

Assessment Blueprint

Assessment Overview

Sector	Construction
Job Role	Construction Welder
QP Code	CON/Q1252
Version	2.0
NSQF level	4
No. of Questions (Theory + Practical+Viva)	39+8+10=57
Duration (Minutes)	Theory: 60 Minutes Viva: 60 Minutes Practical: 360 Minutes
Acceptable level of variance in duration and no. of Questions Per NOS	+ -10%
Language	English

INSTRUCTIONS

1. Total duration of the examination is 480 Minutes (Theory: 60 Minutes + Viva: 60 Minutes + Practical: 360 Minutes)

S.No.	NOS Code	NOS Details	Question Type	Question	Option 1 (A)	Option 2 (B)	Option 3 (C)	Option 4 (D)	Correct Answer	Marks Assigned	
1	CON/N1206	Carry out grinding activities on structural steel elements	MCQ Type	Which PPE is essential while grinding structural steel elements?	Safety goggles	Welding apron	Earthing cable	Welding electrode	A	6	
2			MCQ Type	What should be inspected before using a grinding machine on steel?	Gas regulator	Welding rod	Electrode holder	Grinding wheel	D	6	
3			MCQ Type	Why is grinding performed on welded structural steel joints?	Change steel grade	Increase weld length	Remove weld spatter	Reduce plate thickness	C	6	
4			MCQ Type	Which condition can make grinding a structural steel element unsafe?	Damaged wheel	Clean surface	Proper guard	Firm workpiece	A	6	
5			MCQ Type	How should the structural steel element be positioned during grinding?	Freely balanced	Loosely supported	Vertically suspended	Firmly secured	D	6	
6	CON/N9001	Work according to personal health, safety and environment protocols at construction site	MCQ Type	What should a welder wear to protect eyes during welding operations?	Cotton gloves	Safety shoes	Welding helmet	Ear plugs	C	6	
7			MCQ Type	Which practice helps prevent electric shock during welding work?	Check cable insulation	Increase welding current	Wet welding gloves	Remove machine guard	A	6	
8			MCQ Type	What should be provided at the welding area to control harmful welding fumes?	Additional lighting	Proper ventilation	Wooden flooring	Extra electrodes	B	6	
9			MCQ Type	How should flammable materials be handled near a welding workplace?	Keep them away	Cover with paper	Place beside welder	Store near sparks	A	6	
10			MCQ Type	Which action supports environmental protection during welding activities?	Dump waste onsite	Burn metal waste	Mix waste randomly	Dispose waste properly	D	6	
11	CON/N8001	Work effectively in a team to deliver desired results at the workplace	MCQ Type	What is most important for effective teamwork among construction welders?	Independent task execution	Individual decision-making	Clear communication	Personal work planning	C	6	
12			MCQ Type	How should a welder coordinate work with other team members?	Share task information	Exchange personal opinions	Discuss individual preferences	Report personal achievements	A	6	
13			MCQ Type	What should a welder do when team responsibilities are assigned?	Request additional duties	Select preferred duties	Exchange assigned duties	Perform assigned duties	D	6	
14			MCQ Type	Which action helps resolve a work-related disagreement within a welding team?	Drop the issue	Defend personal views	Compare individual opinions	Present separate solutions	A	6	
15			MCQ Type	What helps a welding team achieve its planned workplace targets effectively?	Personal work methods	Individual performance	Coordinated teamwork	Separate task planning	C	6	
16	DGT/VSQ/N0101	Employability Skills (30 Hours)	MCQ Type	Which behaviour demonstrates professional conduct at a construction workplace?	Responsible behaviour	Casual behaviour	Competitive behaviour	Informal behaviour	A	5	
17			MCQ Type	Which practice demonstrates good time management at a construction workplace?	Rearranging work priorities	Changing work schedules	Extending task duration	Completing tasks timely	D	5	
18			MCQ Type	What helps a construction welder maintain positive relationships with coworkers?	Respectful behaviour	Competitive behaviour	Assertive behaviour	Independent behaviour	A	5	
19			MCQ Type	Which skill helps a welder respond effectively to unexpected workplace problems?	Drawing skills	Presentation skills	Problem-solving skills	Calculation skills	C	5	
20			CON/N1253	Carry out preparatory works for Metal Inert Gas (MIG) Welding operations	MCQ Type	What should be checked before starting MIG welding operations?	Welding machine settings	Electrode coating condition	Hammer handle condition	Measuring tape length	A
21	MCQ Type	Which item is required to provide shielding gas during MIG welding?			Welding brush	Welding electrode	Chipping hammer	Gas cylinder	D	6	
22	MCQ Type	What should be done to the workpiece before starting MIG welding?			Change material grade	Increase plate thickness	Clean the joint surface	Mark electrode length	C	6	
23	MCQ Type	Which component should be checked for proper shielding gas supply?			Gas hose connection	Electrode holder	Ground clamp handle	Welding table leg	A	6	
24	MCQ Type	What should be verified when preparing the MIG welding equipment?			Hammer weight	Electrode coating	Chisel sharpness	Wire feed condition	D	6	
25	CON/N1254	Carry out Metal Inert Gas (MIG) Welding as per requirement in fabrication workshop or construction site	MCQ Type	Which factor should be maintained properly during MIG welding to produce a stable arc?	Correct hammer force	Correct electrode length	Correct chisel angle	Correct wire feed	D	6	
26			MCQ Type	What should be maintained to protect the molten weld pool during MIG welding?	Shielding gas flow	Welding cable length	Electrode coating	Ground clamp size	A	6	
27			MCQ Type	Which movement helps achieve uniform weld deposition during MIG welding?	Interrupted torch movement	Rapid torch movement	Irregular torch movement	Steady torch movement	D	6	
28			MCQ Type	What should be checked after completing a MIG weld on a structural joint?	Weld quality	Gas cylinder colour	Cable insulation length	Torch handle colour	A	6	
29			MCQ Type	Which parameter should be selected according to the material thickness during MIG welding?	Gas cylinder height	Welding current	Torch cable length	Workbench height	B	6	
30	CON/N1255	Carry out preparatory works for Tungsten Inert Gas (TIG) Welding operations	MCQ Type	What should be cleaned before starting TIG welding on a steel joint?	Joint surface	Gas regulator	Torch handle	Welding cable	A	6	
31			MCQ Type	Which component should be checked for correct electrode installation during TIG preparation?	Earth clamp	Gas cylinder	TIG torch	Welding table	C	6	
32			MCQ Type	What should be verified to provide shielding during TIG welding preparation?	Workpiece thickness	Filler rod length	Electrode diameter	Argon gas supply	D	6	
33			MCQ Type	Which condition should be checked before fitting a tungsten electrode into the TIG torch?	Electrode sharpness	Gas hose length	Cable insulation	Clamp position	A	6	
34			MCQ Type	What should be selected according to the welding joint during TIG preparation?	Gas cylinder	Filler rod	Welding helmet	Earth cable	B	6	
35	CON/N1256	Carry out Tungsten Inert Gas (TIG) Welding as per requirement in fabrication workshop or construction site	MCQ Type	Which shielding gas is commonly used during TIG welding operations?	Argon gas	Oxygen gas	Nitrogen gas	Carbon dioxide	A	6	
36			MCQ Type	What should be maintained to produce a consistent TIG weld bead?	Interrupted torch movement	Variable torch movement	Rapid torch movement	Steady torch movement	D	6	
37			MCQ Type	Which component carries the welding current to the tungsten electrode during TIG welding?	TIG torch	Gas regulator	Filler rod	Ground clamp	A	6	
38			MCQ Type	What should be controlled to achieve proper penetration during TIG welding?	Torch cable length	Gas cylinder size	Welding current	Filler rod length	C	6	
39			MCQ Type	What should be inspected after completing a TIG weld on a structural joint?	Cable storage method	Gas cylinder colour	Torch handle condition	Weld bead quality	D	6	
40	CON/N1257	Carry out preparatory work for Shielded Metal Arc Welding (SMAW) operations	MCQ Type	What should be checked first when preparing equipment for SMAW operations?	Wire brush	Chipping hammer	Welding machine	Welding clamp	C	6	
41			MCQ Type	Which factor should be considered when selecting an electrode for SMAW?	Electrode storage	Electrode colour	Electrode packaging	Electrode type	D	6	
42			MCQ Type	What should be done to the joint surface before starting SMAW?	Remove surface contaminants	Increase joint thickness	Change joint position	Mark electrode length	A	6	
43			MCQ Type	Which connection should be checked to establish the welding circuit before SMAW?	Gas connection	Earth connection	Water connection	Air connection	B	6	
44			MCQ Type	What should be checked to ensure electrodes are suitable for welding before use?	Electrode storage shelf	Electrode label colour	Electrode box size	Electrode condition	D	6	
45	CON/N1258	Carry out Shielded Metal Arc Welding (SMAW) as per requirement in fabrication workshop or construction site	MCQ Type	Which parameter should be selected according to the electrode used during SMAW?	Cable length	Plate colour	Welding current	Clamp weight	C	6	
46			MCQ Type	What should be maintained to produce a uniform SMAW weld bead?	Consistent arc length	Variable arc length	Extended arc length	Interrupted arc length	A	6	
47			MCQ Type	What should be removed between successive SMAW weld passes?	Welding current	Electrode coating	Base metal	Slag deposits	D	6	
48			MCQ Type	Which technique helps maintain proper weld penetration during SMAW?	Increasing electrode length	Changing electrode angle	Correct electrode diameter	Reducing electrode diameter	C	6	
49			MCQ Type	What should be inspected after completing the SMAW operation?	Welding machine colour	Electrode package size	Cable storage position	Weld bead quality	D	6	
TOTAL											290

S.No.	NOS Code	NOS Details	Question Type	Question	Tasks to be Performed	Marks Assigne
1	CON/N1206	Carry out grinding activities on structural steel elements	Structured Practical Task	Demonstrate how you will remove excess weld metal from a structural steel element by grinding.	Step 1: Inspect the welded area and identify excessive weld metal. Step 2: Select a suitable grinding disc for the steel and task. Step 3: Secure the workpiece and establish a safe working position. Step 4: Operate the grinder while maintaining controlled contact with the weld. Step 5: Grind gradually until the excess weld metal is removed. Step 6: Clean the surface and check that excessive material has been removed.	70
2	CON/N9001	Work according to personal health, safety and environment protocols at construction site	Structured Practical Task	Demonstrate how you will maintain electrical safety while operating welding equipment.	Step 1: Inspect welding cables, plugs, electrode holder, and machine connections. Step 2: Ensure cables are properly insulated and free from damage. Step 3: Keep electrical connections away from water and wet surfaces. Step 4: Use proper grounding and suitable electrical protection. Step 5: Avoid touching energized components with bare or wet hands. Step 6: Switch off and isolate the welding machine after completing work.	70
3	CON/N8001	Work effectively in a team to deliver desired results at the workplace	Structured Practical Task	Demonstrate how you will coordinate with team members during structural steel welding work.	Step 1: Understand the assigned welding activity and expected result. Step 2: Discuss work responsibilities with welders, fitters, and helpers. Step 3: Coordinate material handling and positioning before welding. Step 4: Communicate clearly during welding, lifting, and positioning activities. Step 5: Inform team members about welding progress and work requirements. Step 6: Check the completed work together and report the result.	70
4	DGT/VSQ/N6101	Employability Skills (30 Hours)	Structured Practical Task	Demonstrate how you will create a basic biodata for a Construction Welder position.	Step 1: Collect personal details such as name, contact number, and address. Step 2: Enter educational qualifications and relevant technical training. Step 3: Mention welding skills, processes, tools, and equipment you can operate. Step 4: Add relevant work experience, job roles, and training certificates. Step 5: Include safety knowledge, teamwork abilities, and other relevant skills. Step 6: Check all information for accuracy and prepare the biodata in a clear format.	30
5	CON/N1253	Carry out preparatory works for Metal Inert Gas (MIG) Welding operations	Structured Practical Task	Demonstrate how you will prepare and position a workpiece for MIG welding.	Step 1: Inspect the workpiece for damage and surface contamination. Step 2: Clean the welding area properly before positioning. Step 3: Select suitable clamps or fixtures for holding the workpiece. Step 4: Position the workpiece securely in the required orientation. Step 5: Check the joint fit up and ensure proper contact between pieces. Step 6: Confirm that the workpiece is stable and ready for welding.	70
6	CON/N1254	Carry out Metal Inert Gas (MIG) Welding as per requirement in fabrication workshop or construction site	Structured Practical Task	Demonstrate how you will perform a MIG fillet weld on a steel joint.	Step 1: Clean the surfaces and remove contaminants from the joint. Step 2: Position and secure the workpieces at the required angle. Step 3: Select suitable wire, voltage, wire-feed speed, and gas flow. Step 4: Position the MIG torch correctly at the joint intersection. Step 5: Move the torch uniformly along the joint to form the fillet weld. Step 6: Clean and visually inspect the completed weld for defects.	70
7	CON/N1255	Carry out preparatory works for Tungsten Inert Gas (TIG) Welding operations	Structured Practical Task	Demonstrate how you will prepare shielding gas for a TIG welding operation.	Step 1: Inspect the shielding gas cylinder for damage and identification. Step 2: Secure the cylinder upright using an approved restraint. Step 3: Connect the correct regulator and gas hose securely. Step 4: Check the gas connections for leakage using an approved method. Step 5: Set the required shielding gas flow according to the procedure. Step 6: Confirm a stable gas supply before beginning the welding operation.	70
8	CON/N1256	Carry out Tungsten Inert Gas (TIG) Welding as per requirement in fabrication workshop or construction site	Structured Practical Task	Demonstrate how you will perform a TIG weld using filler metal on a prepared joint.	Step 1: Clean and align the workpieces and prepare the joint. Step 2: Select a compatible filler rod and suitable tungsten electrode. Step 3: Set the welding current, polarity, and shielding gas flow. Step 4: Establish a stable arc while maintaining proper torch distance. Step 5: Add filler metal consistently into the weld pool while moving the torch. Step 6: Complete the weld and inspect the bead for uniformity and defects.	70
9	CON/N1257	Carry out preparatory work for Shielded Metal Arc Welding (SMAW) operations	Structured Practical Task	Demonstrate how you will prepare the metal surface before SMAW welding.	Step 1: Inspect the joint area for rust, oil, paint, moisture, and dirt. Step 2: Remove contaminants using a wire brush or suitable cleaning tool. Step 3: Remove excessive rust or scale from the welding area. Step 4: Dry the surface properly before starting welding. Step 5: Position and secure the workpieces correctly. Step 6: Inspect the prepared joint and confirm it is ready for welding.	70
10	CON/N1258	Carry out Shielded Metal Arc Welding (SMAW) as per requirement in fabrication workshop or construction site	Structured Practical Task	Demonstrate how you will perform a SMAW fillet weld on a steel joint.	Step 1: Clean the surfaces and remove rust, oil, and dirt. Step 2: Position the workpieces correctly and secure them firmly. Step 3: Select a suitable electrode and adjust the welding current. Step 4: Strike the arc and maintain the correct electrode angle. Step 5: Travel steadily along the joint to produce a uniform fillet weld. Step 6: Remove slag after cooling and visually inspect the completed weld.	70
TOTAL						660