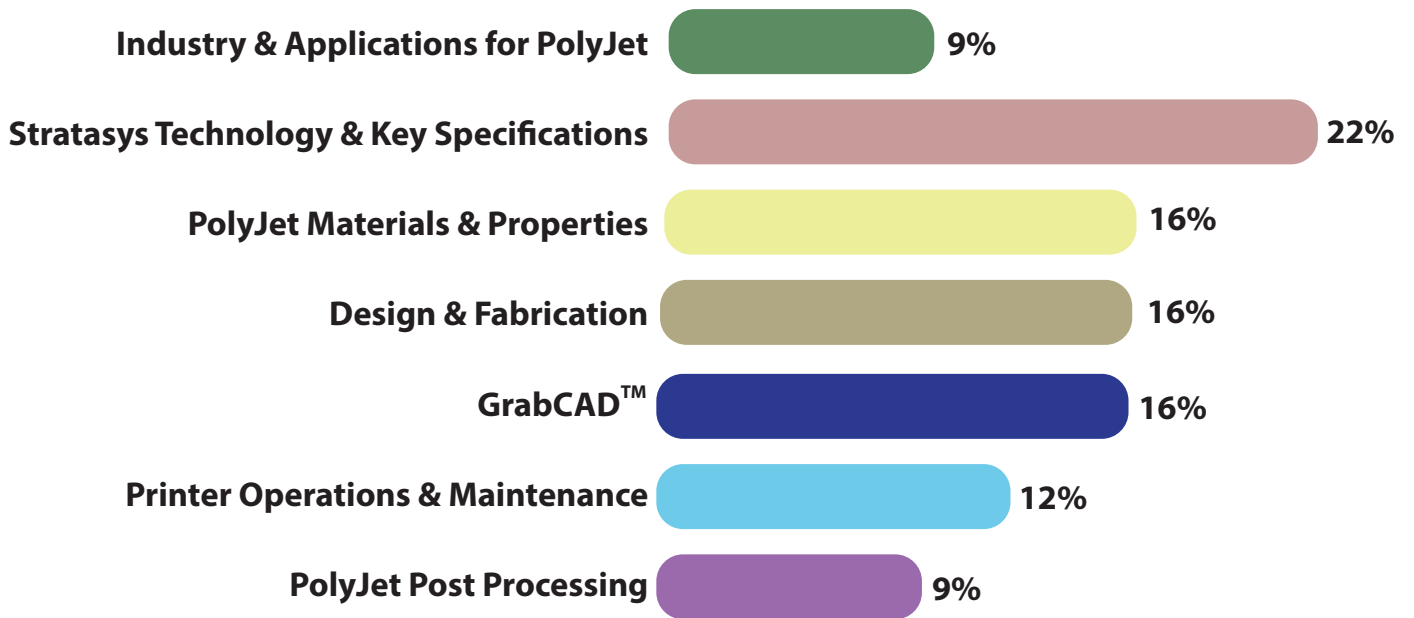
This written assessment consists of questions to measure an individual's factual theoretical knowledge.

**Administration Time:** 3 hours

**Number of Questions:** 116

**Number of Sessions:** This assessment may be administered in one, two, or three sessions.

### Areas Covered



## Specific Competencies and Skills Tested in this Assessment

### **Industry and Applications for PolyJet**

- Identify PolyJet applications and industries
- Identify advantages and disadvantages of PolyJet

### **Stratasys Technology and Key Specifications**

- Describe PolyJet hardware
- Describe PolyJet printing process
- Identify key safety areas

### **PolyJet Materials and Properties**

- Define PolyJet material properties
- Name and identify Stratasys PolyJet material families
- Identify when a material should be used and why

### **Design and Fabrication**

- Identify design considerations
- Describe PolyJet pre-processing
- Discuss file types

### **GrabCAD™**

- Discuss printer setup
- Describe importing files
- Discuss tray settings
- Describe model settings
- Identify part orientation and placement

Continued on the next page

## Specific Competencies and Skills Tested in this Assessment

### **Printer Operations and Maintenance**

- Describe routine cleaning and checks
- Discuss weekly maintenance
- Describe monthly/periodic maintenance
- Troubleshoot part quality

### **PolyJet Post Processing**

- Define post-processing and finishing
- Describe support removal
- Describe post-processing tools
- Identify types of PolyJet post-processing

## Sample Questions

### What is an advantage of PolyJet over FDM?

- A. excellent detail visualization
- B. higher part strength
- C. material properties more stable over time
- D. advanced functional performance

### Why is support material needed in 3D printing?

- A. it mixes with model material to improve build quality
- B. to allow for accurate overhangs and internal cavities
- C. it improves heat resistance
- D. to strengthen build materials, which would otherwise be brittle

### What two material properties does digital ABS combine?

- A. color and clarity
- B. high temperature and high toughness
- C. flexibility and durability
- D. high chemical resistance and low outgassing

### What is a key design consideration when designing assemblies?

- A. clearances
- B. material infill
- C. material type
- D. color

### With full CMYK color materials loaded in a J850, which GrabCAD™ Print Color Profile must be used to only allow greyscale printing?

- A. saturation
- B. perceptual
- C. Stratasys B&W
- D. vivid CMY

