

JOB SPECIFICATON
AND
SKILL TEST

JOB TITLE : **FORGING TECHNICAL ASSISTANT, L - 1**
SECTOR : **MECHANICAL ENGINEERING**
SUB-SECTOR : **METAL FABRICATION**

COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING

NATIONAL SKILL TESTING BOARD

MADHYAPUR THIMI -17, SANOTHIMI, BHAKTAPUR, NEPAL

February 23, 2007 (2063.11.11)

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Sponsored by Helvetas Nepal

Recommended by Mechanical Technical Sub Committee.

February 23, 2007 (2063.11.11)

JOB SPECIFICATION

1	JOB TITLE : Forging Technical Assistant LEVEL : 1 (One)	
2	JOB DESCRIPTION: Forging Technical Assistant, L – 1 Makes smithy hearth, Prepares fire in the smithy hearth (furnace), Heats the work piece (iron), Hammers the required sizes and shapes, Cuts off cold work piece, Grinds and sharpens work piece, Finishes the work piece and puts handle in work piece (Job).	
3	LIST OF TASKS: <ol style="list-style-type: none"> 1. Making smithy hearth (furnace). 2. Making fire. 3. Maintaining fire by using coke/coal/charcoal and blower (Manual/electrical). 4. Cutting the work piece (Iron). 5. Putting the work piece (Iron) into smithy hearth. 6. Putting coke/coal/charcoal around the work piece (Iron). 7. Operating the blower till the work piece gets heated. 8. Heating the work piece to red hot temperature. 9. Shaping/bending the work piece on the swage block (Mould/die). 10. Shaping the work piece on the anvil. 11. Cutting off the work piece while it is hot (heated work piece). 12. Making sharp edges by hammering. 	<ol style="list-style-type: none"> 13. Finishing the heated work piece by hammer. 14. Cutting the iron with tong and chisel (Cold operation). 15. Cutting the iron with hacksaw. 16. Cutting the iron with shears. 17. Cutting sheet metal with sheet cutter. 18. Sharpening the work piece by file. 19. Sharpening the work piece by bench/hand grinder. 20. Honing the work piece with oil stone. 21. Finishing the work piece by file. 22. Finishing the work piece by mallet/wooden hammer. 23. Finishing the work piece by chisel. 24. Cleaning the work piece with emery paper. 25. Coating red oxide and enamel paint. 26. Putting wooden handle.
4	QUALIFYING NOTES (entry requirement etc.) - Health: Normal Health. - Education requirement: Able to read, write and understand specification and interpret drawing.	

TASK SPECIFICATION	
5	<p>TASK NO: 1</p> <p>Making smithy hearth (furnace). JOB TITTLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1.1 Receives instruction/drawing. 1.2 Wears safety aprons. 1.3 Selects tools. 1.4 Selects place for smithy hearth. 1.5 Selects clay as binder. 1.6 Kneads clay. 1.7 Determines bricks size and number. 1.8 Installs the manual/electrical blower. 1.9 Constructs the smithy hearth. 1.10 Operates the blower to check the air flow toward the hearth.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Clay/binder, brick, water, manual/electric blower, plum bob, chupi, hammer, measuring tape.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety apron worn as required. • Tools and measuring instrument selected as required. • Place for smithy hearth selected as specified. • Clay selected as binder. • Clay kneaded to required proportion. • Bricks size and number determined as required. • Manual/electrical blower installed as required. • Smithy hearth constructed as per required shape and size using bricks and clay/binder and dried. • Blower operated to check the air flow toward the hearth.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
1	1 2 3 4 5	Knowledge of types of clay. Knowledge of kneading procedure of clay. Knowledge of shape and size of the smithy hearth. Knowledge of constructing smithy hearth. Knowledge of installing manual/electrical blower.	Simple arithmetic calculation.	Read and interpret simple sketches, drawing and symbols.	

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Making smithy hearth (furnace).		LOCATION OF TEST :
	TASK NO : 1		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	STANDARD NOT MET		(Comments)
	<u>DID THE CANDIDATE ?</u> 1.1 Receive instruction/drawing 1.2 Wear safety aprons. 1.3 Select tools. 1.4 Select place for smithy hearth as specified. 1.5 Select clay as binder. 1.6 Knead clay to required proportion. 1.7 Determine bricks size and number as required. 1.8 Install manual/electrical blower as required. 1.9 Construct smithy hearth as per required shape and size using bricks and clay/binder and dry. 1.10 Operate blower to check the air flow toward the hearth.		

TASK SPECIFICATION	
5	<p>TASK NO: 2</p> <p>Making fire.</p> <p style="text-align: right;">JOB TITTLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction/drawing. 2. Wears safety aprons. 3. Selects cutting tools. 4. Selects fire wood. 5. Cuts fire wood. 6. Puts fire wood in the hearth. 7. Burns fire wood with lighter/match stick.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Lighter/match stick, fire wood, Kerosene</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety apron worn as required. • Cutting tools selected as required. • Fire wood selected as required. • Fire wood cut into small piece. • Pieces of fire wood put in the hearth. • Fire wood burned with lighter/match stick and fire wood burning on its own checked.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
2	1 2 3	Knowledge of selecting cutting tools. Knowledge of cutting fire wood. Knowledge of burning fire wood.			Safe burning of fire wood.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Making fire. TASK NO : 2			LOCATION OF TEST : CANDIDATE'S NAME : EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Receive instruction/drawing. 2. Wear appropriate safety aprons. 3. Select cutting tools as required. 4. Select fire wood as required. 5. Cut fire wood into small piece as required. 6. Put pieces of fire wood in the hearth. 7. Burn fire wood with lighter/match stick. 8. Check fire wood burning on its own. 			

TASK SPECIFICATION

5

TASK NO: 3

Maintaining fire by using coke/coal/charcoal & blower (Manual/electrical). JOB TITTLE: Forging Technical Assistant, L - 1

6

TASK ELEMENTS:

1. Receives instruction/drawing.
2. Wears safety aprons.
3. Selects tools and equipment.
4. Selects coke/coal/charcoal.
5. Breaks the coke.
6. Takes a coke pan or scoop.
7. Puts the pieces of coke in the smithy hearth.
8. Operates the blower.
9. Opens half valve in the beginning (slow).
10. Checks burning.
11. Opens full valve (fast).
12. Adjusts valve position.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Coke/coal/charcoal, manual/electrical blower, hammer, portable trolley, bucket, coke pan or scoop, kerosene.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety apron worn as required. • Tools and equipment selected as required. • Coke/charcoal selected as required quantity. • Coke broke into small pieces by hammering. • Coke pan or scoop taken out. • Pieces of coke put in the smithy hearth upon and around burning wood. • Blower operated safely. • Half valve opened in the beginning. • Slow burning of fire checked. • Full valve opened for higher temperature. • Adjusts valve position as required.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
3	1 2 3 4 5 6 7 8	Knowledge of function and types of coke and charcoal. Knowledge of breaking coke. Knowledge of putting coke/coal/charcoal in the smithy hearth. Knowledge of types of blowers. Knowledge of operating the blower. Knowledge of opening half valve or full valve (slow or fast). Knowledge of checking burning of coke/coal/charcoal. Knowledge of adjusting valve position.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Maintaining fire by using coke/coal/charcoal & blower (Manual/electrical).		LOCATION OF TEST :
	TASK NO : 3		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear appropriate safety aprons. 2. Select tools and equipment as required. 3. Select coke/coal/charcoal as required quantity. 4. Break the coke into small pieces by hammering. 5. Take coke pan or scoop. 6. Put Pieces of coke in the smithy hearth upon and around burning wood. 7. Operate the blower. 8. Open the half valve (slow) in the beginning. 9. Check burning of coke, let it burn slowly. 10. Open the full valve (fast) for higher temperature. 11. Adjust valve position as required. 		

TASK SPECIFICATION	
5	<p>TASK NO: 4</p> <p>Cutting the work piece (Iron).</p> <p style="text-align: right;">JOB TITLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears safety aprons. 3. Selects tools/equipment 4. Selects materials (iron). 5. Marks materials. 6. Makes appropriate cuts. 7. De-burrs the cutting edges.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Measuring tape, weighing machine, scribe, divider, simple outside and inside calliper, try square, chisel, hacksaw, tong, hammer, anvil, stakes, surface block, hand grinder, flat file.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety aprons worn as required. • Tools/equipment selected as required. • Materials (iron) selected as required quantity and quality. • Materials marked as required size and shape. • Materials cut within the tolerance of $\pm 2\text{mm}$ of scribe line for chiselling and the tolerance of $\pm 1\text{mm}$ of scribe line for cutting by hacksaw. • Cutting edges de-burred smoothly.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
4	1 2 3 4 5 6	Knowledge of selecting tools/equipment Knowledge of identification and selection of materials (iron). Knowledge of marking procedure of materials. Knowledge of weighing iron. Knowledge of cutting procedure of materials. Knowledge of de-burring of the sharp edges.	Simple arithmetic calculation and measuring units.	Read and interpret simple sketches, drawing and symbols.	Hazards involved in handling tools/equipment and materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Cutting the work piece (Iron).		LOCATION OF TEST :
	TASK NO : 4		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	STANDARD NOT MET (Comments)		
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear appropriate safety aprons. 2. Select tools/equipment as required. 3. Select materials (iron) as required quantity and quality. 4. Mark materials as required size and shape. 5. Cut materials within the tolerance of ± 2mm of scribe line for chiselling and the tolerance of ± 1mm cutting by hacksaw. 6. De-burr cutting edges smoothly. 		

TASK SPECIFICATION	
5	<p>TASK NO: 5</p> <p>Putting the work piece (Iron) into smithy hearth. JOB TITLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears safety aprons. 3. Selects tools. 4. Cleans work piece and removes unwanted materials before the commencement of heating. 5. Puts the work piece in the smithy hearth. 6. Puts coke/coal/charcoal in the smithy hearth.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Coke/charcoal, work piece, tongs, trowel.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • .Safety aprons worn as required. • Tools selected as required. • Work piece put in the smithy hearth safely. • Coke put in the smithy hearth upon and around work piece. • Unnecessary materials removed from the work piece and hearth.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
5	1 2 3	Knowledge of putting procedure of work piece in the smithy hearth. Knowledge of putting coke/coal/charcoal in the smithy hearth. Knowledge of removing unnecessary materials from the work piece.			Hazards involved in handling tools/equipment and materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Putting the work piece (Iron) into smithy hearth.			LOCATION OF TEST :
	TASK NO : 5			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear appropriate safety aprons. 2. Select tools as required. 3. Clean work piece and remove unwanted materials before the commencement of heating. 4. Put work piece in the smithy hearth safely. 5. Put coke in the smithy hearth upon and around work piece. 6. Remove unnecessary materials from the work piece. 			

TASK SPECIFICATION	
5	<p>TASK NO: 6</p> <p>Putting coke/ coal/charcoal around the work piece (Iron). JOB TITLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears safety aprons. 3. Selects tools and coke/coal/charcoal. 4. Places the work piece on the burning fire. 5. Covers the work piece by coke/coal/charcoal. 6. Checks the work piece.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Cock/coal/charcoal, tongs, pliers, coke pan or scoop.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety aprons worn as required. • Tools and coke/charcoal selected as required. • Work piece placed into the burning fire. • Work piece fully covered by coke/coal/charcoal. • Work piece checked as required.

TASK TRAINING DATA					
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
6	1 2 3 4	Knowledge of types and function of coke/coal/charcoal. Knowledge of placing procedure of work piece into the burning fire. Knowledge of covering the work piece by coke/coal/charcoal. Knowledge of checking the work piece.			Hazards involved in handling tools and materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Putting coke/charcoal around the work piece (Iron).		LOCATION OF TEST :
	TASK NO : 6		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	<u>DID THE CANDIDATE ?</u> 1. Select tools and coke/coal/charcoal as required. 2. Place work piece into the burning fire. 3. Cover work piece fully by coke/coal/charcoal. 4. Check work piece as required.		STANDARD NOT MET (Comments)

TASK SPECIFICATION	
5	<p>TASK NO: 7</p> <p>Operating the blower till the work piece gets heated. JOB TITTLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears safety aprons. 3. Opens blower valve. 4. Adjust the valve. 5. Operates the blower. 6. Checks the blower condition.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Smithy hearth (Forge) with blower.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety aprons worn as required. • Blower valve opens. • Blower valve adjusted as required. • Blower operated smoothly. • Blower condition checked and reported.

9		10				TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE				
7	1 2 3 4	Knowledge of opening the blower valve. Knowledge of adjusting procedure of blower valve. Knowledge of operating the blower. Knowledge of checking the blower condition and reporting.			Hazards involved in handling blower.				

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Operating the blower till the work piece gets heated.		LOCATION OF TEST :
	TASK NO : 7		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	STANDARD NOT MET (Comments)		
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons. 2. Open the blower valve. 3. Adjust the valve as required. 4. Operate the blower smoothly. 5. Check the blower condition and report. 		

TASK SPECIFICATION	
5	<p>TASK NO: 8</p> <p>Heating the work piece to red hot temperature. JOB TITLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears safety aprons. 3. Selects tools and equipment. 4. Selects work piece to be make. 5. Checks the heated work piece. 6. Turns the work piece in position. 7. Adds coke, if necessary. 8. Ensures the work piece is red hot.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Pan, tongs, pliers, coke, blower, smithy hearth.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety aprons worn as required. • Tools and equipment selected as required. • Work piece selected to make as required. • Heated work piece checked for hotness. • Work piece turned in position. • Coke added, if necessary. • Ensured that the work piece is red hot.

9		10				TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE				
8	1 2 3	Knowledge of checking heated work piece. Knowledge of turning work piece in position. Knowledge of judging temperature of the work piece by observing of the shade of red colour..			Hazards involved in handling hot work piece and blower.				

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Heating the work piece to red hot temperature.			LOCATION OF TEST :
	TASK NO : 8			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons. 2. Select tools and equipment as required. 3. Select work piece to be make as required. 4. Check the heated work piece for hotness. 5. Turn the work piece in position safely. 6. Add coke/coal/charcoal, if necessary. 7. Ensure the work piece is red hot. 			

TASK TRAINING DATA					
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
9	1 2 3	Knowledge of taking out work piece from fire. Knowledge of hammering operation on the swage block. Knowledge of shaping/bending work.			Hazards involved in handling hot work piece and hammering.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Shaping/bending the work piece on the swage block (Mould/die).		LOCATION OF TEST :
	TASK NO : 9		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons. 2. Select tools and equipment as required. 3. Stop (off) blower. 4. Remove scale from the hot work piece safely. 5. Take out work piece from fire with appropriate tongs safely. 6. Perform hammering operation on the swage block. 7. Shape/bend work piece as specified size and shape while hot, within the tolerance $\pm 4\text{mm}$. 		

TASK SPECIFICATION	
5	<p>TASK NO: 10</p> <p>Shaping the work piece on the anvil.</p> <p style="text-align: right;">JOB TITLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears safety aprons. 3. Selects tools and equipment. 4. Heats the work piece. 5. Takes out the work piece from fire. 6. Removes scale from the hot work piece. 7. Performs hammering the work piece by placing on the anvil. 8. Shapes/bends the work piece. 9. Checks work piece. 10. Performs hammering operation of the work piece.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Black smithy hearth, tong, pliers, hammer, anvil, stakes, surface blocks, measuring tape, steel ruler and gauge, bending equipment.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety aprons worn as required. • Tools selected as required. • Work piece heated to red hot colour. • Work piece taken out from fire with suitable tongs. • Hammering operation of the work piece performed on the anvil safely. • Work piece shaped/bent as specified size and shape using the face and horn of anvil. • Work piece checked using measuring tape/steel ruler/gauge/sample for correctness. • Hammering operation of the work piece performed only when the work is heated.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
10	1 2 3 4 5	Knowledge of heating procedure of work piece. Knowledge of taking out the work piece from fire. Knowledge of hammering procedure of hot work piece. Knowledge of shaping/bending of the hot work piece. Knowledge of checking work piece.			Hazards involved in handling and hammering of hot work piece.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Shaping the work piece on the anvil.			LOCATION OF TEST :
	TASK NO : 10			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Heat the work piece to red hot colour. 4. Take out work piece from fire with suitable tongs. 5. Perform hammering operation of the work piece on the anvil safely. 6. Shape/bend work piece as specified size and shape using the face and horn of anvil. 7. Check work piece using measuring tape/steel ruler/gauge/sample for correctness. 8. Perform hammering operation of the work piece only when the work is heated. 			

TASK SPECIFICATION	
5	<p>TASK NO: 11</p> <p>Cutting off the work piece while it is hot (heated work piece). JOB TITLE: Forging Technical Assistant, L - 1</p>
6	<p>TASK ELEMENTS:</p> <ol style="list-style-type: none"> 1. Receives instruction. 2. Wears appropriate safety aprons. 3. Selects tools and equipment. 4. Places the work piece on the anvil. 5. Checks the work piece. 6. Cuts the work piece.

TASK SPECIFICATION	
7	<p>TASK PERFORMANCE REQUIREMENTS</p> <p>Tong, hammer, hot working chisel, anvil, stakes, surface block, measuring tape, steel ruler and gauge, scriber, leather apron, leather gloves, leather shoes.</p>
8	<p>TASK PERFORMANCE STANDARDS</p> <ul style="list-style-type: none"> • Safety aprons worn as required. • Tools selected as required. • Work piece placed on the anvil by using appropriate tongs. • Work piece checked as specified. • Work piece cut by hammering/chiselling within the tolerance $\pm 4\text{mm}$.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
11	1 2 3 4	Knowledge of placing work piece on the anvil. Knowledge of marking work piece. Knowledge of checking the work piece. Knowledge of cutting procedure of work piece.			Hazards involved in handling and hammering of hot work piece.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Cutting off the work piece while it is hot (heated work piece).		LOCATION OF TEST :
	TASK NO : 11		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	<u>DID THE CANDIDATE ?</u>		STANDARD NOT MET (Comments)
	<ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Place the work piece on the anvil by using appropriate tongs. 4. Check the work piece as specified. 5. Cut work piece by hammering/chiselling within the tolerance of ± 4mm. 		

TASK SPECIFICATION

5	TASK NO: 12 Making sharp edges by hammering.	JOB TITLE: Forging Technical Assistant, L - 1
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| 6 | TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects tools and equipment.4. Heats the work piece.5. Takes out the work piece from fire.6. Places the work piece on the anvil.7. Performs hammering operation.8. Turns the work piece and hammers the reverse face.9. Repeats the process. |
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TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Black smithy hearth, coke, tong, pliers, sledge hammer, anvil, stakes, surface block, measuring tape, steel ruler and gauge.
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| 8 | TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Tools and equipment selected as required.• Work piece heated till red hot colour.• Work piece taken out from fire safely.• Work piece placed on the anvil.• Hammering operation performed as required.• Work piece turned and hammered the reverse face.• Process repeated until the edge is sharpened. |
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9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
12	1 2 3 4 5 6	Knowledge of heating procedure of the work piece. Knowledge of taking out the work piece from fire. Knowledge of placing the work piece on the anvil. Knowledge of hammering operation. Knowledge of turning the work piece and hammering the reverse face. Knowledge of sharpening edge.			Hazards involved in handling and hammering of hot work piece.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Making sharp edges by hammering.			LOCATION OF TEST :
	TASK NO : 12			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Heats the work piece till red hot colour. 4. Take out work piece from fire safely. 5. Place work piece on the anvil. 6. Perform hammering operation as required. 7. Turn work piece and perform hammering the reverse face. 8. Repeat process until the edge is sharpened. 			

TASK SPECIFICATION

5	TASK NO: 13 Finishing the heated work piece by hammer.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects work piece (job).4. Selects finishing hammer.5. Places the work piece on the anvil.6. Performs finishing operation.7. Levels and straightens the work piece.8. Reheats the work piece.9. Repeats finishing operation.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Anvil, finishing hammer, black smithy hearth, tongs, pliers.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Work piece (job) selected as specified.• Finishing hammer selected as required.• Work piece placed on the anvil as required.• Finishing operation performed along the length and periphery of the work piece.• Work piece levelled and straightened by proper hammering process.• Work piece reheated, if necessary.• Finishing operation repeated, if necessary.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
13	1 2 3 4	Knowledge of finishing hammer selected as required. Knowledge of finishing procedure of the work piece. Knowledge of levelling and straightening procedure of work piece. Knowledge of reheating the work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Finishing the heated work piece by hammer.		LOCATION OF TEST :
	TASK NO : 13		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	STANDARD NOT MET		(Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select work piece (job) as specified. 3. Select finishing hammer as required. 4. Place work piece on the anvil as required. 5. Perform finishing operation along the length and periphery of the work piece. 6. Level and straighten work piece by proper hammering process. 7. Reheat the work piece, if necessary. 8. Repeat finishing operation, if necessary. 		

TASK SPECIFICATION

5	TASK NO: 14 Cutting the iron with tong and chisel (cold operation).	JOB TITLE: Forging Technical Assistant, L - 1
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| 6 | TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects tools and equipment.4. Selects materials (iron).5. Measures the materials.6. Marks the materials.7. Chisels the materials till half penetration is achieved.8. Turns the materials.9. Chisels the materials from the other side and cuts off. |
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TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Chisel, tong, pliers, hammer, anvil, surface block, stakes, measuring tape, steel ruler, weighing machine.
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| 8 | TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Tools and equipment selected as required.• Materials (iron) selected as specified.• Materials measured as required size.• Materials marked within the tolerance of ± 1mm.• Materials chiselled till half penetration is achieved within the tolerance of ± 2mm.• Materials turned.• Materials chiselled from the other side and cut off within the tolerance of ± 2mm. |
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9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
14	1 2 3 4 5 6	Knowledge of selecting tools, equipment and materials. Knowledge of measuring materials. Knowledge of marking the materials. Knowledge of chiselling the materials till half penetration. Knowledge of turning the materials. Knowledge of chiselling the materials from the other side.			Hazards involved in chiselling the materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Cutting the iron with tong and chisel (cold operation).			LOCATION OF TEST :
	TASK NO : 14			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Select the materials (iron) as specified. 4. Measure the materials as required size. 5. Mark the materials within the tolerance of ± 1mm. 6. Chisel the materials till half penetration is achieved within the tolerance of ± 2mm. 7. Turn materials. 8. Chisel the materials from the other side and cut off within the tolerance of ± 2mm. 			

TASK SPECIFICATION

5	TASK NO: 15 Cutting the iron with hacksaw.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects tools and equipment.4. Selects materials (iron).5. Measures/Weights and marks the materials.6. Clamps the materials.7. Cuts the materials.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Measuring tape, steel ruler, weighing machine, scribe, divider, try square, bench vice, hacksaw with blade.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Tools and equipment selected as required.• Materials (iron) selected as specified.• Materials measured as required.• Materials marked within the tolerance of $\pm 1\text{mm}$.• Materials clamped on bench vice securely.• Materials cut by using hacksaw within the tolerance of $\pm 1\text{mm}$.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
15	1 2 3 4 5	Knowledge of selecting tools, equipment and materials. Knowledge of measuring materials. Knowledge of marking the materials. Knowledge of clamping the materials on vice. Knowledge of sawing procedure of the materials.			Hazards involved in sawing the materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Cutting the iron with hacksaw.			LOCATION OF TEST :
	TASK NO : 15			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u>			
	<ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Select the materials (iron) as specified. 4. Measure/Weigh the materials as required. 5. Mark the materials within the tolerance of $\pm 1\text{mm}$. 6. Clamp the materials securely. 7. Cut the materials by using hacksaw within the tolerance of $\pm 1\text{mm}$. 			

TASK SPECIFICATION

5	TASK NO: 16 Cutting the iron with shears.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects materials (iron).4. Measures/Weighs and marks the materials.5. Selects shears.6. Clamps the shear handle for short length cutting.7. Applies exerting pressure on shear handle while shearing.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Measuring tape, steel ruler, weighing machine, scribe, straight shear or round shear, scissors.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Tools and equipment selected as required.• Materials (iron) selected as specified.• Materials measured/weighed as required.• Materials marked within the tolerance of ± 1mm.• Shear selected as required.• Shear handle clamped for short length cutting safely.• Exerting pressure applied on shear handle while shearing within the tolerance of ± 1mm.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
16	1 2 3 4 5	Knowledge of use and types of shearing tools. Knowledge of measuring materials. Knowledge of marking the materials. Knowledge of clamping shear handle. Knowledge of shearing procedure of materials.			Hazards involved in shearing the materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Cutting the iron with shears.			LOCATION OF TEST :
	TASK NO : 16			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Select the materials (iron) as specified. 4. Measure/Weigh the materials as required. 5. Mark the materials within the tolerance of $\pm 1\text{mm}$. 6. Select shear as required. 7. Clamp shear handle for short length cutting safely 8. Apply exerting pressure on shear handle while shearing within the tolerance of $\pm 1\text{mm}$. 			

TASK SPECIFICATION

5	TASK NO: 17 Cutting sheet metal with sheet cutter.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects tools and equipment.4. Selects materials (iron).5. Measures/Weights and marks the materials.6. Places the materials in cutting line between the shear roll/shear cutter/blades.7. Presses the lever and holds the materials.8. Shears the materials.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Measuring tape, steel ruler, weighing machine, scribe, shear roll/sheet cutter/blades.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Tools and equipment selected as required.• Materials (iron) selected as specified.• Materials measured as required.• Materials marked within the tolerance of ± 1mm.• Materials placed in cutting line between the shear rolls/shear cutters/blades securely.• Lever pressed with right hand while materials holding with the left hand securely.• Materials sheared by using shear rolls/shear cutters/blades within the tolerance of ± 1mm.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
17	1 2 3 4 5 6	Knowledge of use and types of shearing tools and equipment. Knowledge of measuring materials. Knowledge of marking the materials. Knowledge of placing procedure of materials in cutting line between the shear rolls/shear cutters/blades. Knowledge of pressing lever. Knowledge of shearing procedure of materials.			Hazards involved in shearing the materials.

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Cutting sheet metal with sheet cutter.		LOCATION OF TEST :
	TASK NO : 17		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select tools and equipment as required. 3. Select the materials (iron) as specified. 4. Measure/weight the materials as required. 5. Mark the materials within the tolerance of ± 1mm. 6. Place materials in cutting line between the shear rolls/shear cutters/blades securely. 7. Press lever with right hand while materials holding with the left hand securely 8. Shear materials by using shear rolls/shear cutters/blades within the tolerance of ± 1mm. 		

TASK SPECIFICATION

5	TASK NO: 18 Sharpening the work piece by file.	JOB TITTLE: Forging Technical Assistant, L - 1
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| 6 | TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects file.4. Selects the work piece (job).5. Holds the work piece (job) firmly.6. Clamps the work piece.7. Sharpens cutting edges of work piece (job). |
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TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS File and bench vice.
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| 8 | TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Smooth flat file selected as required size.• Work piece (job) selected as specified.• Work piece (job) held and clamped firmly and securely.• Cutting edges of work piece (job) sharpened along the length until finish. |
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9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
18	1 2 3	Knowledge of types of files. Knowledge of clamping job in bench vice. Knowledge of sharpening procedure of job.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Sharpening the work piece by file.			LOCATION OF TEST :
	TASK NO : 18			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety aprons as required. 2. Select smooth flat file as required size. 3. Select work piece (job) as specified. 4. Hold and clamp work piece (job) firmly and securely. 5. Sharpen cutting edges of work piece (job) along the length until finish. 			

TASK SPECIFICATION

5	TASK NO: 19 Sharpening the work piece by bench/hand grinder.	JOB TITTLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety goggles.3. Selects work piece (job).4. Checks grinding machine for vibration and broken grinding wheel.5. Holds and/ or clamps the work piece (job).6. Dips in coolant.7. Sharpens the work piece (job).	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Bench/hand grinder, coolant, goggles	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety goggles worn as required.• Work piece (job) selected as specified.• Grinding machine checked for vibration and broken grinding wheel and the gap between tool rest and grinding wheel not more than 2mm.• Work piece (job) held and/ or clamped securely and firmly.• Work piece dipped out in coolant to avoid overheating.• Work piece (job) sharpened along total length or width safely.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
19	1 2 3 4	Knowledge of checking procedure of grinding machine the gap between tool rest and grinding wheel. Knowledge of holding and/ or clamping work piece (job). Knowledge of coolant. Knowledge of sharpening procedure of work piece (job).			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Sharpening the work piece by bench/hand grinder.		LOCATION OF TEST :
	TASK NO : 19		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	<u>DID THE CANDIDATE ?</u>		STANDARD NOT MET (Comments)
	<ol style="list-style-type: none"> 1. Wear safety goggles. 2. Select work piece (job) as specified. 3. Check grinding machine for vibration, broken grinding wheel and the gap between tool rest and grinding wheel not more than 2mm. 4. Hold and/ or clamp work piece (job) securely and firmly. 5. Dip the work piece in coolant to avoid overheating. 6. Sharpen work piece (job) along total length or width safely. 		

TASK SPECIFICATION

5	TASK NO: 20 Honing the work piece with oil stone.	JOB TITLE: Forging Technical Assistant, L - 1
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| 6 | TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects work piece (job).4. Selects oil stone.5. Holds the oil stone in one hand, while the job in the other.6. Rubs (hones) the oil stone to the job.7. Applies film of oil/coolant.8. Repeats the process 6 and 7 several times. |
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TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Oil stone, oil can with oil/coolant.
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| 8 | TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety goggles worn as required.• Work piece (job) selected as specified.• Oil stone selected as specified types and grade.• Oil stone held in one hand, while the job in the other.• Oil stone rubbed (honed) to and from along the length/width of the job.• Film of oil/coolant applied to ease the honing process.• Above process repeated several times until the cutting edge of the work piece becomes fully sharpened. |
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9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
20	1 2	Knowledge of types and grade of oil stone. Knowledge of honing procedure of oil stone to the job.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Honing the work piece with oil stone.		LOCATION OF TEST :
	TASK NO : 20		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	<u>DID THE CANDIDATE ?</u>		STANDARD NOT MET (Comments)
	<ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select work piece (job) as specified. 3. Select oil stone as specified types and grade. 4. Hold oil stone in one hand, while the job in the other. 5. Rub (hone) oil stone to and from along the length/width of the job. 6. Apply film of oil/coolant to ease the honing process. 7. Repeat above process (5 and 6) several times until the cutting edge of the work piece becomes fully sharpened. 		

TASK SPECIFICATION

5	TASK NO: 21 Finishing the work piece by file.	JOB TITLE: Forging Technical Assistant, L - 1
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| 6 | TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects work piece (job).4. Selects appropriate file.5. Clamps the work piece on bench vice.6. Files the work piece for finishing. |
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TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Bench vice, File, safety apron.
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| 8 | TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Work piece (job) selected as specified.• Appropriate file selected as required.• Work piece clamped on bench vice securely.• Work piece filed gradually along the surface for finishing. |
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9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
21	1 2 3	Knowledge of types and grade of cut of files. Knowledge of clamping work piece. Knowledge of filing procedure of work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Finishing the work piece by file.			LOCATION OF TEST :
	TASK NO : 21			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select work piece (job) as specified. 3. Select appropriate file as required. 4. Clamp the work piece on bench vice securely. 5. File the work piece gradually along the surface for finishing. 			

TASK SPECIFICATION

5	TASK NO: 22 Finishing the work piece by mallet/wooden hammer. JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects work piece (job).4. Selects appropriate hammer.5. Places the work piece on metal/wooden stake.6. Hammers the work piece.7. Balances/dents level of the work piece to finish.8. Performs finishing operation.

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Mallet/wooden hammer, metal/wooden stake, down hold and uphold tools.
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Work piece (job) selected as specified.• Appropriate tools selected as required.• Work piece placed on metal/wooden stake as required.• Work piece hammered by using mallet/wooden hammer.• Level of the work piece surface balanced/dented smoothly using proper down hold and uphold tools.• Finishing operation performed along the length and periphery of the work piece surface.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
22	1 2 3 4	Knowledge of placing work piece on metal/wooden stake. Knowledge of hammering procedure of the work piece. Knowledge of balancing/denting surface of the work piece. Knowledge of finishing procedure of the work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Finishing the work piece by mallet/wooden hammer.		LOCATION OF TEST :
	TASK NO : 22		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select work piece (job) as specified. 3. Select appropriate tools. 4. Place the work piece on metal/wooden stake as required. 5. Hammer the work piece by using mallet/wooden hammer. 6. Balance/dent the level of the work piece surface smoothly using proper down hold and uphold tools. 7. Perform finishing operation along the length and periphery of the work piece surface. 		STANDARD NOT MET (Comments)

TASK SPECIFICATION

5	TASK NO: 23 Finishing the work piece by chisel.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects work piece (job).4. Selects appropriate chisel.5. Removes chatter marks.6. Chips off uneven surfaces, overlapping and rough edges.7. Chips off heavy rust and other materials.8. Brushes the surface of the work piece.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Flat chisel, cross cut chisel, special shape chisel, wire brush, chipping hammer, hammer.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Work piece (job) selected as specified.• Appropriate chisel selected as required.• Chatter marks removed on the surface of the work piece.• Uneven surfaces, overlapping and rough edges chipped off by using chipping hammer/chisel.• Heavy rust and other impurities present chipped off on the surface of the work piece.• Surface of the work piece brushed using wire brush.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
23	1 2 3 4	Knowledge of types and size of chisels. Knowledge of removing chatter marks. Knowledge of chipping off procedure of uneven surfaces, overlapping, rough edges, heavy rust and other materials. Knowledge of brushing the surface of the work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Finishing the work piece by chisel.		LOCATION OF TEST : CANDIDATE'S NAME : EVALUATORS NAMES:
	TASK NO : 23		
12	TEST FACTORS AND ITEMS		STANDARD MET STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select work piece (job) as specified. 3. Select appropriate chisel. 4. Remove chatter marks on the surface of the work piece. 5. Chip off uneven surfaces, overlapping, rough edges, heavy rust and other impurities present on the surface of the work piece by using chipping hammer/chisel. 6. Clean the surface of the work piece using wire brush. 		

TASK SPECIFICATION

5	TASK NO: 24 Cleaning the work piece with emery paper. JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects work piece (job).4. Selects appropriate emery paper.5. Cleans heavy or light rusting of the work piece.6. Polishes the work piece.

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Coarse emery paper, fine emery paper, smooth grade emery paper.
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Work piece (job) selected as specified.• Appropriate emery paper selected as required.• Heavy rusting of work piece cleaned by using coarse emery paper and light film of rust cleaned by fine emery paper.• Work piece polished by smooth grade emery paper.

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
24	1 2 3	Knowledge of types and grades of emery paper. Knowledge of cleaning procedure of heavy or light rusting of the work piece. Knowledge of polishing the work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)				
11	TASK TITLE : Cleaning the work piece with emery paper.			LOCATION OF TEST :
	TASK NO : 24			CANDIDATE'S NAME :
				EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS		STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select work piece (job) as specified. 3. Select appropriate emery paper. 4. Clean heavy rusting of the work piece by using coarse emery paper and light film of rust by fine emery paper. 5. Polish the work piece by smooth grade emery paper. 			

TASK SPECIFICATION

5	TASK NO: 25 Coating red oxide and enamel paint.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects appropriate paint brush and paints.4. Cleans and washes the work piece.5. Preheats the work piece.6. Applies red oxide paint as initial coat.7. Dries red oxide painted work piece.8. Applies red oxide paint as final coat.9. Dries red oxide painted work piece.10. Applies enamel paint as initial coat.11. Dries enamel painted work piece.12. Applies enamel paint as final coat.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Emery paper, container with water, red oxide paint, enamel paint, paint brushes.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Appropriate paint brushes and paints selected as required.• Work piece cleaned by emery paper and washed with water properly.• Work piece preheated in the sun light or using drying method.• Red oxide paint applied as initial coat.• Red oxide painted work piece dried safely.• Red oxide paint applied smoothly as final coat.• Enamel paint applied as initial coat.• Enamel painted work piece dried.• Enamel paint applied as required colour as final coat.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
25	1 2 3 4	Knowledge of types of paint and paint brush. Knowledge of preheating the work piece. Knowledge of painting procedure of red oxide and enamel paint as initial coat and final coat. Knowledge of drying red oxide and enamel painted work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Coating red oxide and enamel paint.		LOCATION OF TEST :
	TASK NO : 25		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select appropriate paint brush and paints as required. 3. Clean the work piece by emery paper and wash with water properly. 4. Preheat the work piece in the sun light or using drying method. 5. Apply red oxide paint as initial coat. 6. Dry the red oxide painted work piece safely. 7. Apply red oxide paint smoothly as final coat. 8. Apply enamel paint as initial coat. 9. Dry enamel painted work piece. 10. Paint the enamel as required colour as final coat. 		

TASK SPECIFICATION

5	TASK NO: 26 Putting wooden handle.	JOB TITLE: Forging Technical Assistant, L - 1
6	TASK ELEMENTS: <ol style="list-style-type: none">1. Receives instruction.2. Wears appropriate safety aprons.3. Selects appropriate tools and handles.4. Cuts and finishes the handle.5. Puts ring (ferule) on the handle.6. Makes holes with sharp pointed drift (punch).7. Heats the end of the work piece.8. Pierces the wooden handle into the work piece.9. Bends the tip of the work piece, if required.	

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS Files, hacksaw, hammer, emery paper, ring (ferule), sharp pointed drift (punch), centre punch, bench vice, hearth.	
8	TASK PERFORMANCE STANDARDS <ul style="list-style-type: none">• Safety aprons worn as required.• Appropriate tools and handle selected as required.• Handle cut as required length and diameter and surface finished/chamfered.• Ring (ferule) put on the edge of handle.• Holes made in centre of the handle with sharp pointed drift (punch).• End of the work piece heated in hearth to red hot.• Wooden handle pierced into the work piece to full depth.• Tip of the work piece bent, if required.	

9	10	TASK TRAINING DATA			
TASK NO:	T. E. No.	TECHNICAL KNOWLEDGE	APPLIED CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGENE
26	1 2 3 4 5 6 7	Knowledge of selecting appropriate size of handles. Knowledge of cutting and finishing the handle. Knowledge of putting ring (ferule) on the handle. Knowledge of making holes with sharp pointed drift (punch). Knowledge of heating the end of the work piece. Knowledge of piercing the wooden handle into the work piece. Knowledge of bending the tip of the work piece.			

TASK PERFORMANCE TEST (SKILL ASSESSMENT)			
11	TASK TITLE : Putting wooden handle.		LOCATION OF TEST :
	TASK NO : 26		CANDIDATE'S NAME :
			EVALUATORS NAMES:
12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	<u>DID THE CANDIDATE ?</u> <ol style="list-style-type: none"> 1. Wear safety apron as required. 2. Select appropriate tools and handle as required. 3. Cut handle as required length and diameter and finish/chamfer surface. 4. Put the ring (ferule) on the edge of handle. 5. Make holes in centre of the handle with sharp pointed drift (punch). 6. Heat the end of the work piece in hearth to red hot. 7. Pierce wooden handle into the work piece to full depth. 8. Bend tip of the work piece, if required. 		