

APPENDIX D
Test Specification for Final Primary Skills Certification Test

A	Mold Technology	# Test Items
	1 Describe mold building profession	3
	2 Define common vocabulary used in the mold building profession	7
	3 Describe the type of and flow of work in the industry	4
	4 Demonstrate knowledge of plastics	1
B	Engineering Documents	
	5 Identify common symbols and features on blueprint	5
	6 Intrepid geometric dimensioning and tolerancing (GD&T) features and functions	3
	7 Interpret views on a print	4
	8 Access and manipulate electronic blueprint files	3
	9 Interpret and view 3D models	5
C	Measurement and Inspection	
	10 Operate precision measuring equipment	5
	11 Use reference measuring devices	4
	12 Demonstrate knowledge of Coordinate Measure Machine	1
	13 Identify function and operation of visual inspection equipment	3
D	Mechanical	
	14 Demonstrate knowledge of operation and function of electrical components on a mold	2
	15 Demonstrate knowledge of operation and function of hydraulic component on molds	3
	16 Demonstrate knowledge of operation and function of mechanical components on molds	5
	17 Demonstrate knowledge of operation and function of pneumatic components on molds	2
E	Principles of Work Holding	
	18 Describe principles of work holding	5
	19 Use and maintain chucks	2
	20 Machine between centers	1
	21 Use and maintain vises	3
	22 Use and maintain fixtures	3
	23 Use and maintain magnetic holding devices	4
F	Coolants and Oils	
	24 Describe basics of coolants and oils	2
	25 Describe chemical-based cutting fluids	0
	26 Describe soluble-based cutting fluids	1
	27 Describe machine lubricants and oils	1
	28 Describe safety and maintenance when using cutting fluids	1
G	Principles of Tooling	
	29 Describe tooling basics	4
	30 Describe tooling materials	4
	31 Define tool selection and tool life	3
H	Milling Machine	
	32 Define major components, types and common operations of machining centers	3
	33 Perform manual milling machine setup	3
	34 Perform milling operations	5

	35	Perform tapping operations	5
	36	Perform reaming operations	4
	37	Set up basic drilling equipment	3
	38	Perform basic drilling equipment operation	3
I		Surface Grinder	
	39	Perform surface grinder set up	6
	40	Perform surface grinding operations	6
J		Grinders	
	41	Operate pedestal grinders	5
K		Lathe	
	42	Identify major components, types and operations of a lathe	4
	43	Perform lathe set up	2
	44	Perform basic lathe operations	5
L		Advance or Specialty Technology Operations	
	45	Demonstrate knowledge of CNC milling and turning equipment	4
	46	Demonstrate knowledge of Electrical Discharge Machining (EDM)	2
	47	Demonstrate knowledge of Internal Diameter (ID) and Outside Diameter (OD) grinders	1
	48	Demonstrate knowledge of gun drills	1
	49	Demonstrate knowledge of multi-axis milling machine	1
	50	Demonstrate knowledge of polishes and mold finishes	2
M		Metallurgy	
	51	Demonstrate knowledge of metallurgy	3
	52	Demonstrate knowledge of heat treating of metals	4
N		Equipment Maintenance	
	53	Perform preventative maintenance on machinery	5
O		Business Philosophy and Communication	
	54	Participate in teams	2
	55	Use problem solving strategies	4
	56	Demonstrate knowledge of lean manufacturing principles	1
	57	Demonstrate knowledge of business excellent concepts and philosophy	2
P		Material Handling	
	58	Operate hoist and cranes	3
	59	Perform rigging	4
	60	Operate Forklift	2