Specific competencies and skills tested in this assessment:

Manufacturing
The student will understand and apply safe practices and professional machine shop procedures
The student will demonstrate proper equipment safety procedures
The student will use basic math and measuring skills

Welding
The student will identify welding tools and equipment
The student will demonstrate an understanding of welding processes
The student will be able to interpret drawings, plans, and control documents
The student will be able to identify generally used welding materials
The student will demonstrate ability to understand, plan, and complete core welding processes
The student will demonstrate proper use of the tool to conduct shielded metal arc welding processes
The student will demonstrate proper use of the tool to conduct manual oxy fuel gas cutting processes
The student will demonstrate proper use of equipment to conduct oxy fuel welding processes
The student will demonstrate proper use of the tool to conduct gas metal arc welding processes
The student will demonstrate proper use of the tool to conduct flux cored arc welding processes
Manufacturing and Welding (continued)

Written Assessment:

Administration Time: 2 hours
Number of Questions: 102

Areas covered:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>66%</td>
<td>Welding</td>
</tr>
</tbody>
</table>

Sample Questions:

Approved safety glasses should always be worn because they are
   A. tested and rated to protect you
   B. required by shop safety rules
   C. required by OSHA
   D. all of the above

After the first pass is made on a practice plate, cool the metal in
   A. oil
   B. kerosene
   C. soap
   D. water

Beveling weld joint edges will insure
   A. complete penetration
   B. proper alignment
   C. a good fit-up
   D. ease of welding

Which of these is a process where gas is heated to an ionized state to use in cutting?
   A. oxy/fuel cutting
   B. oxy/acetylene cutting
   C. plasma arc cutting
   D. oxy/mapp cutting

The alloying elements in aluminum determine its
   A. weight
   B. color
   C. weldability
   D. availability