National Occupational Skill Standard (NOSS)

Occupational Title : **Scaffolder (Tubular)**

Level : **1**

Sector : **Construction**

Sub - Sector : **Construction Worker**

NOSS ID/NSCO ID :

ISCO NO :

Council for Technical Education and Vocational Training

NATIONAL SKILL TESTING BOARD

Madhyapur Thimi-17, Sanothimi, Bhaktapur, Nepal

Developed: 28-08-2025 (12-05-2082)

2045

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Developed jointly by National Skill Testing Board/CTEVT
and
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Recommended by Construction Technical Sub Committee: July 1, 2006

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Recommended by Construction Technical Sub Committee: 28 August 2025 (12 Bhadra 2082)

1	**Occupational Title: Scaffolder (Tubular)** **Level: 1**
2	**Job Description:** Scaffolder L-1, installs fix tower scaffolding, installs independent tower scaffolding, installs mobile tower scaffolding, installs light cantilever scaffolding, and installs light birdcage scaffolding.
	UNITS OF COMPETENCY: 1. Install fix tower scaffolding 2. Install independent tower scaffolding 3. Install mobile tower scaffolding 4. Install light cantilever scaffolding 5. Install light birdcage scaffolding 6. Perform communication 7. Develop professionalism ***Note: Unit 6 and 7 are not for testing purpose.***
4	**Qualifying Notes/Prerequisites:** • Physical Requirements: Sound health • Entry Requirements: As per NSTB rules. **Additional Information:** • Assessment Types: Performance test only. • Assessment Duration: 4 to 6 Hrs • Recommended Group Size: Maximum 10 candidates

5	**Unit No: 1** **Unit Title: Install fix tower scaffolding**	**Unit code:**
	Elements of competency	**Performance standards**
	1.1 Prepare tools and equipment	1.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 1.1.2 Tools and equipment collected and checked for serviceability. 1.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 1.1.4 Tools and equipment needed for work arranged in designated area.
	1.2 Prepare worksite	1.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority. 1.2.2 Scaffolding site cleared and obstacles removed from the site. 1.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 1.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements.
	1.3 Arrange scaffolding components	1.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 1.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 1.3.3 Defective components separated, tagged, and reported for repair or replacement. 1.3.4 Stacked components verified against work plan and checklist before scaffolding erection.
	1.4 Erect scaffolding	1.4.1 Scaffolding base laid out as per scaffolding structure or scaffolding layout drawing. 1.4.2 Sole board installed at designated location and baseplate placed on levelled sole boards. 1.4.3 Standards placed vertically over base plate at distance of 1.5meter to 2.5 meter or

		as per drawing/site condition. 1.4.4 Scaffold base formed by sequentially fixing first set of ledgers and transoms not exceeding 30 cm from ground. 1.4.5 Diagonal bracings installed to the base frame. 1.4.6 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 1.4.7 Working platform with minimum width of 60 cm and strong enough to withstand load installed at required level. 1.4.8 ***Railing system*** installed on all open sides of platform. 1.4.9 Ladders installed at 250 cm height from ground level in designated location. 1.4.10 Scaffolding structure inspected for strength and stability. 1.4.11 Tag holders hanged at entry areas at visible height. 1.4.12 Safety nets installed and secured to scaffolding components.
	1.5 Dismantle scaffolding	1.5.1 Scaffolding components removed securely in the reverse order of erection. 1.5.2 Scaffolding components and fittings are passed safely to the ground. 1.5.3 Dismantled components and fittings are segregated and stored at designated locations.
	1.6 Clean worksite	1.6.1 Unused materials collected and stored in designated location. 1.6.2 Tools and equipment cleaned, checked for damage and stored in designated location. 1.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principles*** at designated location.

6	**Task Performance Requirements (Tools, Equipment and Materials):** • Measuring tape, marker, pencil, pen, register, eraser, crow bar, wheel barrow, antirust, oil, brush, cloths, mug, scaffolding components, scaffolding fittings, spirit level, adjustable wrench, spanner set, hammer, cutter, pliers, rope, wire, safety net, broom, soap, dust pan, dust bin, barricading materials, safety signage, and personal protective equipment.
7	**Safety and Hygiene (Occupational Health and Safety):** • Use personal protective equipment. • Safe handling of materials, tools and equipment. • Hazards involved in lifting tools, equipment and materials. • Prevent from electrical hazards. • Safe handling and disposal of debris. • Follow workplace safety guidelines.

8	Required Knowledge		
	Technical Knowledge	**Applied Calculation**	**Graphical Information**

	• Tools, and equipment
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
	  ○ Cleaning and maintenance
	  ○ Storage
	• Introduction and types of scaffolding
	• Introduction and types of tubular scaffolding
	• Fix tower scaffolding
	  ○ Introduction and application
	  ○ Standard dimension
	  ○ Site preparation
	  ○ Scaffolding erection technique
	• Scaffolding components and fittings
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
		• Perform unit conversion	• Read and interpret manual/instructional guide.
			• Read and interpret scaffolding drawing

	• Maintenance
	  ○ Importance
	  ○ Types of physical damage
	  ○ Regular cleaning
	  ○ Visual inspection
	  ○ Types and application of anti-rust
	• Dismantling scaffold
	  ○ Preparation of storage area
	  ○ Dismantling sequence and technique
	  ○ Sorting and labeling
	  ○ Storage system (Rack, shelves, bins, containers, pallets, and stacking)
	• Scaffolding safety
	  ○ Fall protection
	  ○ Load limits
	  ○ Electrical hazards
	• Recordkeeping and reporting
	• Waste management
	• Occupational health and safety (OHS)		

9	Assessment of Competency					
	Unit: 1 **Unit Title: Install fix tower scaffolding**					
	Candidate Details		**Assessors Detail**			
	Candidate's Name: Registration Number: Symbol No: Test Centre: Test Date:		Assessors' Name 1. 2. 3.		ID/License No:	

Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
1.1 Prepare tools and equipment	1.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 1.1.2 Tools and equipment collected and checked for serviceability. 1.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 1.1.4 Tools and equipment needed for work arranged in designated area.				
1.2 Prepare worksite	1.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority.				

	1.2.2 Scaffolding site cleared and obstacles removed from the site. 1.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 1.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements.				
1.3 Arrange scaffolding components	1.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 1.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 1.3.3 Defective components separated, tagged, and reported for repair or replacement. 1.3.4 Stacked components verified against work plan and checklist before scaffolding erection.				
1.4 Erect scaffolding	1.4.1 Scaffolding base laid out as per scaffolding structure or scaffolding layout drawing. 1.4.2 Sole board installed at designated location and baseplate placed on levelled sole boards. 1.4.3 Standards placed vertically over base plate at distance of 1.5meter to 2.5 meter or as per drawing/site condition.				

	1.4.4 Scaffold base formed by sequentially fixing first set of ledgers and transoms not exceeding 30 cm from ground. 1.4.5 Diagonal bracings installed to the base frame. 1.4.6 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 1.4.7 Working platform with minimum width of 60 cm and strong enough to withstand load installed at required level. 1.4.8 ***Railing system*** installed on all open sides of platform. 1.4.9 Ladders installed at 250 cm height from ground level in designated location. 1.4.10 Scaffolding structure inspected for strength and stability. 1.4.11 Tag holders hanged at entry areas at visible height. 1.4.12 Safety nets installed and secured to scaffolding components.				
1.5 Dismantle scaffolding	1.5.1 Scaffolding components removed securely in the reverse order of erection. 1.5.2 Scaffolding components and fittings are passed safely to the ground. 1.5.3 Dismantled components and fittings are segregated and stored at designated locations.				

1.6 Clean worksite	1.6.1 Unused materials collected and stored in designated location. 1.6.2 Tools and equipment cleaned, checked for damage and stored in designated location. 1.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principles*** at designated location.				

WT- Written Test **OQ**- Oral Question **PT-** Practical Test **DO** – Direct Observation **SR**- Supervisor's report **SN**–Simulation

RP- Role Play **PG –**Photographs **VD**- Video **CT** – Certificates **TS** – Testimonials (Reward) **PP** – Product Produced

CS – Case Study

Range Statement

Variable	Range
Personal Protective Equipment	*May include but not limited to:* • Helmet • Goggles • Mask • Apron (Cover all) • Gloves • Protective shoes • Ear plug • Safety belt and harness
Hazards	*May include but not limited to:* • Electric line • Ground condition • Underground services
Scaffolding components	*May include but not limited to:* • Standards • Ledger/Runner • Transom/Bearer • Brace • Base Plate • Sole Board • Drop tube

	• Toe board • Hand rail • Mid rail • Guard rail • Caster wheel • Ladder • Puncheon • Butter tube/T tube • Racker/Pick up brace • Platform board • Projection tube • Pulling brace
Fittings	*May include but not limited to:* • Double Coupler (Right Angle Clamps) • Swivel Coupler (Rotation Clamps) • Single Coupler (Putlog clamps) • Sleeve Coupler (Joint Box) • Joint Pins (Inner Joints) • Beam/girder coupler (Beam clamp) • Board coupler/clamp • Base coupler/clamp

Physical damage	*May include but are not limited to:* • Cracks • Wear and tear • Bent or deformed • Splits • Broken
Railing system	*May include but are not limited to:* • Guardrails • Mid rails • Toe boards
3R's principle	*May include but are not limited to:* • Reduce • Reuse • Recycle

5	**Unit No: 2** **Unit Title: Install independent tower scaffolding**	**Unit code:**
	Elements of competency	**Performance standards**
	2.1 Prepare tools and equipment	2.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 2.1.2 Tools and equipment collected and checked for serviceability. 2.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 2.1.4 Tools and equipment needed for work arranged in designated area.
	2.2 Prepare worksite	2.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority. 2.2.2 Scaffolding site cleared and obstacles removed from the site. 2.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 2.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements
	2.3 Arrange scaffolding components	2.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 2.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 2.3.3 Defective components separated, tagged, and reported for repair or replacement. 2.3.4 Stacked components verified against work plan and checklist before scaffolding erection.
	2.4 Erect scaffolding	2.4.1 Scaffolding base laid out as per scaffolding structure or scaffolding layout drawing. 2.4.2 Sole boards placed at designated location and baseplate placed on levelled sole boards.

		2.4.3 Standards inserted into baseplates and positioned vertically at appropriate spacing as per drawing/site condition. 2.4.4 Scaffold base formed by sequentially fixing first set of ledgers and transoms not exceeding 15 cm from ground. 2.4.5 Diagonal bracings installed to the base frame. 2.4.6 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 2.4.7 Working platform with minimum width of 60 cm and strong enough to withstand load is installed at required level. 2.4.8 ***Railing system*** installed on all open sides of platform. 2.4.9 Ladders installed at required levels and location. 2.4.10 Scaffolding structure inspected for strength and stability. 2.4.11 Tag holders hanged at entry areas at visible height. 2.4.12 Safety nets installed and secured to scaffolding components.
	2.5 Dismantle scaffolding	2.5.1 Scaffolding components removed securely in the reverse order of erection. 2.5.2 Scaffolding components and fittings passed safely to the ground. 2.5.3 Dismantled components and fittings are segregated and stored at designated locations.
	2.6 Clean worksite	2.6.1 Unused materials collected and stored in designated location. 2.6.2 Tools and equipment cleaned, checked for damage and stored in designated location.

		2.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** at designated location.
6	**Task Performance Requirements (Tools, Equipment and Materials):** • Measuring tape, marker, pencil, pen, register, eraser, crow bar, wheel barrow, antirust, oil, brush, cloths, mug, scaffolding components, scaffolding fittings, spirit level, adjustable wrench, spanner set, hammer, cutter, pliers, safety net, wire, rope, broom, soap, dust pan, dust bin, barricading materials, safety signage, and personal protective equipment.	
7	**Safety and Hygiene (Occupational Health and Safety):** • Use personal protective equipment. • Safe handling of materials, tools and equipment. • Hazards involved in lifting tools, equipment and materials. • Prevent from electrical hazards. • Safe handling and disposal of debris. • Follow workplace safety guidelines.	

8	Required Knowledge		
	Technical Knowledge	**Applied Calculation**	**Graphical Information**

	• Tools, and equipment
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
	  ○ Cleaning and maintenance
	  ○ Storage
	• Introduction and types of tubular scaffolding
	• Independent scaffolding
	  ○ Introduction and application
	  ○ Standard dimension
	  ○ Types
	  ○ Site preparation
	  ○ Assembly sequence
	  ○ Scaffolding erection technique
	• Scaffolding components and fittings
	  ○ Introduction
	  ○ Types
		• Perform unit conversion	• Read and interpret manual/instructional guide.
			• Read and interpret scaffolding drawing

	○ Uses ○ Safe handling ○ Transportation • Maintenance ○ Importance ○ Types of physical damage ○ Regular cleaning ○ Visual inspection ○ Types and application of anti-rust ○ Safety consideration • Dismantling scaffold ○ Preparation of storage area ○ Dismantling sequence and technique ○ Sorting and labeling ○ Storage system (Rack, shelves, bins, containers, pallets, and stacking) • Recordkeeping and reporting • Waste management • Occupational health and safety (OHS)		

9	**Assessment of Competency**					
	Unit: 2 **Unit Title: Install independent tower scaffolding**					
	Candidate Details			**Assessors Detail**		
	Candidate's Name: Registration Number: Symbol No: Test Centre: Test Date:			Assessors' Name 1. 2. 3.		ID/License No:

Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
2.1 Prepare tools and equipment	2.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 2.1.2 Tools and equipment collected and checked for serviceability. 2.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 2.1.4 Tools and equipment needed for work arranged in designated area.				
2.2 Prepare worksite	2.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority.				

	2.2.2 Scaffolding site cleared and obstacles removed from the site. 2.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 2.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements				
2.3 Arrange scaffolding components	2.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 2.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 2.3.3 Defective components separated, tagged, and reported for repair or replacement. 2.3.4 Stacked components verified against work plan and checklist before scaffolding erection.				
2.4 Erect scaffolding	2.4.1 Scaffolding base laid out as per scaffolding structure or scaffolding layout drawing. 2.4.2 Sole boards placed at designated location and baseplate placed on levelled sole boards.				

	2.4.3 Standards inserted into baseplates and positioned vertically at appropriate spacing as per drawing/site condition. 2.4.4 Scaffold base formed by sequentially fixing first set of ledgers and transoms not exceeding 15 cm from ground. 2.4.5 Diagonal bracings installed to the base frame. 2.4.6 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 2.4.7 Working platform with minimum width of 60 cm and strong enough to withstand load is installed at required level. 2.4.8 ***Railing system*** installed on all open sides of platform. 2.4.9 Ladders installed at required levels and location. 2.4.10 Scaffolding structure inspected for strength and stability. 2.4.11 Tag holders hanged at entry areas at visible height. 2.4.12 Safety nets installed and secured to scaffolding components.				
2.5 Dismantle scaffolding	2.5.1 Scaffolding components removed securely in the reverse order of erection.				

	2.5.2 Scaffolding components and fittings passed safely to the ground. 2.5.3 Dismantled components and fittings are segregated and stored at designated locations.				
2.6 Clean worksite	2.6.1 Unused materials collected and stored in designated location. 2.6.2 Tools and equipment cleaned, checked for damage and stored in designated location. 2.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** at designated location.				

WT- Written Test **OQ**- Oral Question **PT-** Practical Test **DO** – Direct Observation **SR**- Supervisor's report **SN**–Simulation

RP- Role Play **PG –**Photographs **VD**- Video **CT** – Certificates **TS** – Testimonials (Reward) **PP** – Product Produced

CS – Case Study

Range Statement

Variable	Range
Personal Protective Equipment	*May include but not limited to:* • Helmet • Goggles • Mask • Apron (Cover all) • Gloves • Protective shoes • Ear plug • Safety belt and harness
Hazards	*May include but not limited to:* • Electric line • Ground condition • Underground services
Scaffolding components	*May include but not limited to:* • Standards • Ledger/Runner • Transom/Bearer • Brace • Base Plate • Sole Board • Drop tube • Toe board

	• Hand rail • Mid rail • Guard rail • Caster wheel • Ladder • Puncheon • Butter tube/T tube • Racker/Pick up brace • Platform board • Projection tube • Pulling brace
Fittings	*May include but not limited to:* • Double Coupler (Right Angle Clamps) • Swivel Coupler (Rotation Clamps) • Single Coupler (Putlog clamps) • Sleeve Coupler (Joint Box) • Joint Pins (Inner Joints) • Beam/girder coupler (Beam clamp) • Board coupler/clamp • Base coupler/clamp
Physical damage	*May include but are not limited to:* • Cracks • Wear and tear • Bent or warped • Splits

	• Broken
Railing system	*May include but are not limited to:* • Guardrails • Mid rails • Toe boards
3R's principle	*May include but are not limited to:* • Reduce • Reuse • Recycle

5	**Unit No: 3** **Unit Title: Install mobile tower scaffolding**	**Unit code:**
	Elements of competency	**Performance standards**
	3.1 Prepare tools and equipment	3.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 3.1.2 Tools and equipment collected and checked for serviceability. 3.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 3.1.4 Tools and equipment needed for work arranged in designated area.
	3.2 Prepare worksite	3.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority. 3.2.2 Scaffolding site cleared and obstacles removed from the site. 3.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 3.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements.
	3.3 Arrange scaffolding components	3.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 3.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 3.3.3 Defective components separated, tagged, and reported for repair or replacement. 3.3.4 Stacked components verified against work plan and checklist before scaffolding erection
	3.4 Erect scaffolding	3.4.1 Scaffolding base laid out as per scaffolding structure or scaffolding layout drawing. 3.4.2 Sole boards placed at designated location and baseplate placed on levelled sole boards.

		3.4.3 Standards inserted into baseplates and positioned vertically at appropriate spacing as per drawing/site condition. 3.4.4 Scaffold base formed by sequentially fixing base ledgers and transoms not exceeding 15 cm from ground. 3.4.5 Diagonal bracings installed to the base frame. 3.4.6 Stability and alignment of scaffold base checked and adjusted. 3.4.7 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 3.4.8 Working platform with minimum width of 60 cm and strong enough to withstand required load installed at required level. 3.4.9 ***Railing system*** installed on all open sides of platform. 3.4.10 Ladders installed at different levels at required location. 3.4.11 Tag holders hanged at entry areas at visible height. 3.4.12 Caster wheels installed, locked and plan braces securely fitted to prevent movement. 3.4.13 Scaffolding structure inspected for strength and stability.
	3.5 Dismantle scaffolding	3.5.1 Scaffolding components removed securely in the reverse order of erection. 3.5.2 Scaffolding components and fittings passed safely to the ground. 3.5.3 Dismantled components and fittings are segregated and stored at designated locations.
	3.6 Clean workplace	3.6.1 Unused materials collected and stored in designated location. 3.6.2 Tools and equipment cleaned, checked for damage and stored in designated location.

		3.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** at designated location.
6	**Task Performance Requirements (Tools, Equipment and Materials):** • Measuring tape, marker, pencil, pen, register, eraser, crow bar, wheel barrow, antirust, oil, brush, cloths, mug, scaffolding components, scaffolding fittings, spirit level, adjustable wrench, spanner set, hammer, cutter, pliers, broom, soap, dust pan, dust bin, barricading materials, safety signage, and personal protective equipment.	
7	**Safety and Hygiene (Occupational Health and Safety):** • Use personal protective equipment. • Safe handling of materials, tools and equipment. • Hazards involved in lifting tools, equipment and materials. • Prevent from electrical hazards. • Safe handling and disposal of debris. • Follow workplace safety guidelines.	

8	Required Knowledge		
	Technical Knowledge	**Applied Calculation**	**Graphical Information**

	• Tools, and equipment
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
	  ○ Cleaning and maintenance
	  ○ Storage
	• Tubular scaffolding
	  ○ Introduction
	  ○ Types
	• Scaffolding components and fittings
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
	  ○ Transportation
	• Maintenance
	  ○ Importance
		• Perform unit conversion	• Read and interpret manual/instructional guide.
			• Read and interpret scaffolding drawing

	○ Types of physical damage ○ Regular cleaning ○ Visual inspection ○ Types and application of anti-rust ○ Safety consideration • Mobile tower scaffolding ○ Introduction ○ Standard dimension ○ Scaffolding components and specification ○ Assembly sequence ○ Mobility and locking mechanisms • Dismantling scaffold ○ Preparation of storage area ○ Dismantling sequence and technique ○ Sorting and labeling ○ Storage system (Rack, shelves, bins, containers, pallets, and stacking) • Recordkeeping and reporting • Waste management • Occupational health and safety (OHS) • Use of first aid kit		

9	Assessment of Competency					
	Unit: 3 **Unit Title: Install mobile tower scaffolding**					
	Candidate Details			**Assessors Detail**		
	Candidate's Name: Registration Number: Symbol No: Test Centre: Test Date:			Assessors' Name 1. 2. 3.		ID/License No:

Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
3.1 Prepare tools and equipment	3.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 3.1.2 Tools and equipment collected and checked for serviceability. 3.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 3.1.4 Tools and equipment needed for work arranged in designated area.				
3.2 Prepare worksite	3.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority.				

	3.2.2 Scaffolding site cleared and obstacles removed from the site. 3.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 3.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements.				
3.3 Arrange scaffolding components	3.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 3.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 3.3.3 Defective components separated, tagged, and reported for repair or replacement. 3.3.4 Stacked components verified against work plan and checklist before scaffolding erection				
3.4 Erect scaffolding	3.4.1 Scaffolding base laid out as per scaffolding structure or scaffolding layout drawing. 3.4.2 Sole boards placed at designated location and baseplate placed on levelled sole boards.				

	3.4.3 Standards inserted into baseplates and positioned vertically at appropriate spacing as per drawing/site condition. 3.4.4 Scaffold base formed by sequentially fixing base ledgers and transoms not exceeding 15 cm from ground. 3.4.5 Diagonal bracings installed to the base frame. 3.4.6 Stability and alignment of scaffold base checked and adjusted. 3.4.7 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 3.4.8 Working platform with minimum width of 60 cm and strong enough to withstand required load installed at required level. 3.4.9 ***Railing system*** installed on all open sides of platform. 3.4.10 Ladders installed at different levels at required location. 3.4.11 Tag holders hanged at entry areas at visible height. 3.4.12 Caster wheels installed, locked and plan braces securely fitted to prevent movement. 3.4.13 Scaffolding structure inspected for strength and stability.				

3.5 Dismantle scaffolding	3.5.1 Scaffolding components removed securely in the reverse order of erection. 3.5.2 Scaffolding components and fittings passed safely to the ground. 3.5.3 Dismantled components and fittings are segregated and stored at designated locations.				
3.6 Clean workplace	3.6.1 Unused materials collected and stored in designated location. 3.6.2 Tools and equipment cleaned, checked for damage and stored in designated location. 3.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** at designated location.				

WT- Written Test **OQ**- Oral Question **PT-** Practical Test **DO** – Direct Observation **SR**- Supervisor's report **SN**–Simulation

RP- Role Play **PG –**Photographs **VD**- Video **CT** – Certificates **TS** – Testimonials (Reward) **PP** – Product Produced

CS – Case Study

Range Statement

Variable	Range
Personal Protective Equipment	*May include but not limited to:* • Helmet • Goggles • Mask • Apron (Cover all) • Gloves • Protective shoes • Ear plug • Safety belt and harness
Hazards	*May include but not limited to:* • Electric line • Ground condition • Underground services

Scaffolding components	*May include but not limited to:* • Standards • Ledger/Runner • Transom/Bearer • Brace • Base Plate • Sole Board • Drop tube • Toe board • Hand rail • Mid rail • Guard rail • Caster wheel • Ladder • Puncheon • Butter tube/T tube • Racker/Pick up brace • Platform board • Projection tube • Pulling brace

Fittings	*May include but not limited to:* • Double Coupler (Right Angle Clamps) • Swivel Coupler (Rotation Clamps) • Single Coupler (Putlog clamps) • Sleeve Coupler (Joint Box) • Joint Pins (Inner Joints) • Beam/girder coupler (Beam clamp) • Board coupler/clamp • Base coupler/clamp
Physical damage	*May include but are not limited to:* • Cracks • Wear and tear • Bent or warped • Splits • Broken
Railing system	*May include but are not limited to:* • Guardrails • Mid rails • Toe boards
3R's principle	*May include but are not limited to:* • Reduce • Reuse • Recycle

5	**Unit No: 4** **Unit Title: Install light cantilever scaffolding**	**Unit code:**
	Elements of competency	**Performance standards**
	4.1 Prepare tools and equipment	4.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 4.1.2 Tools and equipment collected and checked for serviceability. 4.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 4.1.4 Tools and equipment needed for work arranged in designated area.
	4.2 Prepare worksite	4.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority. 4.2.2 Scaffolding site cleared and obstacles removed from the site. 4.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 4.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements. 4.2.5 Existing structure and ***structural attachment points*** for cantilever projections are checked and verified for structural integrity and suitability.
	4.3 Arrange scaffolding components	4.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 4.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 4.3.3 Defective components separated, tagged, and reported for repair or replacement. 4.3.4 Stacked components verified against work plan and checklist before scaffolding erection.
	4.4 Erect scaffolding	4.4.1 Anchor points identified and marked as per drawing.

		4.4.2 Cantilever beam securely positioned not exceeding 1.5 meter and anchored to structural elements using appropriate suspension accessories. 4.4.3 Bracings, struts, and props installed to reinforce cantilever beam. 4.4.4 Cantilever supports checked for level, alignment, and structural stability. 4.4.5 Scaffolding components installed sequentially and systematically on the cantilever support using appropriate bracing and fittings as per drawing. 4.4.6 Working platform installed at required level to withstand intended load maintaining alignment. 4.4.7 ***Railing system*** installed on all open sides of platform. 4.4.8 Ladders installed at required levels and location. 4.4.9 Safety sign and tag holders installed as required. 4.4.10 Stability and alignment of scaffolding structure checked and made necessary adjustment. 4.4.11 Safety nets installed and secured to scaffolding members.
	4.5 Dismantle scaffolding	4.5.1 Scaffolding components removed securely in the reverse order of erection. 4.5.2 Scaffolding components and fittings passed safely to the ground. 4.5.3 Dismantled components and fittings segregated and stored at designated locations.
	4.6 Clean worksite	4.6.1 Unused materials collected and stored in designated area. 4.6.2 Tools and equipment cleaned, checked for damage, fault tagged and stored in designated area. 4.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** in designated area.

6	**Task Performance Requirements (Tools, Equipment and Materials):** • Measuring tape, marker, pencil, pen, register, eraser, crow bar, wheel barrow, antirust, oil, brush, cloths, mug, spirit level, adjustable wrench, spanner, screwdrivers, pliers, hammer, scaffolding components, scaffolding fittings, safety net, wire, rope, broom, soap, dust pan, dust bin, barricading materials, safety signage, and personal protective equipment.
7	**Safety and Hygiene (Occupational Health and Safety):** • Use personal protective equipment. • Safe handling of materials, tools and equipment. • Hazards involved in lifting tools, equipment and materials. • Prevent from electrical hazards. • Safe handling and disposal of debris. • Follow workplace safety guidelines.

8	Required Knowledge		
	Technical Knowledge	**Applied Calculation**	**Graphical Information**

	• Tools and equipment
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
	  ○ Cleaning and maintenance
	  ○ Storage
	• Scaffolding
	  ○ Introduction
	  ○ Types
	• Cantilever scaffolding
	  ○ Introduction and application
	  ○ Load capacity (dead load and live load)
	  ○ Standard dimensions
	  ○ Cantilever scaffolding components
	  ○ Scaffolding fittings and their specifications
	  ○ Types and purpose of scaffold ties
	  ○ Cantilever erection techniques
		• Perform unit conversion	• Read and interpret manual/instructional guide.
			• Read and interpret scaffolding drawing

	• Scaffolding safety
	  ○ Fall protection
	  ○ Load limits
	  ○ Electrical hazards
	• Scaffolding maintenance
	• Maintenance of fittings
	• Dismantling scaffold
	  ○ Preparation of storage area
	  ○ Dismantling sequence and technique
	  ○ Sorting and labeling
	  ○ Storage system
	• Recordkeeping and reporting
	• Waste management
	• Occupational health and safety (OHS)
	• Use of first aid kit		

9	Assessment of Competency					
	Unit: 4 **Unit Title: Install light cantilever scaffolding**					
	Candidate Details		**Assessors Detail**			
	Candidate's Name: Registration Number: Symbol No: Test Centre: Test Date:		Assessors' Name 1. 2. 3.		ID/License No:	

Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
4.1 Prepare tools and equipment	4.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 4.1.2 Tools and equipment collected and checked for serviceability. 4.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 4.1.4 Tools and equipment needed for work arranged in designated area.				
4.2 Prepare worksite	4.2.1 Worksite inspected for potential ***hazards*** and reported to concern authority.				

	4.2.2 Scaffolding site cleared and obstacles removed from the site. 4.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 4.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements. 4.2.5 Existing structure and ***structural attachment points*** for cantilever projections are checked and verified for structural integrity and suitability.				
4.3 Arrange scaffolding components	4.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 4.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 4.3.3 Defective components separated, tagged, and reported for repair or replacement. 4.3.4 Stacked components verified against work plan and checklist before scaffolding erection.				
4.4 Erect scaffolding	4.4.1 Anchor points identified and marked as per drawing.				

	4.4.2 Cantilever beam securely positioned not exceeding 1.5 meter and anchored to structural elements using appropriate suspension accessories. 4.4.3 Bracings, struts, and props installed to reinforce cantilever beam. 4.4.4 Cantilever supports checked for level, alignment, and structural stability. 4.4.5 Scaffolding components installed sequentially and systematically on the cantilever support using appropriate bracing and fittings as per drawing. 4.4.6 Working platform installed at required level to withstand intended load maintaining alignment. 4.4.7 ***Railing system*** installed on all open sides of platform. 4.4.8 Ladders installed at required levels and location. 4.4.9 Safety sign and tag holders installed as required. 4.4.10 Stability and alignment of scaffolding structure checked and made necessary adjustment. 4.4.11 Safety nets installed and secured to scaffolding members.				
4.5 Dismantle scaffolding	4.5.1 Scaffolding components removed securely in the reverse order of erection.				

	4.5.2 Scaffolding components and fittings passed safely to the ground. 4.5.3 Dismantled components and fittings segregated and stored at designated locations.				
4.6 Clean worksite	4.6.1 Unused materials collected and stored in designated area. 4.6.2 Tools and equipment cleaned, checked for damage, fault tagged and stored in designated area. 4.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** in designated area.				

WT- Written Test **OQ**- Oral Question **PT-** Practical Test **DO** – Direct Observation **SR**- Supervisor's report **SN**–Simulation
RP- Role Play **PG –**Photographs **VD**- Video **CT** – Certificates **TS** – Testimonials (Reward) **PP** – Product Produced
CS – Case Study

Range Statement

Variable	Range
Personal Protective Equipment	*May include but not limited to:* • Helmet • Goggles • Mask • Apron (Cover all) • Gloves • Protective shoes • Ear plug • Safety belt and harness
Hazards	*May include but not limited to:* • Electric line • Ground condition • Underground services
Structural attachment points	*May include but not limited to:* • Beams • Columns • Walls • Ceilings • Anchoring points

Scaffolding components	*May include but not limited to:* • Standards • Ledger/Runner • Transom/Bearer • Brace • Drop tube • Base plate • Sole board • Toe board • Rails • Ladder • Puncheon • Platform board • Projection tube • Cantilever beam • Cantilever support
Fittings	*May include but not limited to:* • Double Coupler (Right Angle Clamps) • Swivel Coupler (Rotation Clamps) • Single Coupler (Putlog clamps) • Sleeve Coupler (Joint Box) • Joint Pins (Inner Joints) • Beam/girder coupler (Beam clamp) • Board coupler/clamp • Base coupler/clamp

	• Tie/anchor
Physical damage	*May include but are not limited to:* • Cracks • Wear and tear • Bent or warped • Splits • Broken
Suspension accessories	*May include but are not limited to:* • Beam clamps • U-bolts • Anchor plate
Railing system	*May include but are not limited to:* • Guardrails • Mid rails • Toe boards
3R's principle	*May include but are not limited to:* • Reduce • Reuse • Recycle

5	**Unit No: 5** **Unit Title: Install light birdcage scaffolding**	**Unit code:**
	Elements of competency	**Performance standards**
	5.1 Prepare tools and equipment	5.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 5.1.2 Tools and equipment collected and checked for serviceability. 5.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 5.1.4 Tools and equipment needed for work arranged in designated area.
	5.2 Prepare worksite	5.2.1 Worksite inspected for potential **hazards** and reported to concern authority. 5.2.2 Scaffolding site cleared and obstacles removed from the site. 5.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 5.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements.
	5.3 Arrange scaffolding components	5.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 5.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 5.3.3 Defective components separated, tagged, and reported for repair or replacement. 5.3.4 Stacked components verified against work plan and checklist before scaffolding erection.
	5.4 Erect scaffolding	5.4.1 Scaffolding base laid out in grid pattern as per scaffolding structure or scaffolding layout drawing. 5.4.2 Base plate fixed on levelled sole boards placed at marked line.

		5.4.3 Standards inserted into baseplates and secured with appropriate scaffolding fittings in plumb. 5.4.4 Ledgers and transoms installed using kicker lift maintaining a height of 300-600 mm above ground in line and level. 5.4.5 Diagonal bracing installed at base frame and secured with appropriate fittings in line and level. 5.4.6 Bracing Installed at every third bay or fourth bay and secured with appropriate fittings in line and level. 5.4.7 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 5.4.8 Working platform with minimum width of 60 cm and strong enough to withstand required load installed at specified level. 5.4.9 ***Railing system*** installed on all open sides of platform. 5.4.10 Ladders installed at different levels at required location. 5.4.11 Tag holders hanged at entry areas at visible height. 5.4.12 Stability and alignment of scaffolding structure checked and made necessary adjustment. 5.4.13 Safety nets installed and secured to scaffolding components.
	5.5 Dismantle scaffolding	5.5.1 Scaffolding components removed securely in the reverse order of erection. 5.5.2 Scaffolding components and fittings are passed safely to the ground.

		5.5.3 Dismantled components and fittings are segregated and stored at designated locations.
	5.6 Clean worksite	5.6.1 Unused materials collected and stored in designated location. 5.6.2 Tools and equipment cleaned, checked for damage and stored in designated location. 5.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** at designated location.
6	**Task Performance Requirements (Tools, Equipment and Materials):** • Measuring tape, marker, pencil, pen, register, eraser, crow bar, wheel barrow, antirust, oil, brush, cloths, mug, spirit level, adjustable wrench, spanner, screwdrivers, pliers, hammer, scaffolding components, scaffolding fittings, safety net, wire, rope, broom, soap, dust pan, dust bin, barricading materials, safety signage, and personal protective equipment.	
7	**Safety and Hygiene (Occupational Health and Safety):** • Use personal protective equipment. • Safe handling of materials, tools and equipment. • Hazards involved in lifting tools, equipment and materials. • Prevent from electrical hazards. • Safe handling and disposal of debris. • Follow workplace safety guidelines.	

8	Required Knowledge		
	Technical Knowledge	**Applied Calculation**	**Graphical Information**

	• Tools and equipment
	  ○ Introduction
	  ○ Types
	  ○ Uses
	  ○ Safe handling
	  ○ Cleaning and maintenance
	  ○ Storage
	• Birdcage scaffolding
	  ○ Introduction and application
	  ○ Load capacity (dead load and live weight)
	  ○ Standard dimensions and span
	  ○ Birdcage scaffolding components
	  ○ Scaffolding fittings and their specifications
	  ○ Types and purpose of scaffold ties
	  ○ Scaffolding erection technique
	• Maintenance
	  ○ Importance
	  ○ Types of physical damage
		• Perform unit conversion	• Read and interpret manual/instructional guide.
			• Read and interpret scaffolding drawing

	○ Regular cleaning ○ Visual inspection ○ Types and application of anti-rust • Dismantling scaffold ○ Preparation of storage area ○ Dismantling sequence and technique ○ Sorting and labeling ○ Storage system (Rack, shelves, bins, containers, pallets, and stacking) • Scaffolding safety ○ Fall protection ○ Load limits ○ Electrical hazards • Recordkeeping and reporting • Waste management • Occupational health and safety (OHS)		

9	Assessment of Competency					
	Unit: 5 **Unit Title: Install light birdcage scaffolding**					
	Candidate Details		**Assessors Detail**			
	Candidate's Name: Registration Number: Symbol No: Test Centre: Test Date:		Assessors' Name 1. 2. 3.		ID/License No:	
Element of competency	**Performance Standards**		**Standard Met**	**Standard Not Met**	**Evidence Type**	**Comments**
5.1 Prepare tools and equipment	5.1.1 ***Personal protective equipment (PPE)*** used as per task requirements. 5.1.2 Tools and equipment collected and checked for serviceability. 5.1.3 Faulty tools and equipment tagged, reported to supervisor, and sent for repair as per instructions. 5.1.4 Tools and equipment needed for work arranged in designated area.					
5.2 Prepare worksite	5.2.1 Worksite inspected for potential **hazards** and reported to concern authority.					

	5.2.2 Scaffolding site cleared and obstacles removed from the site. 5.2.3 Scaffolding base prepared, levelled, and compacted as per site conditions. 5.2.4 Scaffolding site barricaded and safety signage placed as per safety requirements.				
5.3 Arrange scaffolding components	5.3.1 Storage area prepared on stable and level ground for storing scaffolding components. 5.3.2 ***Scaffolding components*** and ***fittings*** received, checked for ***physical damage***, and stacked based on type, size, and function. 5.3.3 Defective components separated, tagged, and reported for repair or replacement. 5.3.4 Stacked components verified against work plan and checklist before scaffolding erection.				
5.4 Erect scaffolding	5.4.1 Scaffolding base laid out in grid pattern as per scaffolding structure or scaffolding layout drawing. 5.4.2 Base plate fixed on levelled sole boards placed at marked line. 5.4.3 Standards inserted into baseplates and secured with appropriate scaffolding fittings in plumb.				

	5.4.4 Ledgers and transoms installed using kicker lift maintaining a height of 300-600 mm above ground in line and level. 5.4.5 Diagonal bracing installed at base frame and secured with appropriate fittings in line and level. 5.4.6 Bracing Installed at every third bay or fourth bay and secured with appropriate fittings in line and level. 5.4.7 Scaffold constructed to required dimension by erecting additional standards vertically and installing ledgers, diagonal braces and transoms in line and level. 5.4.8 Working platform with minimum width of 60 cm and strong enough to withstand required load installed at specified level. 5.4.9 ***Railing system*** installed on all open sides of platform. 5.4.10 Ladders installed at different levels at required location. 5.4.11 Tag holders hanged at entry areas at visible height. 5.4.12 Stability and alignment of scaffolding structure checked and made necessary adjustment. 5.4.13 Safety nets installed and secured to scaffolding components.				
5.5 Dismantle scaffolding	5.5.1 Scaffolding components removed securely in the reverse order of erection.				

	5.5.2 Scaffolding components and fittings are passed safely to the ground. 5.5.3 Dismantled components and fittings are segregated and stored at designated locations.				
5.6 Clean worksite	5.6.1 Unused materials collected and stored in designated location. 5.6.2 Tools and equipment cleaned, checked for damage and stored in designated location. 5.6.3 Workplace cleaned neatly and waste disposed as per ***3R's principle*** at designated location.				

WT- Written Test **OQ**- Oral Question **PT-** Practical Test **DO** – Direct Observation **SR**- Supervisor's report **SN**–Simulation
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Range Statement

Variable	Range
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Hazards	*May include but not limited to:* • Electric line • Ground condition • Underground services

Scaffolding components	*May include but not limited to:* • Standards • Ledger/Runner • Transom/Bearer • Brace • Drop tube • Base plate • Sole board • Toe board • Rails • Ladder • Puncheon • Platform board • Projection tube
Fittings	*May include but not limited to:* • Double Coupler (Right Angle Clamps) • Swivel Coupler (Rotation Clamps) • Single Coupler (Putlog clamps) • Sleeve Coupler (Joint Box) • Joint Pins (Inner Joints) • Beam/girder coupler (Beam clamp) • Board coupler/clamp • Base coupler/clamp

Physical damage	*May include but are not limited to:* • Cracks • Wear and tear • Bent or warped • Splits • Broken
Railing system	*May include but are not limited to:* • Guardrails • Mid rails • Toe boards
3R's principle	*May include but are not limited to:* • Reduce • Reuse • Recycle