



*Assessment Blueprint*

*AMBA Master Moldmaker Certification*

*Test Code: 8281 Version: 01*

## Specific Competencies and Skills Tested in this Assessment:

### Advanced Planning and Review

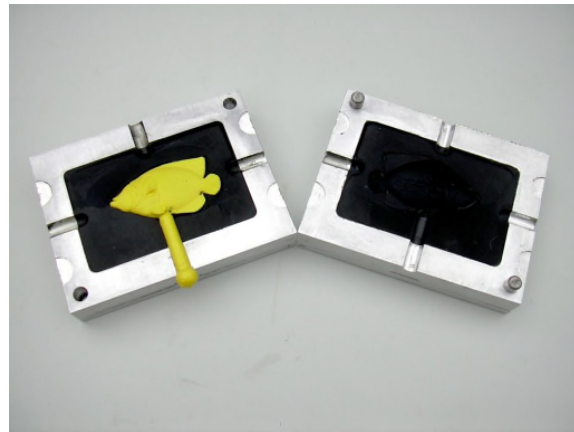
- Redline a mold design
- Identify mold manufacturing cost issues

### Mold Design

- Check mold components for fit and function
- Design jigs and fixtures

### Plastic Injection Molding

- Describe the process of plastic injection molding
- Define functions of the plastic injection mole
- Describe injection molded part features
- Describe injection molded part defects
- Control mold temperature
- Describe parts and functions of the cavity/core assembly
- Describe the plastic delivery system
- Describe mold locating and spotting
- Describe mold ejection systems



### Alternative Molding Process

- Describe blow molding
- Describe extrusion molding processes
- Describe plastic/foam molding processes
- Describe rotational molding process
- Describe thermoform molding process
- Describe metal injection molding
- Define the die-casting process

## *Specific Competencies and Skills continued:*

### **CAD/CAM and other Software**

- Use CAD software to determine undocumented dimensions
- Use CAD software to troubleshoot
- Demonstrate concepts of programming using CAM software
- Demonstrate knowledge of communication software
- Use business production software

### **Inspection and Measurement**

- Request and verify part dimensions and features data
- Perform in-process checks

### **Assembly, Fit and Finish**

- Bench and polish steel
- Perform or request specialty finishing
- Spot together shut off areas
- Check and refine motion component assembly
- Verify operation of temperature management system
- Verify operation of hot runner manifold systems
- Verify customer-approved components
- Verify accuracy of build

### **Project Management**

- Perform a design review
- Use project management tools and/or software



*Specific Competencies and Skills continued:*

**Mold Maintenance and Repair**

- Perform general maintenance
- Perform flash repairs

**Troubleshoot Mold Problems**

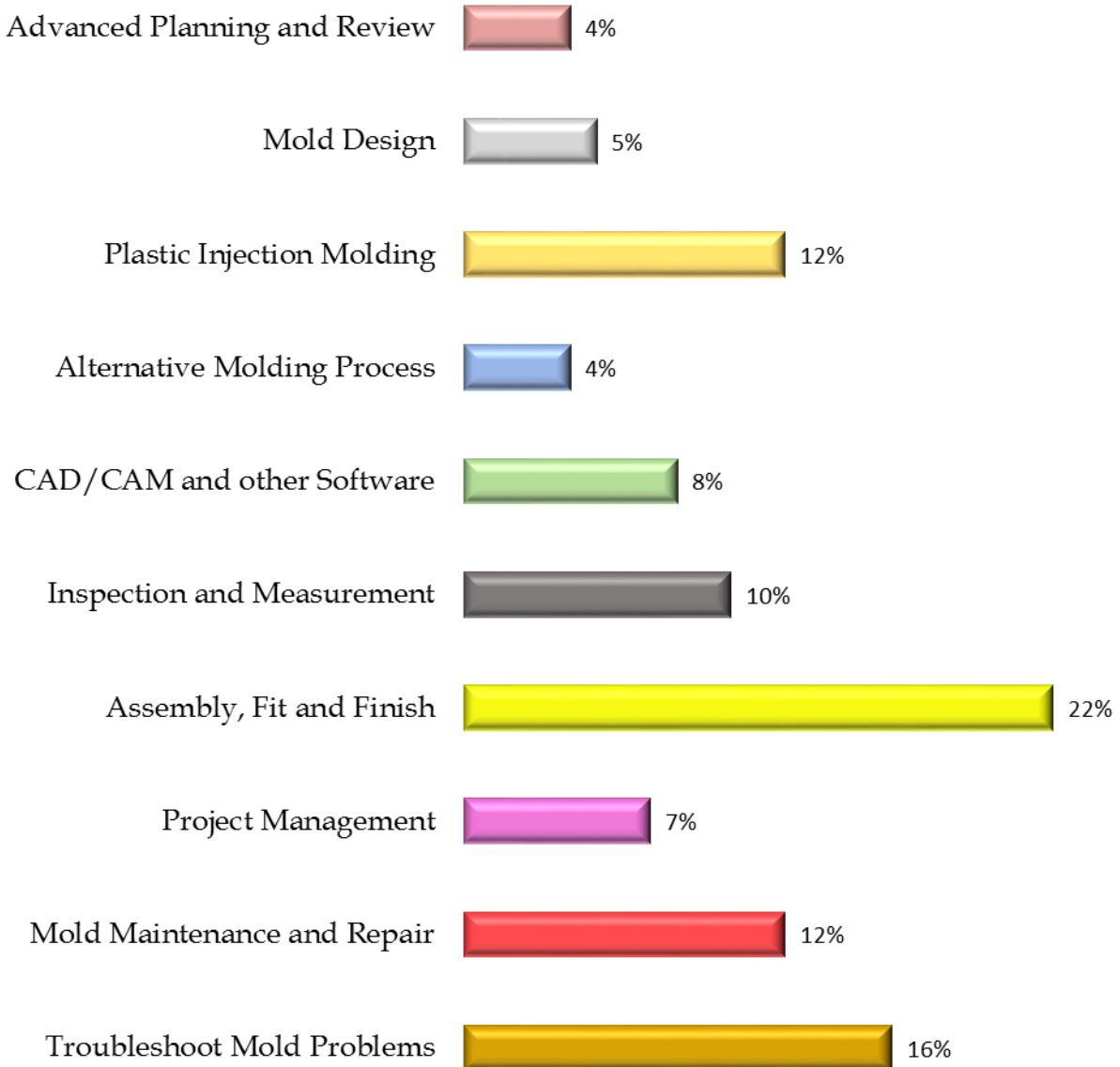
- Troubleshoot fit and function problems
- Troubleshoot hydraulic/pneumatic issues
- Troubleshoot electrical issues on molds
- Troubleshoot balance and fill issues
- Troubleshoot flow or cosmetic issues

## Written Assessment:

Administration Time: 4 hours

Number of Questions: 191

### Areas Covered:



## Sample Questions:

A uniformed thickness on a conforming area of a plastic molded part is called

- A. wall thickness
- B. draft
- C. ribs
- D. wall structure

Which of the following is something you would **NOT** create using CAM?

- A. 2D pocket program
- B. True position
- C. 3 dimensional surface machining
- D. 4 axis indexing

To leave a mirror-like finish on a surface, which polish method is appropriate?

- A. crocus cloth
- B. diamond polish
- C. ruby polish
- D. Arkansas stones

Before conducting a design review, determine all of the following EXCEPT

- A. selection of the design team
- B. vendor of finished components
- C. materials required to manufacture the mold components
- D. location of customer

When a mold makes a high pitched squeak, look for

- A. galling
- B. air leaks
- C. stuck plastic
- D. mice