

Short Term Competency based Curriculum

Occupation: Construction Craftsman (Mason) - Foundation & Masonry Walls

Course Duration: 03 Months Institutional followed by 06 Months OJT in industry

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Occupation: Construction Craftsman (Mason)- Foundation & Masonry Walls

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Occupation: Construction Craftsman (Mason)- Foundation & Masonry Walls

Module Title: Use safe work practices

Module Reference: CCA – M 01

Module Aim

On completion of this module the learner should be able to,

- Recognize hazards in a given worksite
- Demonstrate correct emergency techniques & procedures for a given hazard.
- Minimize hazards by applying safe work practices

Module Content	
Task	Task descriptions/ Performance standards
<p>Describe/Illustrate hazards in the Construction Craftsman (Mason) Trade</p> <p>Emphasize the importance of personal Protective Equipment (PPE)</p>	<p>Hazards may include, but not limited to following:</p> <ul style="list-style-type: none"> ☒ Sharp objects – glass and metal ☒ Overhead hazards/Moving equipment ☒ Electrical hazards ☒ Flammable and explosive materials ☒ Atmospheres- Flammable, explosive, oxygen-deficient ☒ Slips, trips and falls ☒ Toxic substances, Bio hazards, Heavy metals <ul style="list-style-type: none"> - Asbestos, Other Industry products ☒ Respiratory implications <p>Illustrate and explain</p> <ul style="list-style-type: none"> • Safety footwear • Eye protection • Ear protection • Head protection • Gloves • Respiratory protection • Fit test for respirator <ul style="list-style-type: none"> • Personal protective equipment provided by the employer should be used for one’s own safety • Gloves should be worn when handling or contacting chemicals. • Mask should be worn when working in a dusty environment. <p align="right">Continued-</p>

<p>Discuss the proper use of various types of personal fall protection equipment</p> <p>Demonstrate the proper use of various types of personal fall protection equipment.</p> <p>Discuss safe work practices for erecting and dismantling scaffolds</p> <p>Illustrate with diagrams and other visuals safe work practices for erecting and dismantling scaffolds</p> <p>Describe the steps of ladder safety</p> <p>Demonstrate the steps of ladder safety</p> <p>Explain safety practices used when working in confined Spaces</p> <p>Demonstrate the safety practices applied when working in confined spaces</p>	<p style="text-align: right;">Continued-</p> <ul style="list-style-type: none"> • Eye and Ear protectors should be worn whenever necessary • Safety harness should be worn and secure it to a safe anchorage point when working at height. A bamboo scaffold is not a safe anchorage point, so do not fasten the safety harness to it. • Safety shoes should be worn to prevent foot injury. <p>Consider-following aspects too. Pre-planning, inspecting scaffold components, load capacity, platform construction, access requirements, and fall protection</p> <p>Steps of ladder safety should include: selection, inspection, set-up, safe techniques and proper maintenance and storage of ladders</p>
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Training Delivery

Develop Performance Guides for each Task

In respect of each of the above operations

- First provide guided practice
- Then allow groups to practice with minimum guidance

Suggested Training Methodology

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion
4. Small group activities

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be continuously observed and recorded

Assessment of Technical competencies (Performance /Knowledge Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component

Occupation: Construction Craftsman (Mason) - Foundation & Masonry Walls

Module Title: **Setting out Buildings & Structures**

Module Reference: **CCA - M 02**

Module Aim

On completion of this module the learner should be able to accurately perform following setting out operations

- establish angles to set out corners
- set levels according to building plan
- check diagonals, offsets, and angles to ensure accuracy

Module Content

Task	Task descriptions/ Performance standards
1. Provide copies of selected drawings to small groups of students Referring to given drawings Illustrate and explain	<ul style="list-style-type: none"> • Symbols • Dimensions and Scales • Notations • Abbreviations • Elevations • Sectional elevations
2. Discuss/Explain <ul style="list-style-type: none"> • How to calculate Centre Line dimensions • How to sketch the layout as per the site plan 	Site plan to be referred to locate the lay out Site plan to be referred to position the lay out
3. Illustrate and explain <ul style="list-style-type: none"> • How to establish the Base line • How to fix Temporary Bench Mark (TBM) reference points 	Site plan to be referred to establish the Base line
4. Discuss/Explain How fixing of Profile boards and centre pegs be performed	It should be ensured that all pegs to be in one horizontal plane
5. Discuss/Explain How to establish angles to set out corners	
6. Demonstrate how to establish angles to set out corners	

<p>7. Illustrate/Demonstrate How to set levels</p>	<p>Levels should be set according to building plan & appropriate levels maintained to check whether the setting out is done accurately</p> <p>Existing building lines should be extended to set out extensions of the building according to the drawing</p>
<p>8. Demonstrate how to check Diagonals, offsets, and angles</p>	<p>Diagonals, offsets, and angles should be checked for accuracy</p> <p>Building plan should be referred to rectify errors.</p>

Training Delivery

Develop Performance Guides for each of the above Tasks

In respect of tasks (2,3,4,5,& 7)

- First provide guided practice to students
- Then allow them to practice with minimum guidance

Suggested Training Methodology

1. Illustrations & Practical Demonstrations
2. Self-paced Instruction
3. Group Discussion
4. Small group activities

Small group activities

Get students work in small groups to,

- Convert Imperial measurement units to metric measurement units
- Work out their conversion ratios
- Demonstrate taking offset measurements

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Important

- Confirm whether student is able to check the accuracy of the setting out by using a different method to that used for setting out

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

Following competencies may be assessed

- **Layout orientation (Using the site plan)**
- **Establishment of baseline**
- **Locating & positioning of layout**
- **Level setting**
- **Establishment of angles**

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component

Occupation: Construction Craftsman (Mason) - Foundations & Masonry Walls

Module Title: Perform Rubble Masonry work

Module Reference: CCA - M 03

Module Aim

On completion of this module the learner should be able to,

- Maintain the accuracy of measurements
- Maintain the Rubblework pattern/bond
- Maintain the Level & plumb of walls/ structures
- Minimize the wastage of material

Module Content	
Task	Task descriptions/ Performance standards
<p>Illustrate and Discuss: Factors to be considered before building rubble masonry structures (Foundations/walls)</p> <p>Illustrate & Discuss</p> <ul style="list-style-type: none"> • Different shoring methods • Different de-watering methods <p>Explain: What is Ground water table</p> <p>Discuss and outline the steps involved in the preparation of cement mortar</p>	<p>These factors may include</p> <ul style="list-style-type: none"> • Condition of the soil on which the structure will be erected • Water level of the soil • Appropriate measures to be taken to remedy the soil condition & dewatering if necessary. • Dimensions of the trench • Specifications given in the drawing. • Specified Type/s of stones required –Type of stones • Specified material required for cement –mortar mix <p>Identification of Ground water table</p> <p>These steps should include: Ratio of the cement mortar mix Sizes of material required Determining the quantity of material required Determining the quality of material required Mixing material according to identified mixing methods Checking the consistency of mortar mix Maintaining the consistency of mortar mix</p>

<p>Demonstrate Mixing of mortar (sample)</p> <p>Demonstrate setting out of rubble work as per the specifications of the Drawing</p> <p>This may be performed by students In groups after the demonstration of the same</p> <p>Explain different types of foundations</p> <p>Explain what are Trial & Bore Holes</p> <p>Illustrate and Explain different Rubble work and their specific characteristics</p> <p>Demonstrate how weep holes and expansion joints are made according to the working drawing</p> <p>Explain and Demonstrate how line & height of the rubble work is checked and maintained as per the working drawing</p>	<p>Indicate that the type of foundation to be adopted for a building depends upon the load to be transmitted & the bearing capacity of the soil</p> <p>Types of Foundations</p> <ul style="list-style-type: none"> • Strip Foundations • Pad Foundations • Pile & Beam Foundations • Raft Foundations <p>Random Rubble Squared Rubble Miscellaneous Rubble</p>
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Training Delivery

Develop Performance Guides for each Task

In respect of each of the above key operations

- First provide guided practice
- Then allow groups to practice with minimum guidance

Suggested Training Methodology

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion
4. Small group activities

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

Following competencies may be assessed

- **Maintaining the accuracy of measurements**
- **Minimizing the wastage of material**
- **Maintaining the Rubblework pattern/bond**
- **Maintaining the Level & plumb of walls/ structures**

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component

Occupation: Construction Craftsman (Mason)- Foundation & Masonry Walls

Module Title:

Carry out Damp Proofing work

Module Reference:

CCA – M 04

Module Aim

On completion of this module the learner should be able to lay Damp proof course and carry out water proofing operations related to buildings and structures as per the specifications given

Module Content	
Task	Task descriptions/ Performance standards
Discuss Causes of dampness in the walls	Illustrate 4-5 causes
Explain with illustrations What is Damp proofing	Indicate that one of the best methods of avoiding dampness in buildings is by installing damp proof courses (DPCs) in different parts of the building during the construction phase
Explain with illustrations and Discuss ways of accomplishing damp proofing	<p>Explain that Damp proof course (DPC) is a barrier of impervious material incorporated into a wall or pier (platform) to prevent moisture moving to any part of the building.</p> <p>Emphasize that DPC should be laid at least 150 mm above external ground or paving level</p> <ul style="list-style-type: none"> • Damp-proof course .(DPC) • A damp-proof membrane (DPM) (A DPM may be used for the DPC). • Integral damp proofing in concrete involves adding materials to the concrete mix • Surface coating with thin water proof materials • Cavity wall construction, where the interior walls are separated from the exterior walls by a cavity.
Discuss different materials used for damp proofing	<p>Materials widely used for damp proofing include:</p> <ul style="list-style-type: none"> • Flexible materials like plastic sheets, bituminous felts, sheets of lead, copper, etc. • Semi-rigid materials like mastic asphalt

Continued-

<p>Discuss factors to be considered in selecting appropriate material for DPC</p> <p>Discuss the effects of positive screed</p> <p>Outline the steps involved in laying a Damp proof course</p> <p>Demonstrate laying of a Damp proof course</p>	<p style="text-align: right;">Continued-</p> <ul style="list-style-type: none"> • Rigid materials like impervious bricks, stones, slates, cement mortar or cement concrete painted with bitumen, etc. • Stones • Mortar with waterproofing compounds • Coarse sand layers under floors • Continuous plastic sheets under floors <p>All materials used as damp proof courses should be resistant to moisture content.</p> <p>A damp proof course should be cost effective and easily available.</p> <p>The type of DPC to be used depends on the site conditions on which the building is constructed as well as the building construction rules applicable to given area.</p> <ul style="list-style-type: none"> • Selecting material as appropriate to the method to be applied • Checking the suitability of material selected for the type of DPC <ul style="list-style-type: none"> • Cleaning the preparing the surface to be damp proofed as per the specifications • Ensuring that specified number of coats or required thickness is maintained as per specifications • Protecting the finished DPC
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Training Delivery

Develop Performance Guides for each Task

In respect of each of the above operations

- First provide guided practice
- Then allow groups to practice with minimum guidance

Suggested Training Methodology

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion
4. Small group activities

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)
Summative assessment also to be conducted in respect of each module

During assessment, pay special attention to following

- **Maintaining the evenness of the applied layer**
- **Maintaining the specified Thickness of the damp proof layer**
- **Application of water proofing layer to cover entire surface area**
- **Covering the water proofing layer to protect from dust, water, rain etc**
- **Maintaining the uniformity of protective screed to cover the water proofing layer**

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component

Occupation: Construction Craftsman (Mason)- (Foundation & Masonry Walls)

Module Title: Carry out Brick Work

Module Reference: CCA – M 05

Module Aim

On completion of this module the learner should be able to construct different types of walls using different types of bonds as per drawings and specified standards while adhering to safety practices and safety regulations

Module Content	
Task	Task descriptions/ Performance standards
<p>Provide copies of plans, sketches to small groups of students</p> <p><u>Activity:</u> Guide each group to accurately interpret given plans & sketches</p> <p><u>Explain & Discuss</u> How to plan and make preparation to carry out “ Brickwork”</p> <p><u>Discuss and outline the steps</u> involved in the preparation of cement mortar</p> <p>Demonstrate Mixing of mortar (sample)</p>	<p>.</p> <p>Interpret: Resource requirements- Materials, Equipment , Laour & etc. Assessing the quality and suitability of Materials, Equipment Methodologies /Techniques to be applied in construction</p> <p>Gather required information from plans & sketches,</p> <ul style="list-style-type: none"> ● to set out the brick work ● to plan work, fixing targets to carry out bricklaying smoothly ● to select tools to match the requirements ● to erect scaffoldings to stack bricks at heights. ● to gather Tools and material for easy working <p>These steps should include:</p> <ul style="list-style-type: none"> ● Ratio of the cement mortar mix ● Sizes of material required ● Determining the quantity of material required ● Determining the quality of material required ● Mixing material according to identified mixing methods ● Checking the consistency of mortar mix ● Maintaining the consistency of mortar mix

<p>Define “walls” and explain functional and structural requirements of walls</p> <p>Illustrate & Explain different types of walls and their characteristics</p> <p>Illustrate and Demonstrate Setting out brickwork</p> <p>Illustrate and Demonstrate How the</p> <ul style="list-style-type: none"> • Brickwork is constructed. • Material are used economically <p>Also, emphasize the importance of observing safety precautions and safety regulations</p> <p>See below for Exercises</p>	<p>Mention that walls are defined as external or internal to differentiate functional requirements, and as load bearing or non load bearing to differentiate structural requirements</p> <p>Types - solid walls</p> <ul style="list-style-type: none"> Framed walls Load bearing walls Non Load bearing walls <p>Following steps to be observed</p> <ul style="list-style-type: none"> • Mark “Centre Lines” of the brick work to be constructed according to drawings. • Mark Levels using given reference points • Obtain different levels of the building structure by transferring levels from one point to the other using water level or spirit level • Mark Linear and angular measurements in setting out according to the drawings • Set out angles on the ground as per the drawing • Take off set measurements according to drawing • Check off set measurements according to drawing • Establish Lines using threads to facilitate trenching <p>Following steps to be observed in constructing brickwork</p> <ul style="list-style-type: none"> • Soak bricks in water before laying. • Spread cement, sand, mortar uniformly according to the accepted standards • Lay bricks and align along the set out lines following accepted bond patterns • When laying, cut bricks to various standard shapes and sizes as required • Fill up grooves with cement sand mortar for better adhesion and neatness • Align brick courses vertically • Check thickness of brick courses with the gauge staff • Ensure the horizontality of the layers • Clean grooves to get an even spread of mortar • Construct brick work to specified height & provide spaces for door and window openings as per the drawings.
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Training Delivery

Illustrate and explain different types of bonds (**By Trainees**)

- **Heading bond**
- **Stretching bond**
- **English bond**
- **Flemish bond**

Demonstration by (Trainees)

- **How to level and plumb a brick corner**
- **How to build English Bond T Joints**
- **How to build Flemish Bond T Joints**

Form students into 4 or 5 small groups

In respect of each of the above activities/Tasks

- **First demonstrate each of the above.(One per time)**
(Performance guides may be used for each activity)
- **Then allow each group to practice under guidance and supervision**
- **Then allow each group to practice with minimum guidance**

(This may be continued until all groups become competent in each of the above tasks)

Suggested Training Methodology

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion
4. Small group activities

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

During assessment, pay special attention to following aspects

- **Alignment of perpend - should be vertical.**
- **Adherence to safety standards**
- **Strict adherence to plans & specifications**
- **Handling of material economically and carefully**
- **Thickness of layers & appearance**
- **Uniform thicknesses of grooves**
- **Strict adherence to selected bond patterns**

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component

Occupation: Construction Craftsman (Mason)- (Foundation & Masonry Walls)

Module Title: Carry out Block Work

Module Reference: CCA – M 06

Module Aim

On completion of this module the learner should be able to construct walls & columns using blocks as per drawings and specified standards while adhering to safety practices and safety regulations

Module Content	
Task	Task descriptions/ Performance standards
<p>Provide copies of plans, sketches to small groups of students</p> <p><u>Activity:</u> Guide each group to accurately interpret given plans & sketches</p> <p><u>Explain & Discuss</u> How to plan and make preparation to carry out “ Block work”</p> <p><u>Discuss and outline the steps</u> involved in the preparation of cement, sand mortar</p>	<p>.</p> <p>Interpret: Resource requirements- Materials, Equipment , Laour & etc. for block work Assessing the quality and suitability of Materials, Equipment Methodologies /Techniques to be applied in construction</p> <p>Gather required information from plans & sketches,</p> <ul style="list-style-type: none"> • to set out the block work • to plan work, fixing targets to carry out block work smoothly • to select tools to match the requirements • to erect scaffoldings to stack blocks at heights. • to gather Tools and material for easy working <p>These steps should include:</p> <ul style="list-style-type: none"> • Ratio of the cement ,sand, mortar mix • Sizes of material required • Determining the quantity of material required • Determining the quality of material required • Mixing material according to identified mixing methods • Checking the consistency of mortar mix • Maintaining the consistency of mortar mix

<p>Illustrate and Demonstrate Setting out block work</p>	<p><u>Following steps to be followed</u></p> <ul style="list-style-type: none"> • Mark “Centre Lines” of the block work to be constructed according to drawings. • Mark Levels using given reference points • Obtain different levels of the building structure by transferring levels from one point to the other using water level or spirit level • Mark Linear and angular measurements in setting out according to the drawings • Take off set measurements according to drawing • Check off set measurements according to drawing • Establish Lines using threads to facilitate trenching
<p>Illustrate and Demonstrate How the</p> <ul style="list-style-type: none"> • Block work is constructed. • Material are used economically <p>Also, emphasize the importance of observing safety precautions and safety regulations</p>	<p><u>Following steps to be followed</u></p> <ul style="list-style-type: none"> • Obtain number of blocks required for construction and keep in close proximity for quick access • Spread cement mortar with trowel to form a level bed to lay cement blocks • Cut Blocks to different predetermined sizes and shapes using standard techniques and procedures. • Maintain vertical and horizontal alignment of block work • Construct straight walls, corners and junctions as per the specifications given • Fill up grooves with cement sand mortar for better adhesion and neatness • Plumb to ensure the verticality of block wall . • Check the thickness of block courses with the gauge staff • Ensure horizontality of the layers • Cleaned the grooves to obtain an even spread of mortar • Constructed block work to the specified height & provided spaces for door and window openings as per the drawings.

Training Delivery

Prepare performance guides for performance of each of the following operations
(You may use above steps to prepare your performance guides)

- Setting out block work
- Construction of block work

After Trainer Demonstration form students into small groups

(Also provide plans sketches and drawings to each small group)

- First provide guided practice to each group
- Then, let each group practice under minimum supervision
(Get them use respective performance guide for each operation)

Suggested Methodologies for Training delivery

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion
4. Small group activities

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

During assessment, pay special attention to following aspects

- Strict adherence to selected bond patterns & appearance
- Proper alignment of vertical & horizontal joint
- Uniform thicknesses of grooves
- Vertical alignment of block work (Plumbed)
- Thickness of layers
- Economical use of material
- Adherence to plans & specifications

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions - (short viva) to be conducted to assess the knowledge component.

Occupation: Construction Craftsman (Mason)- (Foundation & Masonry Walls)

Module Title: Render Floor surfaces

Module Reference: CCA – M 07

Module Aim

On completion of this module the learner should be able to prepare and render floor surfaces working with cement, sand and water. Paving may be done out of bricks or concrete. Learner should be able to carry out this work while ensuring safe working conditions and safe use of tools, equipment, machinery and material

Module Content	
Task	Task descriptions/ Performance standards
Discuss factors to be considered when planning, work to be done Plan and organize for rendering work	<ul style="list-style-type: none">• Plan the work to be carried out considering the location, environment and other conditions and the volume of work to be done.• Estimate quantity of material required for the job, number of masons and helpers required• Check the suitability and quantity of available materials and rectify short comings if any• Organize store materials at appropriate places• Make ready tools required to carry out rendering
Discuss what need to be done when Preparing the surface for rendering	Following steps given in the NCS may be followed when Preparing the surface for rendering <ul style="list-style-type: none">• Clean the location to be rendered by removing loose mortar (if any) any wedges, spikes and any other unwanted matter• Check Levels of the floor surface against the specifications and take remedial action to rectify shortcomings if any• Check surface for loose spots or minor cracks and action taken to rectify if any

<p>Describe how rendering of floor surface should be carried out</p> <p>Illustrate and explain</p> <ul style="list-style-type: none"> • Effect of water on cement • Hardening time of the mix <p>Perform skirting on the wall around the floor</p> <p>Illustrate and Discuss</p> <ul style="list-style-type: none"> • Preparation of slurry • Proper time to give the 'finish' with cement slurry 	<ul style="list-style-type: none"> • Clean surface & roughen to receive rendering material • Apply water evenly to the surface to wet the surface • Fix cement mortar plumb point at the most protruded spot and make the thickness equal to the specified thickness of the plastering layer • Fix level points on the surface at distances within the reach of available straight edge, ensuring that top surfaces of all level points are in the same plane <p>Following steps may be followed when rendering floor surface</p> <ul style="list-style-type: none"> • Spread cement mortar spread in rows (width about 5" / 125 mm) between fixed level points • Rule out excessive mortar using straight edge maintaining the specified levels using trowel • Make expansion and contraction joints , if the length of the rendering area is greater than 50 feet / 15 m. • Apply cement slurry with trowel over the mortar surface and smoothen until all marks disappear <p>Following steps may be followed</p> <ul style="list-style-type: none"> • Mark skirting level marked along the walls, surrounding the rendering area as specified • Fix Plumb points within the reach of straight edges according to the specified thickness • Apply cement mortar in the skirting area and cut top edge and level out • Apply cement slurry in the skirting area and smoothen until all marks disappear. • Remove all cement mortar droppings and clean the area
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Training Delivery

Develop Performance Guides for each Task
(You may use above steps to prepare your performance guides)

In respect of each of the above operations

- First provide guided practice
- Then allow groups to practice with minimum guidance

Suggested Training Methodology

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

During assessment, pay special attention to following aspects

- **Uniform height of the skirting**
- **Thickness of skirting**
- **Verticality of the skirting**
- **Avoiding- cracking and de-bonding of floor rendering**

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component.

Occupation: Construction Craftsman (Mason)- (Foundation & Masonry Walls)

Module Title:

Plaster Surfaces

Module Reference:

CCA – M 08

Module Aim

On completion of this module the learner should be able to outline the plastering process, explain the importance of surface preparation, prepare a given surface for plastering, establish true verticality of given vertical surface and plaster the same.

Module Content	
Task	Task descriptions/ Performance standards
<p>Introduce “Plastering” of surfaces Indicate purpose of plastering as well.</p> <p>Discuss - Main functions fulfilled by a plaster finish</p> <p>Explain- Common types of plaster</p> <p>Identify-Common materials normally used for plastering</p> <p><u>Outline</u> - preparation of surfaces for plastering</p> <p>(Prepare a performance guide to be used for practicing and also for assessing the surface preparation)</p>	<p>Surfaces may include exterior & interior walls, ceilings and other surfaces in the construction or re-modeling of buildings.</p> <p>Lime Plaster-(Lime plaster – internal, Lime plaster – external), Cement Plaster, Lime cement sand plaster</p> <p>Characteristic features of each type of plaster</p> <p>Properties of each material</p> <p>Indicate that durability of plaster depends upon its adhesion with the background- Hence preparation of surface is of prime importance.</p> <p>Lay Emphasis on <u>following aspects</u> during surface preparation</p> <ul style="list-style-type: none"> • Removal of loose mortar , wedges, nails and solid items from the walls to be plastered without damaging the walls • Checking walls for cracks and rectifying if any • Applying cement motor to fix loose bricks / blocks or concrete • Applying water to wall surface evenly to wet it

Task	Task descriptions/ Performance standards
<p><u>Explain:</u> Establishing of true verticality of a vertical surface</p> <p><u>Demonstrate:</u> How to establish true verticality of a vertical surface</p> <p><u>Explain</u></p> <ul style="list-style-type: none"> • Application of Plaster • Plastering of Vertical surfaces • Plastering soffit <p><u>Demonstrate</u></p> <ul style="list-style-type: none"> • Application of Plaster • Plastering of Vertical surfaces • Plastering soffit <p><u>Discuss:</u> Precautions to be taken when plastering prepared surfaces</p> <p><u>Explain/Discuss</u> Defects in plaster work</p> <p><u>Work Site Visit</u> Organize visit to a suitable worksite for a <u>Study Assignment</u></p> <p><u>Focus</u></p> <ul style="list-style-type: none"> • Plastering Machinery • Plastering through plastering machinery 	<p>Lay Emphasis on <u>following aspects</u></p> <ul style="list-style-type: none"> • Fixing cement mortar plumb point at the most protruded spots • Fixing cement mortar plumb point at the most protruded points and making thickness equal to the specified thickness of plastering layers • Fixing of further plumb points <p>Lay Emphasis on <u>following aspects</u></p> <ul style="list-style-type: none"> • Applying and spreading Plaster in horizontal rows to suit the plumb points fixed. • Applying Plaster in between the horizontal rows and ironing out to get an even surface • Ensuring the surface to be in the same plane as that of the plumb points <p>Emphasize on</p> <ul style="list-style-type: none"> • Wetting the surface before plastering • Maintaining the cement sand ratio as required • After plastering, spreading of water on plastered surface <p>Indicate at least the following: (Defects that could arise due to)</p> <ul style="list-style-type: none"> • Excessive shrinkage of plaster • Surface not been properly prepared • Inadequate adhesion of plaster to the surface • Insufficient curing of plaster <p>Make arrangements for students to observe</p> <ul style="list-style-type: none"> • Plastering Machinery at site • How plastering is done through plastering machinery

Training Delivery

Develop Performance Guides for each Task
(You may use above steps to prepare your performance guides)

In respect of each of the above operations

- First provide guided practice
- Then allow groups to practice with minimum guidance

Suggested Training Methodology

1. Illustration & Practical Demonstration
2. Self-paced Instruction
3. Group Discussion

Assessment

This Module should be subjected to continuous assessment particularly during institutional training phase

All above tasks should be assessed during both institutional training phase as well as Industry Training phase

Consistency of performance to be observed and recorded

Assessment of Technical competencies (Performance Assessments)

(Includes Mode of assessment and Assessment Instruments/tools to be used in assessment)

Summative assessment also to be conducted in respect of each module

During assessment, pay special attention to following aspects

- **Fixing plumb points**
- **Plastering on vertical, inclined surfaces**
- **Plaster standing on scaffolding horizontal surfaces**
- **Obtaining required surface finishes**

Assessment of Technical competencies (Knowledge Assessment)

MCQ and Structured essay type questions and oral questions (short viva) to be used to assess the knowledge component.