

Welder Harmonized Level 1

STANDARDIZED LEVEL EXAM (SLE) BREAKDOWN

The following table shows the number of questions per General Area of Competency (GAC) and Competency on the *Welder Harmonized Level 1 SLE*.

Number of questions on each exam: 90

Level 1 GAC/Competency	#
A. OCCUPATIONAL SKILLS	26
A2. Describe safe working practices	7
A3. Perform basic trade related mathematical calculations	3
A4. Use and maintain measuring and layout tools	2
A5. Use and maintain hand tools	3
A6. Use and maintain power tools (electric and pneumatic)	5
A7. Describe shop materials	1
A8. Apply lifting, hoisting and rigging procedures	5
B. CUTTING AND GOUGING PROCESSES	13
B1. Describe Oxy-Fuel Cutting (OFC) processes and their applications	1
B2. Describe Oxy-Fuel Cutting (OFC) equipment and its operation	3
B3. Perform freehand and guided cuts on low carbon steel (OFC)	3
B4. Use automatic and semi-automatic cutting machines (OFC)	0
B5. Describe CAC-A and PAC processes, equipment and their applications	4
B6. Use CAC-A and PAC cutting and gouging processes and equipment	2
C. FUSION AND BRAZE WELDING (TB) USING THE OXY-FUEL (OFW) PROCESS	4
C1. Describe fusion welding, braze welding and brazing processes and their applications	1

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Level 1 GAC/Competency	#
C2. Describe fusion welding, braze welding and brazing equipment and its operation	1
C3. Describe filler metals, fluxes and tips used for fusion welding, braze welding and brazing	1
C4. Describe joint design and weld positions for OFW	1
C5. Fusion weld on low carbon steel sheet	0
C6. Braze weld (TB) using the OFW process	0
C7. Silver alloy braze on similar and dissimilar metals	0
D. SHIELDED METAL ARC WELDING (SMAW)	26
D1. Describe the SMAW process	5
D2. Describe SMAW equipment and its operation	5
D3. Select electrodes for SMAW	5
D4. Describe basic joint design and weld positions for SMAW	5
D5. Describe weld faults and distortion in fabrications in SMAW	5
D6. Use the SMAW process on low carbon steel plate and pipe	0
D7. Use the hardsurfacing process on low carbon steel	1
D9. Use the SMAW process on stainless steel and/or low carbon steel plate and pipe	0
E. SEMI-AUTOMATIC AND AUTOMATIC WELDING	17
E1. Describe GMAW, GMAW-P, FCAW, MCAW and SAW processes and their applications	4
E2. Describe semi-automatic and automatic welding equipment and its operation	5
E3. Describe filler metal and shielding gases for semi-automatic and automatic processes	4
E4. Use the GMAW and GMAW-P process	2
E5. Use the FCAW process	2
I. WELDING DRAWINGS, LAYOUT AND FABRICATION	4
I1. Identify common welding symbols and bolted connections	4
Total:	90

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