Qualification Pack

Interior Finisher

Painting/ Tiling/ Marble Laying/ False Ceiling and Drywall Installation/ Waterproofing

QP Code: ICE/CON/Q0301

Version: 1.0

NSQF Level: 4

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Contents

ICE/CON/Q0301: Interior Finisher

Brief Job Description

An Interior Finisher is responsible for finishing tasks such as painting, tiling, marble work, false ceiling installation, drywall setup and waterproofing in residential, commercial and industrial buildings. These tasks are completed in residential, commercial and industrial spaces with a focus on safety, aesthetics, functionality and adherence to environmental guidelines.

Personal Attributes

Teamwork, Attention to Detail

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ICE/CON/N0301: Read and Interpret Construction and Design Drawings
2. ICE/CON/N9901: Implement Safe Work Practices and Environmental Stewardship at Construction Sites
3. DGT/VSQ/N0102: Employability Skills (60 Hours)

Electives*(mandatory to select at least one)*:

Elective 1: Painting

1. ICE/CON/N0302: Clean and Prepare Surfaces for Painting
2. ICE/CON/N0303: Prepare Paint Mix Including Digital Color Matching
3. ICE/CON/N0304: Apply Paints Using Traditional and Airless Spray Techniques
4. ICE/CON/N0305: Identify and Repair Common Painting Issues

Elective 2: Tiling

1. ICE/CON/N0307: Level and Prepare Surfaces for Tiling Work
2. ICE/CON/N0308: Measure and Cut Tiles as Per Layout Specifications
3. ICE/CON/N0309: Install Standard Tiles and Prefabricated Tile Sheets
4. ICE/CON/N0310: Apply Grouts and Sealants for Tiled Surfaces

Elective 3: Marble Laying

1. ICE/CON/N0312: Prepare Surfaces for Marble Installation
2. ICE/CON/N0313: Measure and Cut Marble Using Advanced Tools
3. ICE/CON/N0314: Install Marble Slabs and Tiles
4. ICE/CON/N0315: Polish and Seal Marble Surfaces using Epoxy Resins and Nano Coatings

Elective 4: False Ceiling and Drywall Installation

1. ICE/CON/N0317: Prepare Framework for False Ceiling Installation
2. ICE/CON/N0318: Install Flush Jointed and Open Grid Ceiling Systems
3. ICE/CON/N0319: Install Pre Fabricated Ceiling and Drywall Systems
4. ICE/CON/N0320: Install Structural Wall Panels and Insulated Partitions

Elective 5: Waterproofing

1. ICE/CON/N0322: Apply Waterproofing Techniques Using Membranes and Adhesives
2. ICE/CON/N0323: Inspect and Maintain Waterproofed Surfaces

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Finishing Works
Country	India
NSQF Level	4
Credits	30
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7131.0100, NCO-2015/7121.0100, NCO-2015/7112.0100, NCO-2015/7122.9900

Minimum Educational Qualification & Experience	12th grade Pass OR 10th grade pass with 2 Years of experience Relevant Industry OR 8th grade pass with 4 Years of experience Relevant Industry OR Previous relevant Qualification of NSQF Level (3) with 3 Years of experience Relevant Industry OR Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience Relevant Industry
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Not Applicable
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	07/10/2028
NSQC Approval Date	07/10/2025
Version	1.0
Reference code on NQR	NCVET-QG-04-CO-046432025-V1-ICES
NQR Version	1.0

Remarks:

Minimum Job Entry Age is As per Govt. Norms

ICE/CON/N0301: Read and Interpret Construction and Design Drawings

Description

This NOS covers the skills and knowledge required to read, interpret and apply information from construction and design drawings relevant to interior finishing works such as painting, tiling, marble installation, false ceiling and drywall installation and waterproofing. It includes understanding symbols, dimensions, layout details, levels, material specifications and installation requirements needed to execute finishing tasks as per project standards, safety norms and quality parameters.

Scope

The scope covers the following :

- Identify and Interpret Drawing Types and Symbols
- Extract Dimensional Information from Drawings
- Interpret Layouts, Sections, and Elevations
- Interpret Material Specifications and Technical Requirements
- Apply Drawing Information to Execute Work on Site

Elements and Performance Criteria

Identify and Interpret Drawing Types and Symbols

To be competent, the user/individual on the job must be able to:

PC1. identify various types of construction drawings including architectural, structural, MEP, finishing and shop drawings

PC2. recognize and interpret common symbols, legends and notations used across finishing works

PC3. read title blocks to identify project details, drawing scale, revision number and dates.

PC4. interpret conventional symbols for walls, floors, ceilings, openings, utilities and finishes

PC5. identify symbols specific to painting (texture codes, paint types), tiling (patterns, tile sizes), marble cutting lines and ceiling grids

PC6. recognize waterproofing symbols such as membrane boundaries, lap directions and drainage points

PC7. interpret dimensioning conventions including linear, angular, radial and spot levels

PC8. identify tolerance markings and material references provided in drawings

PC9. interpret drawing scales and convert drawing measurements into actual site measurements

PC10. identify cross-reference markers such as section cuts, detail bubbles, elevation markers and notes

Extract Dimensional Information from Drawings

To be competent, the user/individual on the job must be able to:

PC11. read dimensions for lengths, widths, heights and depths as shown in architectural and interior drawings.

PC12. interpret grid lines, datums and reference levels to determine the positioning of interior finishes.

PC13. extract tile layout dimensions including joint spacing, alignment grids and cutting margins.

PC14. identify marble slab dimensions, cutting marks, grain direction and matching patterns.

PC15. interpret ceiling height, soffit levels, suspension details and channel spacing as per ceiling drawings.

PC16. extract painting area dimensions for walls, ceilings, openings and special texture zones.

PC17. identify waterproofing dimensions including coverage area, lap lengths and termination heights.

PC18. verify measurement annotations and cross-check with scaling for accuracy.

PC19. interpret tolerances allowed for cut-to-size materials, movement joints and alignments.

PC20. document extracted measurements for site execution and material estimation.

Interpret Layouts, Sections and Elevations

To be competent, the user/individual on the job must be able to:

PC21. read plan views to understand the overall area layout for finishing works.

PC22. interpret wall elevations for painting patterns, tile layouts, marble designs and cladding details.

PC23. interpret ceiling layouts including lighting cutouts, AC diffusers, service openings and panel arrangement.

PC24. read sectional details for tile bedding thickness, mortar layers, marble under-supports and ceiling levels.

PC25. interpret substrate preparation details such as waterproofing layers, bonding coats, primers and leveling compounds.

PC26. understand detail drawings showing joints, grooves, trims and corner treatments.

PC27. interpret interface details between finishes and MEP elements such as switches, pipes, conduits and fixtures.

PC28. identify slope directions, drainage points and fall requirements for wet-area waterproofing.

PC29. interpret expansion joint locations and sealing details in tiling, marble and drywall works.

PC30. read detail callouts and annotations to ensure correct alignment and installation sequence

Interpret Material Specifications and Technical Requirements

To be competent, the user/individual on the job must be able to:

PC31. read and interpret material specifications provided in boqs, drawings and technical sheets.

PC32. identify paint type, finish category, number of coats and sheen levels as per specification notes.

PC33. interpret tile specifications such as grade, finish, thickness, pattern and joint width.

PC34. read technical data for marble type, thickness, edge finish, reinforcement and installation method.

PC35. identify ceiling materials including gypsum boards, metal channels, suspension systems and fastener details.

PC36. interpret waterproofing material requirements including primer, membrane type, coat thickness, curing time and reinforcement layers.

PC37. identify compatibility requirements between substrates and finishing materials.

PC38. interpret installation tolerances such as flatness, alignment, spacing and level differences.

PC39. read and interpret manufacturer recommendations and technical notes attached to drawings.

PC40. document material requirements extracted from drawings for procurement and site execution.

Apply Drawing Information to Execute Work on Site

To be competent, the user/individual on the job must be able to:

PC41. mark reference points, baselines and working lines on site using drawing data.

PC42. transfer tile and marble layout grids from drawings to the site surface accurately.

PC43. mark ceiling suspension points, hanger positions, channel layout and light openings as per drawings.

PC44. mark painting boundaries, texture zones, colour transition points and stencil positions.

PC45. mark waterproofing termination lines, overlap areas and drainage slopes as indicated in drawings.

PC46. cross-check site measurements with drawing dimensions before installation.

PC47. identify discrepancies between site conditions and drawings and report to supervisor.

PC48. use tools such as laser levels, plumb lines and measuring tapes to ensure correct implementation of drawing details.

PC49. maintain documentation and marking records as required by the supervisor.

PC50. ensure implemented layouts match drawing specifications, tolerances and sequence of operations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. company policies regarding quality, safety and work documentation.

KU2. workflow and reporting structure on site.

KU3. standard operating procedures for interior finishing work.

KU4. roles of site engineer, supervisor, quality inspector and safety officer.

KU5. approved drawing revision management and document control procedures.

KU6. escalation protocols for drawing discrepancies or unclear details.

KU7. standard tolerances and quality parameters for interior finishing works.

KU8. types of construction drawings such as floor plans, elevations, sections, tile layouts, marble patterns, waterproofing details, shop drawings.

KU9. symbols, legends, reference markers and dimensioning systems used in technical drawings.

KU10. understanding of scales, coordinate systems, gridlines and levels.

KU11. basic geometry and measurement techniques relevant to interior finishing.

KU12. material specifications for paint, tiles, marble, gypsum boards, drywall systems and waterproofing layers.

KU13. arrangement of ceiling systems including primary/secondary channels, suspension layout, cut-out locations.

KU14. tile & marble layout principles such as staggering, book-matching, vein-matching, cut tile logic, spacing.

KU15. waterproofing requirements such as slopes, laps, upturns, penetrations and detailing.

KU16. basic MEP understanding for coordinating finishing elements with mechanical, electrical and plumbing systems.

KU17. quality parameters such as alignment, evenness, flatness, levelness and joint width.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. communicate clearly with supervisors and team members regarding drawing details.
GS2. use basic mathematical skills to interpret scales, dimensions and material quantities.
GS3. read and understand technical English used in notes, specifications and legends.
GS4. use digital tools (mobile apps, pdfs, on-site digital drawings) to view and zoom drawing details.
GS5. record measurements, notes and changes accurately in logbooks or digital formats.
GS6. work collaboratively with painting, tiling, marble, ceiling and waterproofing teams.
GS7. apply problem-solving skills to address site-drawing mismatches.
GS8. maintain safety while interpreting and marking drawing details at heights or confined areas.
GS9. manage time effectively to complete marking and layout tasks as per schedule.
GS10. demonstrate professionalism, discipline and adherence to quality standards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Identify and Interpret Drawing Types and Symbols	6	12	-	2
PC1. identify various types of construction drawings including architectural, structural, MEP, finishing and shop drawings	-	-	-	-
PC2. recognize and interpret common symbols, legends and notations used across finishing works	-	-	-	-
PC3. read title blocks to identify project details, drawing scale, revision number and dates.	-	-	-	-
PC4. interpret conventional symbols for walls, floors, ceilings, openings, utilities and finishes	-	-	-	-
PC5. identify symbols specific to painting (texture codes, paint types), tiling (patterns, tile sizes), marble cutting lines and ceiling grids	-	-	-	-
PC6. recognize waterproofing symbols such as membrane boundaries, lap directions and drainage points	-	-	-	-
PC7. interpret dimensioning conventions including linear, angular, radial and spot levels	-	-	-	-
PC8. identify tolerance markings and material references provided in drawings	-	-	-	-
PC9. interpret drawing scales and convert drawing measurements into actual site measurements	-	-	-	-
PC10. identify cross-reference markers such as section cuts, detail bubbles, elevation markers and notes	-	-	-	-
Extract Dimensional Information from Drawings	6	12	-	2
PC11. read dimensions for lengths, widths, heights and depths as shown in architectural and interior drawings.	-	-	-	-
PC12. interpret grid lines, datums and reference levels to determine the positioning of interior finishes.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. extract tile layout dimensions including joint spacing, alignment grids and cutting margins.	-	-	-	-
PC14. identify marble slab dimensions, cutting marks, grain direction and matching patterns.	-	-	-	-
PC15. interpret ceiling height, soffit levels, suspension details and channel spacing as per ceiling drawings.	-	-	-	-
PC16. extract painting area dimensions for walls, ceilings, openings and special texture zones.	-	-	-	-
PC17. identify waterproofing dimensions including coverage area, lap lengths and termination heights.	-	-	-	-
PC18. verify measurement annotations and cross-check with scaling for accuracy.	-	-	-	-
PC19. interpret tolerances allowed for cut-to-size materials, movement joints and alignments.	-	-	-	-
PC20. document extracted measurements for site execution and material estimation.	-	-	-	-
Interpret Layouts, Sections and Elevations	6	12	-	2
PC21. read plan views to understand the overall area layout for finishing works.	-	-	-	-
PC22. interpret wall elevations for painting patterns, tile layouts, marble designs and cladding details.	-	-	-	-
PC23. interpret ceiling layouts including lighting cutouts, AC diffusers, service openings and panel arrangement.	-	-	-	-
PC24. read sectional details for tile bedding thickness, mortar layers, marble under-supports and ceiling levels.	-	-	-	-
PC25. interpret substrate preparation details such as waterproofing layers, bonding coats, primers and leveling compounds.	-	-	-	-
PC26. understand detail drawings showing joints, grooves, trims and corner treatments.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC27. interpret interface details between finishes and MEP elements such as switches, pipes, conduits and fixtures.	-	-	-	-
PC28. identify slope directions, drainage points and fall requirements for wet-area waterproofing.	-	-	-	-
PC29. interpret expansion joint locations and sealing details in tiling, marble and drywall works.	-	-	-	-
PC30. read detail callouts and annotations to ensure correct alignment and installation sequence	-	-	-	-
Interpret Material Specifications and Technical Requirements	6	12	-	2
PC31. read and interpret material specifications provided in boqs, drawings and technical sheets.	-	-	-	-
PC32. identify paint type, finish category, number of coats and sheen levels as per specification notes.	-	-	-	-
PC33. interpret tile specifications such as grade, finish, thickness, pattern and joint width.	-	-	-	-
PC34. read technical data for marble type, thickness, edge finish, reinforcement and installation method.	-	-	-	-
PC35. identify ceiling materials including gypsum boards, metal channels, suspension systems and fastener details.	-	-	-	-
PC36. interpret waterproofing material requirements including primer, membrane type, coat thickness, curing time and reinforcement layers.	-	-	-	-
PC37. identify compatibility requirements between substrates and finishing materials.	-	-	-	-
PC38. interpret installation tolerances such as flatness, alignment, spacing and level differences.	-	-	-	-
PC39. read and interpret manufacturer recommendations and technical notes attached to drawings.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC40. document material requirements extracted from drawings for procurement and site execution.	-	-	-	-
Apply Drawing Information to Execute Work on Site	6	12	-	2
PC41. mark reference points, baselines and working lines on site using drawing data.	-	-	-	-
PC42. transfer tile and marble layout grids from drawings to the site surface accurately.	-	-	-	-
PC43. mark ceiling suspension points, hanger positions, channel layout and light openings as per drawings.	-	-	-	-
PC44. mark painting boundaries, texture zones, colour transition points and stencil positions.	-	-	-	-
PC45. mark waterproofing termination lines, overlap areas and drainage slopes as indicated in drawings.	-	-	-	-
PC46. cross-check site measurements with drawing dimensions before installation.	-	-	-	-
PC47. identify discrepancies between site conditions and drawings and report to supervisor.	-	-	-	-
PC48. use tools such as laser levels, plumb lines and measuring tapes to ensure correct implementation of drawing details.	-	-	-	-
PC49. maintain documentation and marking records as required by the supervisor.	-	-	-	-
PC50. ensure implemented layouts match drawing specifications, tolerances and sequence of operations	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0301
NOS Name	Read and Interpret Construction and Design Drawings
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	2
Version	1.0
Next Review Date	NA

ICE/CON/N9901: Implement Safe Work Practices and Environmental Stewardship at Construction Sites

Description

This NOS focuses on enabling construction workers and supervisors to actively adopt safe work practices, promote environmental stewardship and ensure a hazard-free workplace through proactive risk management, sustainable resource usage and timely emergency response.

Scope

The scope covers the following :

- Conduct workplace safety inspections
- Apply safe operational practices
- Promote health, hygiene, and well-being
- Implement sustainability and environmental conservation measures
- Respond effectively to onsite emergencies

Elements and Performance Criteria

Conduct Workplace Safety Inspections

To be competent, the user/individual on the job must be able to:

PC1. identify unsafe conditions such as improper scaffolding, poor lighting, open edges or obstructed pathways

PC2. assess task-specific risks involving tools, machinery, and hazardous materials

PC3. document safety observations and communicate them to the safety lead or supervisor

PC4. verify that safety controls such as guard rails, signages and access controls are in place

Apply Safe Operational Practices

To be competent, the user/individual on the job must be able to:

PC5. use appropriate PPE and ensure correct fit before beginning any activity

PC6. follow safe operation procedures for cutting, lifting, mixing and power tools

PC7. implement ergonomic practices to reduce fatigue and prevent musculoskeletal injuries

PC8. maintain housekeeping standards by ensuring clean and clutter-free work areas

Promote Health, Hygiene and Well-Being

To be competent, the user/individual on the job must be able to:

PC9. follow personal hygiene practices such as handwashing, clean clothing and proper hydration

PC10. identify signs of health issues such as heat stress, dehydration and respiratory discomfort

PC11. ensure availability and safe usage of sanitation facilities, drinking water and resting zones

PC12. report workplace illnesses or physical discomfort to the assigned authority

Implement Sustainability and Environmental Conservation Measures

To be competent, the user/individual on the job must be able to:

PC13. follow procedures for safe storage and controlled use of chemicals, fuels and hazardous substances

PC14. practice material conservation by preventing spillage, wastage and improper handling

PC15. undertake waste segregation for recyclable, non-recyclable and hazardous waste

PC16. support measures for dust suppression, noise control and energy/water conservation

Respond Effectively to Onsite Emergencies

To be competent, the user/individual on the job must be able to:

PC17. identify emergency alarms, muster points and evacuation routes

PC18. use basic firefighting equipment such as extinguishers, fire blankets and sand buckets where appropriate

PC19. assist in basic first-aid procedures including bleeding control, CPR and heat-stroke management

PC20. support emergency communication protocols and follow command instructions

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. workplace safety policies, EHS manuals and site-specific procedures

KU2. roles of safety personnel, supervisors and emergency response teams

KU3. documentation formats for safety reporting and compliance

KU4. internal escalation protocols for hazardous conditions or incidents

KU5. legal obligations related to occupational safety and environmental protection

KU6. types of workplace hazards chemical, physical, electrical, ergonomic and environmental

KU7. safe handling techniques for construction materials, tools and machinery

KU8. principles of PPE selection, inspection and maintenance

KU9. basics of first aid, CPR and firefighting methods

KU10. environmental management practices including waste reduction and pollution control

KU11. measures for heat-stress prevention, hydration management and fatigue control

KU12. ergonomics and safe manual handling techniques

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and interpret safety signage, manuals and instructions

GS2. communicate safety findings and concerns clearly to team members

GS3. maintain basic documentation and reports for safety audits

GS4. use problem-solving skills to manage minor hazards or disruptions

GS5. collaborate effectively during drills, emergency situations and environmental initiatives

GS6. demonstrate awareness and discipline in following safe work practices consistently

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Conduct Workplace Safety Inspections	6	12	-	2
PC1. identify unsafe conditions such as improper scaffolding, poor lighting, open edges or obstructed pathways	-	-	-	-
PC2. assess task-specific risks involving tools, machinery, and hazardous materials	-	-	-	-
PC3. document safety observations and communicate them to the safety lead or supervisor	-	-	-	-
PC4. verify that safety controls such as guard rails, signages and access controls are in place	-	-	-	-
Apply Safe Operational Practices	6	12	-	2
PC5. use appropriate PPE and ensure correct fit before beginning any activity	-	-	-	-
PC6. follow safe operation procedures for cutting, lifting, mixing and power tools	-	-	-	-
PC7. implement ergonomic practices to reduce fatigue and prevent musculoskeletal injuries	-	-	-	-
PC8. maintain housekeeping standards by ensuring clean and clutter-free work areas	-	-	-	-
Promote Health, Hygiene and Well-Being	6	12	-	2
PC9. follow personal hygiene practices such as handwashing, clean clothing and proper hydration	-	-	-	-
PC10. identify signs of health issues such as heat stress, dehydration and respiratory discomfort	-	-	-	-
PC11. ensure availability and safe usage of sanitation facilities, drinking water and resting zones	-	-	-	-
PC12. report workplace illnesses or physical discomfort to the assigned authority	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Implement Sustainability and Environmental Conservation Measures	6	12	-	2
PC13. follow procedures for safe storage and controlled use of chemicals, fuels and hazardous substances	-	-	-	-
PC14. practice material conservation by preventing spillage, wastage and improper handling	-	-	-	-
PC15. undertake waste segregation for recyclable, non-recyclable and hazardous waste	-	-	-	-
PC16. support measures for dust suppression, noise control and energy/water conservation	-	-	-	-
Respond Effectively to Onsite Emergencies	6	12	-	2
PC17. identify emergency alarms, muster points and evacuation routes	-	-	-	-
PC18. use basic firefighting equipment such as extinguishers, fire blankets and sand buckets where appropriate	-	-	-	-
PC19. assist in basic first-aid procedures including bleeding control, CPR and heat-stroke management	-	-	-	-
PC20. support emergency communication protocols and follow command instructions	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N9901
NOS Name	Implement Safe Work Practices and Environmental Stewardship at Construction Sites
Sector	Construction
Sub-Sector	
Occupation	Generic
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	07/10/2025
Next Review Date	07/10/2028
NSQC Clearance Date	07/10/2025

DGT/VSQ/N0102: Employability Skills (60 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

PC1. identify employability skills required for jobs in various industries

PC2. identify and explore learning and employability portals

Constitutional values - Citizenship

To be competent, the user/individual on the job must be able to:

PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.

PC4. follow environmentally sustainable practices

Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

PC5. recognize the significance of 21st Century Skills for employment

PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

To be competent, the user/individual on the job must be able to:

PC7. use basic English for everyday conversation in different contexts, in person and over the telephone

PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English

PC9. write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

To be competent, the user/individual on the job must be able to:

PC10. understand the difference between job and career

PC11. prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

To be competent, the user/individual on the job must be able to:

PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings

PC13. work collaboratively with others in a team

Diversity & Inclusion

To be competent, the user/individual on the job must be able to:

PC14. communicate and behave appropriately with all genders and PwD

PC15. escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

PC16. select financial institutions, products and services as per requirement

PC17. carry out offline and online financial transactions, safely and securely

PC18. identify common components of salary and compute income, expenses, taxes, investments etc

PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

To be competent, the user/individual on the job must be able to:

PC20. operate digital devices and carry out basic internet operations securely and safely

PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively

PC22. use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

To be competent, the user/individual on the job must be able to:

PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research

PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion

PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

To be competent, the user/individual on the job must be able to:

PC26. identify different types of customers

PC27. identify and respond to customer requests and needs in a professional manner.

PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

PC29. create a professional Curriculum vitae (Résumé)

PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC31. apply to identified job openings using offline /online methods as per requirement

PC32. answer questions politely, with clarity and confidence, during recruitment and selection

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills and different learning and employability related portals

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

KU6. importance of career development and setting long- and short-term goals

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

KU10. different types of financial institutes, products, and services

KU11. how to compute income and expenditure

KU12. importance of maintaining safety and security in offline and online financial transactions

KU13. different legal rights and laws

KU14. different types of digital devices and the procedure to operate them safely and securely

KU15. how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

KU16. how to identify business opportunities

KU17. types and needs of customers

KU18. how to apply for a job and prepare for an interview

KU19. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and write different types of documents/instructions/correspondence

GS2. communicate effectively using appropriate language in formal and informal settings

GS3. behave politely and appropriately with all

GS4. how to work in a virtual mode

GS5. perform calculations efficiently
GS6. solve problems effectively
GS7. pay attention to details
GS8. manage time efficiently
GS9. maintain hygiene and sanitization to avoid infection

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
Constitutional values - Citizenship	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
Basic English Skills	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
Communication Skills	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
Entrepreneurship	2	3	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	**20**	**30**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	07/05/2028
NSQC Clearance Date	08/05/2025

ICE/CON/N0302: Clean and Prepare Surfaces for Painting

Description

This unit covers the skills and knowledge required to prepare various surfaces for painting by cleaning, leveling, and priming, ensuring optimal paint adhesion and a high-quality finish.

Scope

The scope covers the following :

- Clean and remove contaminants
- Sand and level surfaces
- Apply primers or undercoats

Elements and Performance Criteria

Clean and remove contaminants

To be competent, the user/individual on the job must be able to:

PC1. Review the work plan to identify surface preparation requirements.

PC2. Determine the type of surface to be painted to select appropriate preparation methods.

PC3. Remove contaminants such as rust, grease, dirt, old paint, and debris from the surface using solvent wiping, detergent washing, or chemical stripping.

PC4. Ensure the work area is adequately ventilated to avoid harmful fume accumulation.

PC5. Protect surrounding areas from damage using masking, drop cloths, or relocating objects.

Sand and level surfaces

To be competent, the user/individual on the job must be able to:

PC6. Sand the surface using manual or power sanders to remove uneven textures and achieve a smooth base.

PC7. Fill cracks, holes, or voids with suitable fillers and level the surface using scrapers or putty knives.

PC8. Inspect the surface for uniformity and repeat sanding or filling if required to meet quality standards.

Apply primers or undercoats

To be competent, the user/individual on the job must be able to:

PC9. Choose the appropriate primer or undercoat based on the surface type and paint specifications.

PC10. Apply primer evenly using brushes, rollers, or spray equipment, ensuring complete surface coverage.

PC11. Allow sufficient drying time for the primer or undercoat before proceeding to the next layer, as per manufacturer's guidelines.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Properties of various surfaces (e.g., wood, metal, concrete) and their preparation requirements for painting.

KU2. Types of contaminants (e.g., rust, grease, dirt, old paint) and their impact on paint adhesion.

KU3. Methods for cleaning surfaces, including solvent wiping, detergent washing, and chemical stripping.

KU4. Techniques for sanding and leveling surfaces using manual or power sanders.

KU5. Use of fillers to repair cracks, holes, and voids for creating a smooth surface.

KU6. Importance of primers and undercoats, and their compatibility with different surface types and paint systems.

KU7. Tools and equipment for surface preparation, including sanders, scrapers, and brushes.

KU8. Health and safety precautions for handling cleaning agents, sanding dust, and primer fumes.

KU9. Importance of proper ventilation and protective measures during surface preparation.

KU10. Steps to mask and protect surrounding areas to avoid accidental damage during preparation.

KU11. Application techniques for primers or undercoats using brushes, rollers, or spray equipment.

KU12. Guidelines for ensuring even application of primers and achieving full coverage.

KU13. Inspection techniques to check surface readiness and uniformity before painting.

KU14. Standard drying times for primers or undercoats and environmental factors affecting them.

KU15. Quality standards for prepared surfaces to ensure a durable and high-quality paint finish.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Clean and remove contaminants	10	20	-	3
PC1. Review the work plan to identify surface preparation requirements.	-	-	-	-
PC2. Determine the type of surface to be painted to select appropriate preparation methods.	-	-	-	-
PC3. Remove contaminants such as rust, grease, dirt, old paint, and debris from the surface using solvent wiping, detergent washing, or chemical stripping.	-	-	-	-
PC4. Ensure the work area is adequately ventilated to avoid harmful fume accumulation.	-	-	-	-
PC5. Protect surrounding areas from damage using masking, drop cloths, or relocating objects.	-	-	-	-
Sand and level surfaces	10	20	-	4
PC6. Sand the surface using manual or power sanders to remove uneven textures and achieve a smooth base.	-	-	-	-
PC7. Fill cracks, holes, or voids with suitable fillers and level the surface using scrapers or putty knives.	-	-	-	-
PC8. Inspect the surface for uniformity and repeat sanding or filling if required to meet quality standards.	-	-	-	-
Apply primers or undercoats	10	20	-	3
PC9. Choose the appropriate primer or undercoat based on the surface type and paint specifications.	-	-	-	-
PC10. Apply primer evenly using brushes, rollers, or spray equipment, ensuring complete surface coverage.	-	-	-	-
PC11. Allow sufficient drying time for the primer or undercoat before proceeding to the next layer, as per manufacturer's guidelines.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	30	60	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0302
NOS Name	Clean and Prepare Surfaces for Painting
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0303: Prepare Paint Mix Including Digital Color Matching

Description

This unit covers the skills and knowledge required to prepare various types of paint mixes, including the use of digital color-matching technology to achieve precise shades and consistency for different applications.

Scope

The scope covers the following :

- Prepare different types of paint mixes
- Operate digital color-matching equipment
- Measure and mix paint components
- Ensure shade accuracy and consistency

Elements and Performance Criteria

Prepare different types of paint mixes

To be competent, the user/individual on the job must be able to:

PC1. Identify the type of paint required (e.g., oil-based, water-based, emulsion) based on surface mater

PC2. Check and ensure the quality of paint, additives, and other materials are within their expiration period and meet project standards.

PC3. Read and interpret manufacturer's instructions for the use of paint, thinners, and additives.

PC4. Calculate the quantity of paint required based on the area to be covered and the number of coats specified.

PC5. Select the appropriate tools and equipment for mixing, such as stirrers, mixers, and measuring containers.

PC6. Ensure proper mixing techniques based on the paint type, using manual or mechanical stirrers.

Operate digital color-matching equipment

To be competent, the user/individual on the job must be able to:

PC7. Set up and calibrate digital color-matching equipment following manufacturer guidelines.

PC8. Input reference color codes or samples into the digital system to determine accurate formulations.

PC9. Verify the equipment readings and troubleshoot any discrepancies in shade identification.

PC10. Ensure proper lighting conditions for accurate color assessment and matching.

Measure and mix paint components

To be competent, the user/individual on the job must be able to:

PC11. Measure paint components accurately using digital weighing scales or dispensing systems.

PC12. Mix paint components uniformly to achieve consistency in texture and shade.

PC13. Document paint formulation details, batch numbers, and proportions for future reference. Handle and store paint components safely following standard operating procedures.

Ensure shade accuracy and consistency

To be competent, the user/individual on the job must be able to:

PC14. Test the mixed paint on a small sample area to verify shade accuracy.

PC15. Compare the prepared paint shade with the target shade under different lighting conditions.

PC16. Make necessary adjustments to the formulation to achieve precise color matching.

PC17. Maintain consistency in paint shades across batches for uniform application results.

PC18. Store mixed paint in labeled containers and ensure proper storage to avoid contamination.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of paints (e.g., oil-based, water-based, emulsion) and their suitability for various surfaces and applications.

KU2. The role of additives, thinners, and colourants in achieving desired paint characteristics (e.g., durability, finish, adhesion).

KU3. Importance of using quality materials and checking expiration dates to maintain paint integrity.

KU4. Techniques for calculating the quantity of paint required based on surface area and number of coats.

KU5. Manufacturer guidelines for mixing ratios, additive usage, and handling procedures.

KU6. Digital color-matching systems and their application in achieving precise colour shades and consistency.

KU7. Tools and equipment for paint mixing, including stirrers, mixers, viscosity cups, and measuring containers.

KU8. Preparation and maintenance of a clean mixing environment to avoid contamination in paint.

KU9. Methods for combining base paints, colourants, and additives to prepare custom colours.

KU10. Importance of adjusting paint viscosity for different application methods, such as brushing, rolling, or spraying.

KU11. Procedures for testing paint mixes on sample surfaces to check for colour accuracy, texture, and adhesion.

KU12. Safety measures for handling chemicals and paints, including proper ventilation and protective gear.

KU13. Effects of environmental factors like humidity and temperature on paint mixing and application.

KU14. Industry standards for achieving uniformity and consistency in paint mixes.

KU15. Troubleshooting common issues in paint mixing, such as incorrect colour, improper viscosity, or uneven texture.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare different types of paint mixes	8	15	-	3
PC1. Identify the type of paint required (e.g., oil-based, water-based, emulsion) based on surface mater	-	-	-	-
PC2. Check and ensure the quality of paint, additives, and other materials are within their expiration period and meet project standards.	-	-	-	-
PC3. Read and interpret manufacturer's instructions for the use of paint, thinners, and additives.	-	-	-	-
PC4. Calculate the quantity of paint required based on the area to be covered and the number of coats specified.	-	-	-	-
PC5. Select the appropriate tools and equipment for mixing, such as stirrers, mixers, and measuring containers.	-	-	-	-
PC6. Ensure proper mixing techniques based on the paint type, using manual or mechanical stirrers.	-	-	-	-
Operate digital color-matching equipment	8	15	-	3
PC7. Set up and calibrate digital color-matching equipment following manufacturer guidelines.	-	-	-	-
PC8. Input reference color codes or samples into the digital system to determine accurate formulations.	-	-	-	-
PC9. Verify the equipment readings and troubleshoot any discrepancies in shade identification.	-	-	-	-
PC10. Ensure proper lighting conditions for accurate color assessment and matching.	-	-	-	-
Measure and mix paint components	7	15	-	2
PC11. Measure paint components accurately using digital weighing scales or dispensing systems.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Mix paint components uniformly to achieve consistency in texture and shade.	-	-	-	-
PC13. Document paint formulation details, batch numbers, and proportions for future reference. Handle and store paint components safely following standard operating procedures.	-	-	-	-
Ensure shade accuracy and consistency	7	15	-	2
PC14. Test the mixed paint on a small sample area to verify shade accuracy.	-	-	-	-
PC15. Compare the prepared paint shade with the target shade under different lighting conditions.	-	-	-	-
PC16. Make necessary adjustments to the formulation to achieve precise color matching.	-	-	-	-
PC17. Maintain consistency in paint shades across batches for uniform application results.	-	-	-	-
PC18. Store mixed paint in labeled containers and ensure proper storage to avoid contamination.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0303
NOS Name	Prepare Paint Mix Including Digital Color Matching
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0304: Apply Paints Using Traditional and Airless Spray Techniques

Description

This unit covers the skills and knowledge required to apply different types of paint using traditional methods and airless spray techniques, ensuring uniform coverage and adherence to project specifications.

Scope

The scope covers the following :

- Apply paint using traditional methods
- Apply paint using airless spray techniques

Elements and Performance Criteria

Apply paint using traditional methods

To be competent, the user/individual on the job must be able to:

PC1. Select appropriate brushes, rollers, and paint trays based on surface type and paint viscosity.

PC2. Mix and prepare paint to achieve the desired consistency and application quality.

PC3. Apply paint evenly using consistent strokes and techniques to avoid drips, streaks, or patchy areas.

PC4. Use layering techniques and multiple coats to achieve the required opacity and smoothness.

PC5. Ensure edge cutting and detailing for neat and precise finishes, especially in corners or trims.

PC6. Maintain tools during application to avoid dried paint or contamination.

PC7. Clean and store brushes and rollers after completing the painting process to ensure longevity.

Apply paint using airless spray techniques

To be competent, the user/individual on the job must be able to:

PC8. Set up and inspect airless spray equipment to ensure proper functioning before operation.

PC9. Adjust pressure settings, nozzle size, and spray angle according to the surface and paint type.

PC10. Perform test sprays on sample surfaces to ensure correct paint flow, pattern, and pressure.

PC11. Apply paint consistently by maintaining the correct spray distance, overlap, and speed for even coverage.

PC12. Follow appropriate techniques to avoid overspray, runs, or uneven texture on surfaces.

PC13. Troubleshoot and resolve common spray issues, such as clogging, splattering, or inconsistent patterns.

PC14. Clean and maintain the airless spray system after use, including flushing and storing components properly.

PC15. Follow safety procedures and wear appropriate PPE when operating airless spray equipment.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Tools and materials for traditional painting, including brushes, rollers, trays, and paint stirrers.

KU2. Proper stroke techniques, edge cutting, and layering for achieving smooth and precise finishes.

KU3. Principles and functioning of airless spray equipment, including pressure settings, nozzles, and adjustments.

KU4. Techniques for applying paint using airless spray systems to achieve even and uniform coverage.

KU5. Troubleshooting methods for airless spray issues like clogging, overspray, or inconsistent patterns.

KU6. Safety protocols for traditional and spray painting, including ventilation, ppe usage, and handling of paints and equipment.

KU7. Maintenance and cleaning procedures for brushes, rollers, and airless spray equipment.

KU8. Factors affecting paint application, such as humidity, temperature, surface preparation, and paint viscosity.

KU9. Environmental considerations for safe disposal of paint waste, solvents, and cleaning agents.

KU10. Quality standards for paint application to meet aesthetic and functional requirements.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Apply paint using traditional methods	15	30	-	5
PC1. Select appropriate brushes, rollers, and paint trays based on surface type and paint viscosity.	-	-	-	-
PC2. Mix and prepare paint to achieve the desired consistency and application quality.	-	-	-	-
PC3. Apply paint evenly using consistent strokes and techniques to avoid drips, streaks, or patchy areas.	-	-	-	-
PC4. Use layering techniques and multiple coats to achieve the required opacity and smoothness.	-	-	-	-
PC5. Ensure edge cutting and detailing for neat and precise finishes, especially in corners or trims.	-	-	-	-
PC6. Maintain tools during application to avoid dried paint or contamination.	-	-	-	-
PC7. Clean and store brushes and rollers after completing the painting process to ensure longevity.	-	-	-	-
Apply paint using airless spray techniques	15	30	-	5
PC8. Set up and inspect airless spray equipment to ensure proper functioning before operation.	-	-	-	-
PC9. Adjust pressure settings, nozzle size, and spray angle according to the surface and paint type.	-	-	-	-
PC10. Perform test sprays on sample surfaces to ensure correct paint flow, pattern, and pressure.	-	-	-	-
PC11. Apply paint consistently by maintaining the correct spray distance, overlap, and speed for even coverage.	-	-	-	-
PC12. Follow appropriate techniques to avoid overspray, runs, or uneven texture on surfaces.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. Troubleshoot and resolve common spray issues, such as clogging, splattering, or inconsistent patterns.	-	-	-	-
PC14. Clean and maintain the airless spray system after use, including flushing and storing components properly.	-	-	-	-
PC15. Follow safety procedures and wear appropriate PPE when operating airless spray equipment.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0304
NOS Name	Apply Paints Using Traditional and Airless Spray Techniques
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	2
Version	1.0
Next Review Date	NA

ICE/CON/N0305: Identify and Repair Common Painting Issues

Description

This unit covers the skills and knowledge required to identify and repair common painting issues, such as peeling, cracking, and discoloration, ensuring durability and aesthetic quality.

Scope

The scope covers the following :

- Identify common painting issues
- Repair and prevent painting issues

Elements and Performance Criteria

Identify common painting issues

To be competent, the user/individual on the job must be able to:

PC1. Inspect painted surfaces to identify common defects, such as peeling, blistering, cracking, flaking, chalking, discoloration, and mildew.

PC2. Assess the root causes of painting issues, such as improper surface preparation, moisture, poor-quality paint, or environmental factors.

PC3. Document observed defects and their severity for appropriate repair planning.

PC4. Use tools like moisture meters, magnifiers, and scrapers to analyze surface damage and defect patterns.

PC5. Distinguish between surface-related and paint application-related issues for accurate diagnosis.

Repair and prevent painting issues

To be competent, the user/individual on the job must be able to:

PC6. Remove damaged or defective paint layers using appropriate tools, such as scrapers, sandpaper, or chemical strippers.

PC7. Prepare surfaces by cleaning, sanding, filling cracks, and priming to ensure a smooth and durable base for repainting.

PC8. Apply moisture or mold-resistant treatments where required to prevent recurring issues.

PC9. Select and apply appropriate paints, primers, and sealants suitable for the repaired surfaces.

PC10. Ensure uniform application and blending to match repaired areas with the surrounding surface.

PC11. Address underlying causes, such as moisture seepage or poor ventilation, to prevent future defects.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Common painting defects, including peeling, cracking, blistering, flaking, chalking, fading, mildew, and discoloration.

KU2. Causes of painting issues, such as moisture, poor surface preparation, low-quality paint, application errors, and environmental factors.

KU3. Methods for inspecting and diagnosing painting defects, including visual assessments and use of tools like moisture meters.

KU4. Techniques for removing damaged paint, such as sanding, scraping, chemical stripping, and pressure washing.

KU5. Surface preparation methods, including cleaning, sanding, patching cracks, priming, and treating for moisture or mold.

KU6. Properties and uses of primers, sealants, and moisture/mildew-resistant paints to prevent future issues.

KU7. Correct application techniques to ensure smooth finishes and blending of repaired areas.

KU8. Tools and equipment required for repairing painting defects, such as scrapers, sandpaper, fillers, and primers.

KU9. Preventative measures to avoid recurring painting defects, such as proper ventilation, surface treatments, and quality paint selection.

KU10. Safety guidelines for handling tools, chemicals, and paints during repair work, including use of ppe and safe disposal methods.

KU11. Documentation methods for recording defects, repair processes, and future maintenance recommendations.

KU12. Quality standards for repainting and repairing surfaces to meet durability and aesthetic requirements.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentiely to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Identify common painting issues	15	30	-	5
PC1. Inspect painted surfaces to identify common defects, such as peeling, blistering, cracking, flaking, chalking, discoloration, and mildew.	-	-	-	-
PC2. Assess the root causes of painting issues, such as improper surface preparation, moisture, poor-quality paint, or environmental factors.	-	-	-	-
PC3. Document observed defects and their severity for appropriate repair planning.	-	-	-	-
PC4. Use tools like moisture meters, magnifiers, and scrapers to analyze surface damage and defect patterns.	-	-	-	-
PC5. Distinguish between surface-related and paint application-related issues for accurate diagnosis.	-	-	-	-
Repair and prevent painting issues	15	30	-	5
PC6. Remove damaged or defective paint layers using appropriate tools, such as scrapers, sandpaper, or chemical strippers.	-	-	-	-
PC7. Prepare surfaces by cleaning, sanding, filling cracks, and priming to ensure a smooth and durable base for repainting.	-	-	-	-
PC8. Apply moisture or mold-resistant treatments where required to prevent recurring issues.	-	-	-	-
PC9. Select and apply appropriate paints, primers, and sealants suitable for the repaired surfaces.	-	-	-	-
PC10. Ensure uniform application and blending to match repaired areas with the surrounding surface.	-	-	-	-
PC11. Address underlying causes, such as moisture seepage or poor ventilation, to prevent future defects.	-	-	-	-
NOS Total	30	60	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0305
NOS Name	Identify and Repair Common Painting Issues
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0307: Level and Prepare Surfaces for Tiling Work

Description

This unit covers the skills and knowledge required to level and prepare surfaces for tiling by cleaning, smoothing, and applying primers, ensuring proper adhesion and alignment.

Scope

The scope covers the following :

- Inspect and clean surfaces for tiling
- Level and prepare surfaces for tiling

Elements and Performance Criteria

Inspect and clean surfaces for tiling

To be competent, the user/individual on the job must be able to:

PC1. Inspect surfaces to identify unevenness, cracks, moisture issues, or loose materials that may affect tiling work.

PC2. Remove dust, dirt, grease, debris, or old adhesive residues using appropriate cleaning tools and techniques.

PC3. Repair cracks, holes, and other surface irregularities using fillers or patching compounds.

PC4. Assess moisture content in the substrate using moisture meters and address damp surfaces with moisture-resistant treatments.

PC5. Ensure proper ventilation during cleaning and preparation activities to aid drying and safety.

Level and prepare surfaces for tiling

To be competent, the user/individual on the job must be able to:

PC6. Select appropriate tools, such as trowels, screeds, and leveling equipment, for surface preparation.

PC7. Apply surface leveling compounds or mortar to create a smooth and even substrate for tiling.

PC8. Check alignment and flatness of prepared surfaces using levels and straight edges.

PC9. Apply suitable primers or bonding agents to enhance tile adhesion, ensuring compatibility with substrate and tile type.

PC10. Allow prepared surfaces to cure or dry as per material guidelines before starting tiling work.

PC11. Maintain cleanliness and safety during surface preparation activities to ensure quality results.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of surfaces used for tiling, such as concrete, plaster, drywall, wood, and existing tiled substrates.

KU2. Common issues in surfaces, such as unevenness, cracks, moisture problems, and loose materials.

KU3. Tools and equipment used for surface cleaning, leveling, and preparation, such as scrapers, trowels, screeds, sanders, and moisture meters.

KU4. Methods for cleaning surfaces, including removing debris, dirt, grease, and old adhesives.

KU5. Techniques for repairing surface defects using fillers, patching compounds, or leveling materials.

KU6. Importance of moisture content and methods for measuring and addressing dampness in substrates.

KU7. Properties and types of primers, bonding agents, and their compatibility with surfaces and tiles.

KU8. Techniques for applying leveling compounds or mortar to achieve smooth, even surfaces.

KU9. Use of tools like straight edges, levels, and plumb lines to check surface alignment and flatness.

KU10. Curing and drying times for different surface preparation materials to ensure proper readiness for tiling.

KU11. Safety guidelines for handling tools, materials, and chemicals during surface preparation work.

KU12. Quality standards for surface preparation to ensure proper adhesion and alignment of tiles.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Inspect and clean surfaces for tiling	15	30	-	5
PC1. Inspect surfaces to identify unevenness, cracks, moisture issues, or loose materials that may affect tiling work.	-	-	-	-
PC2. Remove dust, dirt, grease, debris, or old adhesive residues using appropriate cleaning tools and techniques.	-	-	-	-
PC3. Repair cracks, holes, and other surface irregularities using fillers or patching compounds.	-	-	-	-
PC4. Assess moisture content in the substrate using moisture meters and address damp surfaces with moisture-resistant treatments.	-	-	-	-
PC5. Ensure proper ventilation during cleaning and preparation activities to aid drying and safety.	-	-	-	-
Level and prepare surfaces for tiling	15	30	-	5
PC6. Select appropriate tools, such as trowels, screeds, and leveling equipment, for surface preparation.	-	-	-	-
PC7. Apply surface leveling compounds or mortar to create a smooth and even substrate for tiling.	-	-	-	-
PC8. Check alignment and flatness of prepared surfaces using levels and straight edges.	-	-	-	-
PC9. Apply suitable primers or bonding agents to enhance tile adhesion, ensuring compatibility with substrate and tile type.	-	-	-	-
PC10. Allow prepared surfaces to cure or dry as per material guidelines before starting tiling work.	-	-	-	-
PC11. Maintain cleanliness and safety during surface preparation activities to ensure quality results.	-	-	-	-
NOS Total	30	60	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0307
NOS Name	Level and Prepare Surfaces for Tiling Work
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0308: Measure and Cut Tiles as Per Layout Specifications

Description

This unit covers the skills and knowledge required to measure and cut tiles accurately according to layout drawings, ensuring precision in fitting and alignment.

Scope

The scope covers the following :

- Measure and mark tiles as per layout specifications
- Cut tiles to required sizes and shapes

Elements and Performance Criteria

Measure and mark tiles as per layout specifications

To be competent, the user/individual on the job must be able to:

PC1. Review layout plans and specifications to determine tile measurements and cutting requirements.

PC2. Identify tile size, patterns, and orientations to suit the design and layout.

PC3. Use measuring tools such as measuring tapes, rulers, and squares to measure the tile dimensions accurately.

PC4. Mark cutting lines on tiles using pencils, markers, or scoring tools, ensuring precision for proper fit.

PC5. Plan the placement of tiles to reduce wastage and ensure visual alignment with layout specifications.

Cut tiles to required sizes and shapes

To be competent, the user/individual on the job must be able to:

PC6. Select appropriate cutting tools, such as manual tile cutters, wet saws, angle grinders, or nippers, based on tile material and shape requirements.

PC7. Cut tiles along marked lines accurately to achieve desired sizes and shapes.

PC8. Perform straight cuts, angled cuts, curved cuts, and holes in tiles as per layout needs.

PC9. Smooth the edges of cut tiles using sandpaper or rubbing stones to avoid sharp edges and ensure a clean finish.

PC10. Check cut tiles for accuracy and ensure they fit within the intended layout before installation.

PC11. Follow safety procedures while handling tools and equipment to prevent injuries and tile breakage.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of tiles, such as ceramic, porcelain, glass, natural stone, and their specific cutting requirements.

KU2. Tools and equipment used for cutting tiles, including manual tile cutters, wet saws, angle grinders, and nippers.

KU3. Techniques for measuring and marking tiles accurately, including the use of measuring tapes, rulers, and squares.

KU4. Methods for cutting tiles, including straight cuts, diagonal cuts, notching, and curved cuts.

KU5. Importance of tile orientation, alignment, and visual consistency with layout specifications.

KU6. Techniques for smoothing tile edges using sandpaper, rubbing stones, or other finishing tools.

KU7. Methods for reducing material wastage through effective planning and accurate cutting.

KU8. Safety precautions for handling tile-cutting tools and avoiding tile breakage or personal injuries.

KU9. Properties of different tile materials and their impact on cutting techniques and tool selection.

KU10. Importance of verifying tile fit and accuracy before installation to ensure alignment with design specifications.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Measure and mark tiles as per layout specifications	15	30	-	5
PC1. Review layout plans and specifications to determine tile measurements and cutting requirements.	-	-	-	-
PC2. Identify tile size, patterns, and orientations to suit the design and layout.	-	-	-	-
PC3. Use measuring tools such as measuring tapes, rulers, and squares to measure the tile dimensions accurately.	-	-	-	-
PC4. Mark cutting lines on tiles using pencils, markers, or scoring tools, ensuring precision for proper fit.	-	-	-	-
PC5. Plan the placement of tiles to reduce wastage and ensure visual alignment with layout specifications.	-	-	-	-
Cut tiles to required sizes and shapes	15	30	-	5
PC6. Select appropriate cutting tools, such as manual tile cutters, wet saws, angle grinders, or nippers, based on tile material and shape requirements.	-	-	-	-
PC7. Cut tiles along marked lines accurately to achieve desired sizes and shapes.	-	-	-	-
PC8. Perform straight cuts, angled cuts, curved cuts, and holes in tiles as per layout needs.	-	-	-	-
PC9. Smooth the edges of cut tiles using sandpaper or rubbing stones to avoid sharp edges and ensure a clean finish.	-	-	-	-
PC10. Check cut tiles for accuracy and ensure they fit within the intended layout before installation.	-	-	-	-
PC11. Follow safety procedures while handling tools and equipment to prevent injuries and tile breakage.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0308
NOS Name	Measure and Cut Tiles as Per Layout Specifications
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0309: Install Standard Tiles and Prefabricated Tile Sheets

Description

This unit covers the skills and knowledge required to install standard tiles and prefabricated tile sheets on various surfaces, ensuring stability and adherence to design specifications.

Scope

The scope covers the following :

- Prepare for tile installation
- Install standard tiles and prefabricated tile sheets

Elements and Performance Criteria

Prepare for tile installation

To be competent, the user/individual on the job must be able to:

PC1. Review layout plans, design specifications, and material requirements for tile installation.

PC2. Check surface readiness for tiling, ensuring it is clean, level, and primed for proper adhesion.

PC3. Select appropriate adhesives, grout, and tools based on the type of tiles and surface material.

PC4. Lay out tiles and prefabricated sheets to ensure proper alignment, spacing, and pattern accuracy.

PC5. Determine tile placement and starting points to minimize cutting and achieve visual consistency.

PC6. Set up tools and materials, ensuring accessibility and safety throughout the work process.

Install standard tiles and prefabricated tile sheets

To be competent, the user/individual on the job must be able to:

PC7. Apply adhesives uniformly using appropriate tools such as trowels, ensuring correct thickness and coverage.

PC8. Fix standard tiles and prefabricated tile sheets onto the surface, pressing them firmly to achieve proper adhesion.

PC9. Use tile spacers to maintain consistent gaps and ensure alignment of tiles according to the layout plan.

PC10. Adjust tile positions as needed to maintain straight lines and design consistency.

PC11. Cut and fit tiles accurately around corners, edges, and fixtures to achieve seamless installation.

PC12. Install prefabricated tile sheets efficiently, ensuring uniform spacing and alignment.

PC13. Allow sufficient time for adhesive curing as per manufacturer guidelines.

PC14. Check for loose tiles and make necessary adjustments before applying grout.

PC15. Apply grout evenly into gaps using appropriate tools and remove excess grout for a clean finish.

PC16. Clean and polish the tile surface to remove adhesive and grout residues, ensuring a visually appealing result.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of tiles (standard and prefabricated sheets), adhesives, and grouts suitable for various surfaces.

KU2. Surface preparation techniques, including cleaning, leveling, and priming for proper adhesion.

KU3. Layout planning methods to ensure alignment, spacing, and minimal tile cutting.

KU4. Tools and equipment used for tile installation, including trowels, spacers, levels, and grout floats.

KU5. Techniques for applying adhesives uniformly and selecting appropriate coverage based on tile size and material.

KU6. Methods for fixing tiles and prefabricated tile sheets to achieve proper alignment and stability.

KU7. Techniques for cutting tiles to fit edges, corners, and fixtures while maintaining design consistency.

KU8. Importance of adhesive curing time and steps to check for tile stability.

KU9. Grouting techniques to ensure clean and uniform joints, including excess grout removal methods.

KU10. Methods for cleaning, polishing, and finishing tiled surfaces for a visually appealing outcome.

KU11. Safety guidelines for handling tools, adhesives, and tile materials during installation.

KU12. Common challenges in tile installation, such as uneven surfaces, tile misalignment, and corrective measures.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare for tile installation	15	30	-	5
PC1. Review layout plans, design specifications, and material requirements for tile installation.	-	-	-	-
PC2. Check surface readiness for tiling, ensuring it is clean, level, and primed for proper adhesion.	-	-	-	-
PC3. Select appropriate adhesives, grout, and tools based on the type of tiles and surface material.	-	-	-	-
PC4. Lay out tiles and prefabricated sheets to ensure proper alignment, spacing, and pattern accuracy.	-	-	-	-
PC5. Determine tile placement and starting points to minimize cutting and achieve visual consistency.	-	-	-	-
PC6. Set up tools and materials, ensuring accessibility and safety throughout the work process.	-	-	-	-
Install standard tiles and prefabricated tile sheets	15	30	-	5
PC7. Apply adhesives uniformly using appropriate tools such as trowels, ensuring correct thickness and coverage.	-	-	-	-
PC8. Fix standard tiles and prefabricated tile sheets onto the surface, pressing them firmly to achieve proper adhesion.	-	-	-	-
PC9. Use tile spacers to maintain consistent gaps and ensure alignment of tiles according to the layout plan.	-	-	-	-
PC10. Adjust tile positions as needed to maintain straight lines and design consistency.	-	-	-	-
PC11. Cut and fit tiles accurately around corners, edges, and fixtures to achieve seamless installation.	-	-	-	-
PC12. Install prefabricated tile sheets efficiently, ensuring uniform spacing and alignment.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. Allow sufficient time for adhesive curing as per manufacturer guidelines.	-	-	-	-
PC14. Check for loose tiles and make necessary adjustments before applying grout.	-	-	-	-
PC15. Apply grout evenly into gaps using appropriate tools and remove excess grout for a clean finish.	-	-	-	-
PC16. Clean and polish the tile surface to remove adhesive and grout residues, ensuring a visually appealing result.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0309
NOS Name	Install Standard Tiles and Prefabricated Tile Sheets
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	2
Version	1.0
Next Review Date	NA

ICE/CON/N0310: Apply Grouts and Sealants for Tiled Surfaces

Description

This unit covers the skills and knowledge required to apply grouts and sealants to tiled surfaces, ensuring a clean, finished appearance and durability.

Scope

The scope covers the following :

- Preparation of the surface and materials
- Application of grout and sealant
- Post-application cleaning and finishing

Elements and Performance Criteria

Preparation of the surface and materials

To be competent, the user/individual on the job must be able to:

PC1. Review the work plan and specifications to understand the type of tiles and the required grout and sealant.

PC2. Ensure the surface of the tiled area is clean, dry, and free of debris before applying grout or sealant.

PC3. Prepare grout and sealant according to the manufacturer's instructions, ensuring the right consistency and quantity.

PC4. Choose the appropriate type of grout and sealant based on the material of the tiles (e.g., ceramic, porcelain, natural stone) and the environmental conditions.

Application of grout and sealant

To be competent, the user/individual on the job must be able to:

PC5. Apply grout between the tiles using a rubber float or other suitable tools, ensuring an even distribution and complete filling of joints.

PC6. Use sufficient pressure to force grout into joints without damaging the tile surface.

PC7. Remove excess grout from the tile surface using the float at an angle, leaving the joints clean and full.

PC8. Allow the grout to set for the recommended time, ensuring proper curing.

PC9. Apply a thin, even layer of sealant to grout lines and the surrounding tile edges to prevent moisture ingress and staining.

PC10. Ensure that the sealant is applied smoothly and consistently, without over-application.

PC11. Allow the sealant to cure for the required time, ensuring no interference with the surrounding area.

Post-application cleaning and finishing

To be competent, the user/individual on the job must be able to:

PC12. Clean the tile surface thoroughly after grout and sealant application, removing any residue or haze.

PC13. Ensure the grout lines are smooth and uniform, touching up where necessary to maintain a professional finish.

PC14. Inspect the completed work to ensure all grout joints are properly filled, sealant is evenly applied, and there is no excess residue.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Properties of different types of grout and sealants, including epoxy, cement-based, and silicone-based products.

KU2. Methods for preparing tiled surfaces to ensure effective adhesion of grout and sealant.

KU3. Application techniques for grout, including proper pressure and angles to avoid damage to tiles.

KU4. The importance of curing time for grout and sealant to ensure maximum durability.

KU5. Techniques for cleaning excess grout and sealant without damaging tiles.

KU6. Different types of sealants available and their suitability for specific environments (e.g., bathrooms, kitchens, outdoor areas).

KU7. Tools and equipment required for grout and sealant application, including rubber floats, trowels, and caulking guns.

KU8. Health and safety precautions when handling grouts, sealants, and cleaning chemicals.

KU9. Techniques for inspecting the final finish to ensure uniform grout joints and smooth sealant coverage.

KU10. Importance of allowing grout and sealant to cure fully before exposing them to moisture or heavy use.

KU11. Standards for grout line appearance, including uniformity, smoothness, and cleanliness.

KU12. Environmental factors that may affect the curing and durability of grouts and sealants, such as humidity and temperature.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Preparation of the surface and materials	10	20	-	3
PC1. Review the work plan and specifications to understand the type of tiles and the required grout and sealant.	-	-	-	-
PC2. Ensure the surface of the tiled area is clean, dry, and free of debris before applying grout or sealant.	-	-	-	-
PC3. Prepare grout and sealant according to the manufacturer's instructions, ensuring the right consistency and quantity.	-	-	-	-
PC4. Choose the appropriate type of grout and sealant based on the material of the tiles (e.g., ceramic, porcelain, natural stone) and the environmental conditions.	-	-	-	-
Application of grout and sealant	10	20	-	4
PC5. Apply grout between the tiles using a rubber float or other suitable tools, ensuring an even distribution and complete filling of joints.	-	-	-	-
PC6. Use sufficient pressure to force grout into joints without damaging the tile surface.	-	-	-	-
PC7. Remove excess grout from the tile surface using the float at an angle, leaving the joints clean and full.	-	-	-	-
PC8. Allow the grout to set for the recommended time, ensuring proper curing.	-	-	-	-
PC9. Apply a thin, even layer of sealant to grout lines and the surrounding tile edges to prevent moisture ingress and staining.	-	-	-	-
PC10. Ensure that the sealant is applied smoothly and consistently, without over-application.	-	-	-	-
PC11. Allow the sealant to cure for the required time, ensuring no interference with the surrounding area.	-	-	-	-
Post-application cleaning and finishing	10	20	-	3

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Clean the tile surface thoroughly after grout and sealant application, removing any residue or haze.	-	-	-	-
PC13. Ensure the grout lines are smooth and uniform, touching up where necessary to maintain a professional finish.	-	-	-	-
PC14. Inspect the completed work to ensure all grout joints are properly filled, sealant is evenly applied, and there is no excess residue.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0310
NOS Name	Apply Grouts and Sealants for Tiled Surfaces
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0312: Prepare Surfaces for Marble Installation

Description

This unit covers the skills and knowledge required to level and prepare surfaces for marble installation by cleaning, smoothing, and applying primers to ensure proper adhesion and alignment.

Scope

The scope covers the following :

- Clean and remove of contaminants
- Level and smooth the surface
- Apply primers or bonding agents

Elements and Performance Criteria

Clean and remove contaminants

To be competent, the user/individual on the job must be able to:

PC1. Review the work plan to identify the type of surface and preparation required for marble installation.

PC2. Remove dirt, grease, and any old adhesives or coatings from the surface using appropriate cleaning solutions and techniques.

PC3. Ensure the work area is clean, dry, and free from debris to ensure optimal adhesion of the marble.

PC4. Protect surrounding surfaces from potential damage during cleaning by using drop cloths or masking.

Level and smooth the surface

To be competent, the user/individual on the job must be able to:

PC5. Check the surface for unevenness, cracks, or imperfections that may affect marble installation.

PC6. Use appropriate tools, such as a leveling compound, trowels, or power sanders, to smooth and level the surface.

PC7. Fill cracks and holes with suitable fillers, ensuring the surface is smooth and uniform before installation.

PC8. Inspect the surface to ensure it is level, stable, and free of defects that may affect the alignment of the marble.

Apply primers or bonding agents

To be competent, the user/individual on the job must be able to:

PC9. Select the appropriate primer or bonding agent for the surface type (e.g., concrete, wood, drywall) and the type of marble being installed.

PC10. Apply the primer or bonding agent evenly over the surface using brushes, rollers, or sprayers, following the manufacturer's instructions.

PC11. Allow sufficient drying or curing time for the primer or bonding agent to set properly before marble installation begins.

PC12. Inspect the surface after the primer or bonding agent application to ensure uniform coverage and adherence.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of surfaces (e.g., concrete, wood, drywall) and their specific preparation requirements for marble installation.

KU2. Properties of marble and how different substrates interact with marble adhesives and bonding agents.

KU3. Methods and techniques for cleaning surfaces, including the use of solvents, detergents, and other cleaning agents.

KU4. Tools and equipment for leveling and smoothing surfaces, such as trowels, power sanders, and leveling compounds.

KU5. Techniques for filling cracks and imperfections in surfaces before marble installation.

KU6. Importance of ensuring a stable, smooth, and level surface for proper alignment and adhesion of marble.

KU7. Different types of primers and bonding agents used for marble installation and their compatibility with various substrates.

KU8. The correct application techniques for primers and bonding agents to ensure uniform coverage and secure adhesion.

KU9. Drying and curing times for primers and bonding agents, and the impact of environmental conditions on their performance.

KU10. Safety precautions when using cleaning agents, leveling compounds, and bonding agents, including ventilation and protective gear.

KU11. Procedures for protecting surrounding areas during surface preparation to prevent accidental damage.

KU12. The standards for a well-prepared surface, including uniformity, smoothness, and stability, to ensure a durable marble installation.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Clean and remove contaminants	10	20	-	3
PC1. Review the work plan to identify the type of surface and preparation required for marble installation.	-	-	-	-
PC2. Remove dirt, grease, and any old adhesives or coatings from the surface using appropriate cleaning solutions and techniques.	-	-	-	-
PC3. Ensure the work area is clean, dry, and free from debris to ensure optimal adhesion of the marble.	-	-	-	-
PC4. Protect surrounding surfaces from potential damage during cleaning by using drop cloths or masking.	-	-	-	-
Level and smooth the surface	10	20	-	4
PC5. Check the surface for unevenness, cracks, or imperfections that may affect marble installation.	-	-	-	-
PC6. Use appropriate tools, such as a leveling compound, trowels, or power sanders, to smooth and level the surface.	-	-	-	-
PC7. Fill cracks and holes with suitable fillers, ensuring the surface is smooth and uniform before installation.	-	-	-	-
PC8. Inspect the surface to ensure it is level, stable, and free of defects that may affect the alignment of the marble.	-	-	-	-
Apply primers or bonding agents	10	20	-	3
PC9. Select the appropriate primer or bonding agent for the surface type (e.g., concrete, wood, drywall) and the type of marble being installed.	-	-	-	-
PC10. Apply the primer or bonding agent evenly over the surface using brushes, rollers, or sprayers, following the manufacturer's instructions.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. Allow sufficient drying or curing time for the primer or bonding agent to set properly before marble installation begins.	-	-	-	-
PC12. Inspect the surface after the primer or bonding agent application to ensure uniform coverage and adherence.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0312
NOS Name	Prepare Surfaces for Marble Installation
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0313: Measure and Cut Marble Using Advanced Tools

Description

This unit covers the skills and knowledge required to measure and cut marble accurately using advanced tools like 3D measurement devices and laser cutters for precision and efficiency.

Scope

The scope covers the following :

- Measurement of marble for cutting
- Use of advanced tools for cutting marble
- Safety and precision techniques for marble cutting

Elements and Performance Criteria

Measurement of marble for cutting

To be competent, the user/individual on the job must be able to:

PC1. Use appropriate measuring tools, such as digital calipers, laser measuring devices, or 3D scanners, to obtain accurate measurements of the marble slabs.

PC2. Mark measurement points and cutting lines clearly and accurately on the marble surface using suitable tools (e.g., chalk lines, pencils, or markers).

PC3. Verify measurements against specifications to ensure accuracy before proceeding with cutting.

Use of advanced tools for cutting marble

To be competent, the user/individual on the job must be able to:

PC4. Select the appropriate cutting tool based on the type and thickness of marble (e.g., laser cutter, waterjet cutter, or diamond blade saw).

PC5. Set up and calibrate advanced cutting tools such as 3D measurement devices or laser cutters to ensure precision.

PC6. Operate cutting tools efficiently, maintaining control over the cutting process to ensure clean, straight cuts without chipping or damaging the marble.

PC7. Monitor the cutting process to adjust settings if necessary to maintain optimal cutting conditions (e.g., speed, pressure, and alignment).

PC8. Ensure the marble is properly supported during cutting to prevent shifting or breakage.

Safety and precision techniques for marble cutting

To be competent, the user/individual on the job must be able to:

PC9. Inspect the cut marble for precision, checking for accuracy of dimensions and smoothness of the cut edges.

PC10. Use finishing tools (e.g., grinders or polishers) to smooth rough edges or surfaces if necessary.

PC11. Clean the marble pieces to remove any dust or debris resulting from the cutting process.

PC12. Ensure the cut pieces are safely stored or transported to prevent damage.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. The properties of marble, including its density, hardness, and how these factors affect the cutting process.

KU2. Types of advanced measurement tools (e.g., laser measuring devices, 3D scanners) and their use in obtaining accurate dimensions for marble cutting.

KU3. Methods for marking and preparing marble for cutting to ensure precise cuts.

KU4. Characteristics of different cutting tools (e.g., laser cutters, waterjet cutters, diamond blade saws) and their suitability for various marble types and thicknesses.

KU5. Principles of operation for advanced tools like 3D measurement devices and laser cutters, including calibration and settings for precision cutting.

KU6. Techniques for controlling the cutting process, including speed, alignment, and pressure, to achieve clean, accurate cuts without causing damage.

KU7. Safety precautions while using advanced cutting tools, including protective gear and safe handling of marble slabs.

KU8. Post-cutting processes, including inspection of the marble for quality, edge finishing, and cleaning methods.

KU9. Importance of proper handling and storage of cut marble pieces to avoid breakage or damage.

KU10. Troubleshooting techniques for identifying and correcting errors in measurement or cutting during the process.

KU11. Maintenance requirements for advanced tools to ensure consistent performance and accuracy.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Measurement of marble for cutting	10	20	-	3
PC1. Use appropriate measuring tools, such as digital calipers, laser measuring devices, or 3D scanners, to obtain accurate measurements of the marble slabs.	-	-	-	-
PC2. Mark measurement points and cutting lines clearly and accurately on the marble surface using suitable tools (e.g., chalk lines, pencils, or markers).	-	-	-	-
PC3. Verify measurements against specifications to ensure accuracy before proceeding with cutting.	-	-	-	-
Use of advanced tools for cutting marble	10	20	-	4
PC4. Select the appropriate cutting tool based on the type and thickness of marble (e.g., laser cutter, waterjet cutter, or diamond blade saw).	-	-	-	-
PC5. Set up and calibrate advanced cutting tools such as 3D measurement devices or laser cutters to ensure precision.	-	-	-	-
PC6. Operate cutting tools efficiently, maintaining control over the cutting process to ensure clean, straight cuts without chipping or damaging the marble.	-	-	-	-
PC7. Monitor the cutting process to adjust settings if necessary to maintain optimal cutting conditions (e.g., speed, pressure, and alignment).	-	-	-	-
PC8. Ensure the marble is properly supported during cutting to prevent shifting or breakage.	-	-	-	-
Safety and precision techniques for marble cutting	10	20	-	3
PC9. Inspect the cut marble for precision, checking for accuracy of dimensions and smoothness of the cut edges.	-	-	-	-
PC10. Use finishing tools (e.g., grinders or polishers) to smooth rough edges or surfaces if necessary.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. Clean the marble pieces to remove any dust or debris resulting from the cutting process.	-	-	-	-
PC12. Ensure the cut pieces are safely stored or transported to prevent damage.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0313
NOS Name	Measure and Cut Marble Using Advanced Tools
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0314: Install Marble Slabs and Tiles

Description

This unit covers the skills and knowledge required to install marble slabs and tiles securely, ensuring stability, alignment, and adherence to design specifications.

Scope

The scope covers the following :

- Selection and application of adhesives
- Installation and alignment of marble slabs and tiles
- Ensuring proper spacing and grout application

Elements and Performance Criteria

Selection and application of adhesives

To be competent, the user/individual on the job must be able to:

PC1. Choose the appropriate adhesive based on the type of marble or tile and the surface it will be installed on.

PC2. Mix the adhesive to the correct consistency to ensure a strong bond with the surface.

PC3. Apply the adhesive evenly to the surface using appropriate tools such as trowels or spreaders.

PC4. Follow the manufacturer's guidelines regarding adhesive application to ensure optimal bonding andcuring time.

Installation and alignment of marble slabs and tiles

To be competent, the user/individual on the job must be able to:

PC5. Position the marble slabs or tiles onto the adhesive, ensuring they are aligned according to the design layout.

PC6. Use spacers to maintain consistent grout joints and tile alignment.

PC7. Ensure that the marble slabs or tiles are properly pressed into place to achieve a strong bond and prevent shifting during installation.

PC8. Frequently check the alignment and make necessary adjustments to ensure the tiles are level and positioned correctly.

Ensuring proper spacing and grout application

To be competent, the user/individual on the job must be able to:

PC9. Prepare and apply grout between the joints of the tiles or slabs.

PC10. Clean excess grout from the surface of the marble or tiles to ensure a clean finish.

PC11. Allow grout to set according to the manufacturer's instructions before cleaning or making adjustments.

PC12. Inspect the installation to ensure that all tiles or slabs are securely in place, properly aligned, and meet the required quality standards.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. The types of adhesives suitable for different marble and tile types and their characteristics.
KU2. Proper techniques for applying adhesives to achieve optimal bonding.
KU3. Methods for ensuring alignment, leveling, and spacing of marble slabs or tiles during installation.
KU4. The correct use of spacers and leveling tools to ensure even grout joints.
KU5. The impact of surface preparation on the adhesives performance and the installations stability
KU6. Safety precautions when handling marble slabs and tiles to prevent injury.
KU7. The importance of ensuring a consistent grout joint and smooth finish between tiles or slabs.
KU8. Environmental factors, such as temperature and humidity, and their effect on the installation process.
KU9. Cleaning and maintenance practices to keep the marble or tiles in good condition.
KU10. The steps to inspect the final installation to confirm the stability, alignment, and adherence to design specifications.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.
GS2. Read and interpret project plans, specifications, and safety guidelines.
GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.
GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.
GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.
GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.
GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Selection and application of adhesives	10	20	-	3
PC1. Choose the appropriate adhesive based on the type of marble or tile and the surface it will be installed on.	-	-	-	-
PC2. Mix the adhesive to the correct consistency to ensure a strong bond with the surface.	-	-	-	-
PC3. Apply the adhesive evenly to the surface using appropriate tools such as trowels or spreaders.	-	-	-	-
PC4. Follow the manufacturer's guidelines regarding adhesive application to ensure optimal bonding andcuring time.	-	-	-	-
Installation and alignment of marble slabs and tiles	10	20	-	4
PC5. Position the marble slabs or tiles onto the adhesive, ensuring they are aligned according to the design layout.	-	-	-	-
PC6. Use spacers to maintain consistent grout joints and tile alignment.	-	-	-	-
PC7. Ensure that the marble slabs or tiles are properly pressed into place to achieve a strong bond and prevent shifting during installation.	-	-	-	-
PC8. Frequently check the alignment and make necessary adjustments to ensure the tiles are level and positioned correctly.	-	-	-	-
Ensuring proper spacing and grout application	10	20	-	3
PC9. Prepare and apply grout between the joints of the tiles or slabs.	-	-	-	-
PC10. Clean excess grout from the surface of the marble or tiles to ensure a clean finish.	-	-	-	-
PC11. Allow grout to set according to the manufacturer's instructions before cleaning or making adjustments.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Inspect the installation to ensure that all tiles or slabs are securely in place, properly aligned, and meet the required quality standards.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0314
NOS Name	Install Marble Slabs and Tiles
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	2
Version	1.0
Next Review Date	NA

ICE/CON/N0315: Polish and Seal Marble Surfaces using Epoxy Resins and Nano Coatings

Description

This unit covers the skills and knowledge required to polish and seal marble surfaces using epoxy resins and nano coatings, enhancing durability and aesthetic quality.

Scope

The scope covers the following :

- Polish marble surfaces to a high gloss
- Apply sealants for protection
- Maintain and upkeep of marble surfaces

Elements and Performance Criteria

Polish marble surfaces to a high gloss

To be competent, the user/individual on the job must be able to:

PC1. Assess the surface condition of the marble to determine the level of polishing required.

PC2. Choose the appropriate polishing compound based on the marble's type and desired finish.

PC3. Apply the polishing compound evenly across the surface using a suitable tool or machine.

PC4. Use polishing machines or hand tools, depending on the surface area, ensuring uniform polishing for an even sheen.

PC5. Monitor the surface to avoid over-polishing or damage, adjusting the process as necessary.

PC6. Buff the surface after polishing to enhance the marble's natural shine and ensure a smooth, glossy finish.

Apply sealants for protection

To be competent, the user/individual on the job must be able to:

PC7. Choose the appropriate sealant (epoxy resin, nano coatings)based on the marble’s type and the environmental conditions it will be exposed to.

PC8. Clean the marble surface thoroughly before applying the sealant to ensure it adheres properly.

PC9. Apply the sealant evenly using a brush, roller, or spray, covering the entire surface.

PC10. Allow the sealant to dry completely according to the manufacturer's instructions before handling the surface.

PC11. Inspect the application of the sealant to ensure complete coverage and proper adhesion.

Maintain and upkeep of marble surfaces

To be competent, the user/individual on the job must be able to:

PC12. Educate clients on the care and maintenance of sealed marble surfaces to preserve their appearance and durability.

PC13. Recommend periodic resealing based on the level of wear and environmental exposure to maintain the marble’s protective barrier.

PC14. Clean marble surfaces using appropriate techniques and cleaning agents to avoid damaging the polish or sealant.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Best methods for polishing and sealing each type of marble.
KU2. Various polishing compounds and their applications for achieving different levels of shine on marble.
KU3. The proper techniques for using polishing machines and tools to avoid damage to the surface.
KU4. The importance of surface preparation, including cleaning, before applying polish or sealant.
KU5. Types of sealants available and their suitability for different marble surfaces and environmental conditions.
KU6. Methods for applying sealant evenly without streaks or uneven coverage.
KU7. Drying and curing times for different sealants and their impact on the marble surface.
KU8. How environmental factors (e.g., humidity, temperature) affect the polishing and sealing process.
KU9. Health and safety precautions when working with chemicals used in polishing and sealing.
KU10. Maintenance guidelines to prolong the life of marble surfaces, including cleaning and periodic resealing.
KU11. Signs that indicate when marble surfaces need resealing or additional maintenance.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.
GS2. Read and interpret project plans, specifications, and safety guidelines.
GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.
GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.
GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.
GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.
GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Polish marble surfaces to a high gloss	10	20	-	3
PC1. Assess the surface condition of the marble to determine the level of polishing required.	-	-	-	-
PC2. Choose the appropriate polishing compound based on the marble's type and desired finish.	-	-	-	-
PC3. Apply the polishing compound evenly across the surface using a suitable tool or machine.	-	-	-	-
PC4. Use polishing machines or hand tools, depending on the surface area, ensuring uniform polishing for an even sheen.	-	-	-	-
PC5. Monitor the surface to avoid over-polishing or damage, adjusting the process as necessary.	-	-	-	-
PC6. Buff the surface after polishing to enhance the marble's natural shine and ensure a smooth, glossy finish.	-	-	-	-
Apply sealants for protection	10	20	-	4
PC7. Choose the appropriate sealant (epoxy resin, nano coatings)based on the marble’s type and the environmental conditions it will be exposed to.	-	-	-	-
PC8. Clean the marble surface thoroughly before applying the sealant to ensure it adheres properly.	-	-	-	-
PC9. Apply the sealant evenly using a brush, roller, or spray, covering the entire surface.	-	-	-	-
PC10. Allow the sealant to dry completely according to the manufacturer's instructions before handling the surface.	-	-	-	-
PC11. Inspect the application of the sealant to ensure complete coverage and proper adhesion.	-	-	-	-
Maintain and upkeep of marble surfaces	10	20	-	3

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Educate clients on the care and maintenance of sealed marble surfaces to preserve their appearance and durability.	-	-	-	-
PC13. Recommend periodic resealing based on the level of wear and environmental exposure to maintain the marble's protective barrier.	-	-	-	-
PC14. Clean marble surfaces using appropriate techniques and cleaning agents to avoid damaging the polish or sealant.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0315
NOS Name	Polish and Seal Marble Surfaces using Epoxy Resins and Nano Coatings
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0317: Prepare Framework for False Ceiling Installation

Description

This unit covers the skills and knowledge required to prepare and level frameworks for false ceiling installation, ensuring proper alignment and structural integrity.

Scope

The scope covers the following :

- Select materials for the framework
- Measure and mark framework positions
- Cut and prepare framework components
- Assemble and secure the framework
- Level and align the framework

Elements and Performance Criteria

Select materials for the framework

To be competent, the user/individual on the job must be able to:

PC1. Assess the design specifications to determine the types of materials required for the framework.

PC2. Choose appropriate materials, such as metal grids, rods, or wooden battens, based on load-bearing capacity and the ceiling type.

PC3. Ensure that all materials meet safety standards and quality requirements for structural integrity.

Measure and mark framework positions

To be competent, the user/individual on the job must be able to:

PC4. Measure and mark accurate reference points on walls and ceilings to guide the placement of the framework.

PC5. Use appropriate tools like laser levels, measuring tapes, and plumb bobs to ensure precise positioning.

PC6. Confirm the measurements to ensure that the framework will be level and aligned according to the ceiling design.

Cut and prepare framework components

To be competent, the user/individual on the job must be able to:

PC7. Cut the framework components, such as rods, rails, or battens, to the required length using cutting tools (e.g., saws, power cutters).

PC8. Smooth the cut edges to avoid any damage to the components and ensure safe handling.

PC9. Prepare any additional components required for fixing the framework to the ceiling structure, such as brackets, clips, or anchors.

Assemble and secure the framework

To be competent, the user/individual on the job must be able to:

PC10. Assemble the components of the framework based on the design specifications and measurements.

PC11. Ensure all framework components are securely fixed in place using appropriate fasteners, such as screws, bolts, or anchors.

PC12. Double-check the stability of the framework before proceeding with further ceiling installation tasks.

Level and align the framework

To be competent, the user/individual on the job must be able to:

PC13. Use levels, plumb lines, or laser devices to ensure the framework is aligned horizontally and vertically.

PC14. Adjust any misaligned components to achieve the required precision in positioning.

PC15. Verify that the framework is level and securely attached to support the false ceiling materials.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of materials suitable for false ceiling frameworks and their characteristics.

KU2. Methods for measuring and marking accurate reference points to guide framework installation.

KU3. Tools and techniques for cutting and preparing framework components.

KU4. Assembly techniques for various types of frameworks (e.g., suspended, grid-based).

KU5. Health and safety procedures to ensure safe handling of materials and tools.

KU6. The importance of accurate leveling and alignment in the structural integrity of the framework.

KU7. Fasteners and anchors used to secure framework components and ensure stability.

KU8. How to verify the framework's alignment before proceeding with false ceiling installation.

KU9. The impact of structural conditions, such as ceiling height or load-bearing capacity, on framework design and installation.

KU10. The environmental and safety considerations when working at heights or with heavy materials.

KU11. Best practices for maintaining proper alignment and level during the entire framework installation process.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Select materials for the framework	6	12	-	2
PC1. Assess the design specifications to determine the types of materials required for the framework.	-	-	-	-
PC2. Choose appropriate materials, such as metal grids, rods, or wooden battens, based on load-bearing capacity and the ceiling type.	-	-	-	-
PC3. Ensure that all materials meet safety standards and quality requirements for structural integrity.	-	-	-	-
Measure and mark framework positions	6	12	-	2
PC4. Measure and mark accurate reference points on walls and ceilings to guide the placement of the framework.	-	-	-	-
PC5. Use appropriate tools like laser levels, measuring tapes, and plumb bobs to ensure precise positioning.	-	-	-	-
PC6. Confirm the measurements to ensure that the framework will be level and aligned according to the ceiling design.	-	-	-	-
Cut and prepare framework components	6	12	-	2
PC7. Cut the framework components, such as rods, rails, or battens, to the required length using cutting tools (e.g., saws, power cutters).	-	-	-	-
PC8. Smooth the cut edges to avoid any damage to the components and ensure safe handling.	-	-	-	-
PC9. Prepare any additional components required for fixing the framework to the ceiling structure, such as brackets, clips, or anchors.	-	-	-	-
Assemble and secure the framework	6	12	-	2
PC10. Assemble the components of the framework based on the design specifications and measurements.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. Ensure all framework components are securely fixed in place using appropriate fasteners, such as screws, bolts, or anchors.	-	-	-	-
PC12. Double-check the stability of the framework before proceeding with further ceiling installation tasks.	-	-	-	-
Level and align the framework	6	12	-	2
PC13. Use levels, plumb lines, or laser devices to ensure the framework is aligned horizontally and vertically.	-	-	-	-
PC14. Adjust any misaligned components to achieve the required precision in positioning.	-	-	-	-
PC15. Verify that the framework is level and securely attached to support the false ceiling materials.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0317
NOS Name	Prepare Framework for False Ceiling Installation
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0318: Install Flush Jointed and Open Grid Ceiling Systems

Description

This unit covers the skills and knowledge required to install flush-jointed ceiling systems by fixing panels and applying joint compounds to create a smooth finish.

Scope

The scope covers the following :

- Install non-suspended flush-jointed ceiling systems
- Install suspended flush-jointed ceiling systems
- Install exposed grid suspended panel ceiling systems

Elements and Performance Criteria

Install Non-Suspended Flush-Jointed Ceiling Systems

To be competent, the user/individual on the job must be able to:

PC1. Inspect and clean the surface where the flush-jointed ceiling will be installed to ensure it is suitable for installation.

PC2. Mark datums and levels using tools like spirit levels and laser levels as per work specifications.

PC3. Identify and mark fixing points for brackets and framing systems on walls and ceilings.

PC4. Measure and cut plasterboard, gypsum board, or fiberboard accurately to required dimensions.

PC5. Apply framing systems, such as metal grids or steel furring channels, following specified designs and drawings

PC6. Use adhesives and fasteners to securely fix plasterboards to the framing systems, ensuring proper alignment.

PC7. Strengthen joints and edges of plasterboards by applying jointing compound and paper tape.

PC8. Create cut outs for services like electrical and plumbing systems using appropriate tools.

PC9. Finish the installed ceiling system using cements, compounds, and accessories to ensure a smooth surface.

Install Suspended Flush-Jointed Ceiling Systems

To be competent, the user/individual on the job must be able to:

PC10. Draw and mark levels around the room to determine the position of the wall angles for the ceiling.

PC11. Secure wall angles to the walls using suitable fasteners, ensuring alignment and stability.

PC12. Fix suspension brackets to the ceiling at specified points using appropriate tools and techniques.

PC13. Attach intermediate channels to suspension brackets and connect them to wall angles with fasteners.

PC14. Fix ceiling sections perpendicular to intermediate channels, ensuring proper spacing and support.

PC15. Install plasterboards to the ceiling sections using drywall screws, maintaining even spacing.

PC16. Strengthen joints by applying jointing compound and tape as per industry standards.

PC17. Inspect and finish the ceiling surface to ensure proper concealment of joints and screws.

Install Exposed Grid Suspended Panel ceiling systems

To be competent, the user/individual on the job must be able to:

PC18. Establish datums and levels for positioning grid components using measuring tools.

PC19. Securely fasten suspension brackets to support main tees in line with specifications.

PC20. Install main tees and cross tees to form a grid, ensuring proper alignment and stability.

PC21. Place and adjust panels into the grid system to ensure a precise fit.

PC22. Finish panel joints with jointing compound and tape to provide a seamless appearance.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Different types of ceiling systems (flush-jointed, open grid, suspended, non-suspended) and their applications in various building types.

KU2. Materials used for ceiling systems, including gypsum boards, metal grids, and tiles.

KU3. Techniques for installing non-suspended and suspended flush-jointed ceiling systems.

KU4. Methods for installing exposed grid suspended panel ceiling systems.

KU5. The importance of accurate measurement and planning for ceiling panel placement and grid alignment.

KU6. Properties and types of joint compounds, including their suitability for different materials.

KU7. Techniques for applying and finishing joint compounds to create a smooth ceiling surface.

KU8. Tools and equipment required for ceiling installation, such as measuring instruments, fasteners, and cutting tools.

KU9. Safety protocols, including personal protective equipment (ppe) and proper ventilation during installation.

KU10. Building codes and industry standards that apply to ceiling installation (e.g., fire resistance, load-bearing capacity).

KU11. Inspection techniques to ensure proper alignment, secure fixing, and finish quality.

KU12. Troubleshooting common installation issues, such as misalignment or cracking, and corrective measures.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Install Non-Suspended Flush-Jointed Ceiling Systems	10	20	-	3
PC1. Inspect and clean the surface where the flush-jointed ceiling will be installed to ensure it is suitable for installation.	-	-	-	-
PC2. Mark datums and levels using tools like spirit levels and laser levels as per work specifications.	-	-	-	-
PC3. Identify and mark fixing points for brackets and framing systems on walls and ceilings.	-	-	-	-
PC4. Measure and cut plasterboard, gypsum board, or fiberboard accurately to required dimensions.	-	-	-	-
PC5. Apply framing systems, such as metal grids or steel furring channels, following specified designs and drawings	-	-	-	-
PC6. Use adhesives and fasteners to securely fix plasterboards to the framing systems, ensuring proper alignment.	-	-	-	-
PC7. Strengthen joints and edges of plasterboards by applying jointing compound and paper tape.	-	-	-	-
PC8. Create cut outs for services like electrical and plumbing systems using appropriate tools.	-	-	-	-
PC9. Finish the installed ceiling system using cements, compounds, and accessories to ensure a smooth surface.	-	-	-	-
Install Suspended Flush-Jointed Ceiling Systems	10	20	-	4
PC10. Draw and mark levels around the room to determine the position of the wall angles for the ceiling.	-	-	-	-
PC11. Secure wall angles to the walls using suitable fasteners, ensuring alignment and stability.	-	-	-	-
PC12. Fix suspension brackets to the ceiling at specified points using appropriate tools and techniques.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. Attach intermediate channels to suspension brackets and connect them to wall angles with fasteners.	-	-	-	-
PC14. Fix ceiling sections perpendicular to intermediate channels, ensuring proper spacing and support.	-	-	-	-
PC15. Install plasterboards to the ceiling sections using drywall screws, maintaining even spacing.	-	-	-	-
PC16. Strengthen joints by applying jointing compound and tape as per industry standards.	-	-	-	-
PC17. Inspect and finish the ceiling surface to ensure proper concealment of joints and screws.	-	-	-	-
Install Exposed Grid Suspended Panel ceiling systems	10	20	-	3
PC18. Establish datums and levels for positioning grid components using measuring tools.	-	-	-	-
PC19. Securely fasten suspension brackets to support main tees in line with specifications.	-	-	-	-
PC20. Install main tees and cross tees to form a grid, ensuring proper alignment and stability.	-	-	-	-
PC21. Place and adjust panels into the grid system to ensure a precise fit.	-	-	-	-
PC22. Finish panel joints with jointing compound and tape to provide a seamless appearance.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0318
NOS Name	Install Flush Jointed and Open Grid Ceiling Systems
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0319: Install Pre Fabricated Ceiling and Drywall Systems

Description

This unit covers the skills and knowledge required to install pre-fabricated ceiling and drywall systems, ensuring accuracy, durability, and compliance with project specifications.

Scope

The scope covers the following :

- Install pre fabricated ceiling panels and tiles
- Install drywall sheets

Elements and Performance Criteria

Install pre-fabricated ceiling panels and tiles

To be competent, the user/individual on the job must be able to:

PC1. Select appropriate materials and pre-fabricated components based on the project specifications and site conditions.

PC2. Gather all necessary tools and equipment, including drills, screwdrivers, cutting tools, and safety gear.

PC3. Measure and mark the ceiling to determine the correct positioning of panels or tiles.

PC4. Position the pre-fabricated ceiling panels or tiles according to the design layout, ensuring proper alignment.

PC5. Secure panels or tiles to the ceiling framework using appropriate fasteners, ensuring a stable, level installation.

PC6. Check the alignment and fit of panels or tiles during installation to maintain consistent spacing and proper orientation.

PC7. Trim and cut panels or tiles as needed to fit around obstacles such as beams or ducts while maintaining a clean, finished edge.

Install drywall sheets

To be competent, the user/individual on the job must be able to:

PC8. Assess the condition of the ceiling and walls to ensure suitability for installing ceiling panels or drywall.

PC9. Measure and cut drywall sheets to the required dimensions, ensuring minimal waste and proper fit.

PC10. Position and secure drywall sheets onto the ceiling or wall studs using drywall screws or nails, ensuring alignment and a stable fit.

PC11. Check for even spacing between sheets and maintain consistent joints for a seamless finish.

PC12. Use joint compounds to seal joints between drywall sheets, ensuring a smooth, uniform surface.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. The types of pre-fabricated ceiling panels, tiles, and drywall systems and their respective installation methods.

KU2. Project specifications, design drawings, and material requirements for ceiling and drywall installations.

KU3. Measurement and alignment techniques to ensure precise installation of ceiling panels and drywall sheets.

KU4. Tools and equipment required for installing ceiling panels and drywall, including fasteners, cutting tools, drills, and screwdrivers.

KU5. Techniques for securing ceiling panels, tiles, and drywall sheets to support structures in compliance with safety regulations.

KU6. Safety protocols for handling materials, using tools, and working at height during installation.

KU7. Procedures for trimming and cutting panels or drywall to fit around obstacles while maintaining a professional finish.

KU8. Methods for sealing joints and seams between drywall sheets to ensure a smooth and durable surface.

KU9. Compliance with building codes, standards, and regulations for drywall and ceiling system installations.

KU10. Techniques for inspecting completed installations to ensure structural integrity and aesthetic quality.

KU11. The impact of environmental factors such as moisture or temperature on the installation and performance of ceiling and drywall systems.

KU12. The importance of ensuring proper ventilation and air circulation when installing certain ceiling systems to prevent long-term damage.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Install pre-fabricated ceiling panels and tiles	15	30	-	5
PC1. Select appropriate materials and pre-fabricated components based on the project specifications and site conditions.	-	-	-	-
PC2. Gather all necessary tools and equipment, including drills, screwdrivers, cutting tools, and safety gear.	-	-	-	-
PC3. Measure and mark the ceiling to determine the correct positioning of panels or tiles.	-	-	-	-
PC4. Position the pre-fabricated ceiling panels or tiles according to the design layout, ensuring proper alignment.	-	-	-	-
PC5. Secure panels or tiles to the ceiling framework using appropriate fasteners, ensuring a stable, level installation.	-	-	-	-
PC6. Check the alignment and fit of panels or tiles during installation to maintain consistent spacing and proper orientation.	-	-	-	-
PC7. Trim and cut panels or tiles as needed to fit around obstacles such as beams or ducts while maintaining a clean, finished edge.	-	-	-	-
Install drywall sheets	15	30	-	5
PC8. Assess the condition of the ceiling and walls to ensure suitability for installing ceiling panels or drywall.	-	-	-	-
PC9. Measure and cut drywall sheets to the required dimensions, ensuring minimal waste and proper fit.	-	-	-	-
PC10. Position and secure drywall sheets onto the ceiling or wall studs using drywall screws or nails, ensuring alignment and a stable fit.	-	-	-	-
PC11. Check for even spacing between sheets and maintain consistent joints for a seamless finish.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Use joint compounds to seal joints between drywall sheets, ensuring a smooth, uniform surface.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0319
NOS Name	Install Pre Fabricated Ceiling and Drywall Systems
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	2
Version	1.0
Next Review Date	NA

ICE/CON/N0320: Install Structural Wall Panels and Insulated Partitions

Description

This unit covers the skills and knowledge required to install structural wall panels and partitions with acoustic and thermal insulation, ensuring functionality and adherence to design requirements.

Scope

The scope covers the following :

- Prepare for installation
- Install structural wall panels
- Install insulated partitions

Elements and Performance Criteria

Prepare for installation

To be competent, the user/individual on the job must be able to:

PC1. Review project specifications, design drawings, and insulation requirements to understand installation needs.

PC2. Assess the work area to ensure the surface is suitable for panel or partition installation.

PC3. Select appropriate materials and insulation types based on thermal and acoustic requirements, as per project specifications.

PC4. Gather all necessary tools, including measuring instruments, cutting tools, and fasteners, along with safety gear.

Install structural wall panels

To be competent, the user/individual on the job must be able to:

PC5. Measure and mark the walls to determine the correct position of structural panels.

PC6. Position the wall panels, ensuring they are aligned and level with the reference points indicated in the project design.

PC7. Secure the panels to the supporting structure using appropriate fasteners, ensuring that the panels are fixed securely.

PC8. Check the panels for proper alignment and level during installation, adjusting as necessary to maintain the design specification.

Install insulated partitions

To be competent, the user/individual on the job must be able to:

PC9. Position and secure the insulated partition materials, ensuring that the thermal and acoustic properties are correctly applied.

PC10. Install the insulation material between panels or within the partition framework as per design specifications.

PC11. Ensure that the insulation material is properly fitted, with no gaps or compression that could reduce effectiveness.

PC12. Secure the partition framework and panels to the supporting structure, ensuring stability and alignment.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Types of structural wall panels and insulated partitions, and their respective installation methods.

KU2. Thermal and acoustic properties of insulation materials and their application in partition systems.

KU3. Measurement and alignment techniques to ensure precise installation of panels and partitions.

KU4. Tools and equipment required for installing structural panels, insulated partitions, and insulation materials.

KU5. Safety regulations related to handling insulation materials and installing wall panels and partitions.

KU6. Techniques for securing wall panels and partitions to structural supports, ensuring durability and alignment.

KU7. Methods for inspecting and testing the thermal and acoustic performance of installed partitions.

KU8. The importance of proper sealing around the edges and joints of panels to maintain insulation integrity.

KU9. Compliance with building codes, standards, and regulations for insulated partitions and structural panels.

KU10. Environmental considerations when choosing and installing insulation materials.

KU11. Methods for ensuring the correct fit and securing of insulation materials within partitions.

KU12. Troubleshooting techniques to address any misalignment or insulation issues during or after installation.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare for installation	10	20	-	3
PC1. Review project specifications, design drawings, and insulation requirements to understand installation needs.	-	-	-	-
PC2. Assess the work area to ensure the surface is suitable for panel or partition installation.	-	-	-	-
PC3. Select appropriate materials and insulation types based on thermal and acoustic requirements, as per project specifications.	-	-	-	-
PC4. Gather all necessary tools, including measuring instruments, cutting tools, and fasteners, along with safety gear.	-	-	-	-
Install structural wall panels	10	20	-	4
PC5. Measure and mark the walls to determine the correct position of structural panels.	-	-	-	-
PC6. Position the wall panels, ensuring they are aligned and level with the reference points indicated in the project design.	-	-	-	-
PC7. Secure the panels to the supporting structure using appropriate fasteners, ensuring that the panels are fixed securely.	-	-	-	-
PC8. Check the panels for proper alignment and level during installation, adjusting as necessary to maintain the design specification.	-	-	-	-
Install insulated partitions	10	20	-	3
PC9. Position and secure the insulated partition materials, ensuring that the thermal and acoustic properties are correctly applied.	-	-	-	-
PC10. Install the insulation material between panels or within the partition framework as per design specifications.	-	-	-	-
PC11. Ensure that the insulation material is properly fitted, with no gaps or compression that could reduce effectiveness.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Secure the partition framework and panels to the supporting structure, ensuring stability and alignment.	-	-	-	-
NOS Total	**30**	**60**	**-**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0320
NOS Name	Install Structural Wall Panels and Insulated Partitions
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	1
Version	1.0
Next Review Date	NA

ICE/CON/N0322: Apply Waterproofing Techniques Using Membranes and Adhesives

Description

This unit covers the skills and knowledge required to apply both waterproof membranes and adhesive-based waterproofing systems to various surfaces.

Scope

The scope covers the following :

- Surface Preparation and Membrane Application
- Adhesive Waterproofing Application

Elements and Performance Criteria

Surface Preparation and Membrane Application

To be competent, the user/individual on the job must be able to:

PC1. Review work plans and specifications to identify areas requiring waterproofing.

PC2. Select the appropriate type of waterproofing membrane (sheet or liquid) based on surface type and project requirements.

PC3. Clean and prepare surfaces by removing contaminants such as dirt, grease, and debris to ensure proper adhesion.

PC4. Apply the membrane evenly, ensuring full coverage without gaps or wrinkles.

PC5. Seal edges and joints of the membrane to avoid water penetration, ensuring a uniform finish.

PC6. Allow the membrane to cure as per manufacturer guidelines before proceeding with further layers or finishing work.

Adhesive Waterproofing Application

To be competent, the user/individual on the job must be able to:

PC7. Select appropriate adhesive waterproofing materials (coatings or sealants) based on surface type and environmental conditions.

PC8. Apply adhesive waterproofing materials in a consistent manner, ensuring complete coverage and bond.

PC9. Ensure that adhesive materials are applied without air pockets or inconsistencies.

PC10. Perform proper sealing at joints, seams, and edges to prevent water seepage.

PC11. Allow adhesives to cure adequately before exposing the surface to water or environmental factors.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Properties of various surfaces (concrete, wood, metal, etc.) and how they influence waterproofing choices.

KU2. Types of waterproofing membranes (liquid, sheet) and adhesive waterproofing systems, including their advantages and limitations.

KU3. Techniques for surface preparation, including cleaning, sanding, and priming to achieve optimal adhesion.

KU4. Methods for applying waterproof membranes and adhesives to achieve seamless coverage and protection.

KU5. Importance of proper sealing at joints, edges, and seams to prevent water penetration.

KU6. Tools and equipment used in waterproofing, including rollers, brushes, sprayers, and trowels.

KU7. Health and safety precautions when working with waterproofing materials (e.g., ppe, ventilation, handling chemicals).

KU8. Curing times and environmental factors that affect the performance of waterproofing systems.

KU9. Inspection techniques to assess the quality of the waterproofing application.

KU10. Guidelines for ensuring longevity and durability of waterproofing systems in various environmental conditions.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Surface Preparation and Membrane Application	15	30	-	5
PC1. Review work plans and specifications to identify areas requiring waterproofing.	-	-	-	-
PC2. Select the appropriate type of waterproofing membrane (sheet or liquid) based on surface type and project requirements.	-	-	-	-
PC3. Clean and prepare surfaces by removing contaminants such as dirt, grease, and debris to ensure proper adhesion.	-	-	-	-
PC4. Apply the membrane evenly, ensuring full coverage without gaps or wrinkles.	-	-	-	-
PC5. Seal edges and joints of the membrane to avoid water penetration, ensuring a uniform finish.	-	-	-	-
PC6. Allow the membrane to cure as per manufacturer guidelines before proceeding with further layers or finishing work.	-	-	-	-
Adhesive Waterproofing Application	15	30	-	5
PC7. Select appropriate adhesive waterproofing materials (coatings or sealants) based on surface type and environmental conditions.	-	-	-	-
PC8. Apply adhesive waterproofing materials in a consistent manner, ensuring complete coverage and bond.	-	-	-	-
PC9. Ensure that adhesive materials are applied without air pockets or inconsistencies.	-	-	-	-
PC10. Perform proper sealing at joints, seams, and edges to prevent water seepage.	-	-	-	-
PC11. Allow adhesives to cure adequately before exposing the surface to water or environmental factors.	-	-	-	-
NOS Total	30	60	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0322
NOS Name	Apply Waterproofing Techniques Using Membranes and Adhesives
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	3
Version	1.0
Next Review Date	NA

ICE/CON/N0323: Inspect and Maintain Waterproofed Surfaces

Description

This unit covers the skills and knowledge required to inspect and maintain waterproofed surfaces, ensuring their continued effectiveness, identifying potential issues, and performing necessary maintenance.

Scope

The scope covers the following :

- Inspect Waterproofed Surfaces
- Maintain Waterproofed Surfaces

Elements and Performance Criteria

Inspect Waterproofed Surfaces

To be competent, the user/individual on the job must be able to:

PC1. Visually inspect the waterproofed surfaces for signs of wear, damage, or degradation, such as cracking, bubbling, peeling, or discoloration.

PC2. Identify areas with potential water ingress or failure, including joints, seams, and edges.

PC3. Check for signs of mold, mildew, or water stains that may indicate hidden moisture behind the waterproofed surface.

PC4. Use appropriate testing equipment (e.g., moisture meters, water spray tests) to assess the integrity of the waterproofing.

Maintain Waterproofed Surfaces

To be competent, the user/individual on the job must be able to:

PC5. Identify areas requiring repairs or reapplication of waterproofing materials.

PC6. Select the appropriate materials and techniques for repairs based on the type of waterproofing system used (membranes or adhesives).

PC7. Reapply or replace damaged waterproofing materials, ensuring correct adhesion, alignment, and full coverage.

PC8. Perform necessary repairs to joints, seams, and edges to prevent water infiltration.

PC9. Apply touch-up coatings or sealants to areas showing early signs of deterioration.

PC10. Test the repaired areas to confirm the effectiveness of the maintenance work.

PC11. Advise clients or stakeholders on the expected lifespan of the waterproofing system

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. The types of waterproofing systems used and their expected lifespan and performance under different conditions.

KU2. Techniques for inspecting waterproofed surfaces, including visual inspection, testing methods, and use of tools like moisture meters.

KU3. Common signs of damage or degradation in waterproofing systems (e.g., cracking, peeling, discoloration).

KU4. Best practices for performing repairs, including reapplication of membranes, adhesives, and sealants.

KU5. Tools and equipment used for inspection and maintenance, including testing devices, applicators, and protective gear.

KU6. Regulatory standards and industry guidelines related to waterproofing materials and performance.

KU7. The importance of proper sealing and joint maintenance in preventing water ingress.

KU8. Environmental factors (e.g., temperature, humidity, water exposure) that impact the performance of waterproofing systems.

KU9. Cost-effective methods for extending the life of waterproofing systems through routine maintenance.

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. Maintain accurate and updated records of materials, project timelines, and work progress.

GS2. Read and interpret project plans, specifications, and safety guidelines.

GS3. Communicate effectively and professionally with clients, architects, supervisors, and team members.

GS4. Listen attentively to instructions and feedback from stakeholders to deliver quality outcomes.

GS5. Plan daily tasks and workflow to meet deadlines while prioritizing critical project milestones.

GS6. Identify potential challenges or risks in interior finishing activities and implement mitigation strategies.

GS7. Respond promptly and appropriately to workplace emergencies, such as injuries or safety hazards.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Inspect Waterproofed Surfaces	15	30	-	5
PC1. Visually inspect the waterproofed surfaces for signs of wear, damage, or degradation, such as cracking, bubbling, peeling, or discoloration.	-	-	-	-
PC2. Identify areas with potential water ingress or failure, including joints, seams, and edges.	-	-	-	-
PC3. Check for signs of mold, mildew, or water stains that may indicate hidden moisture behind the waterproofed surface.	-	-	-	-
PC4. Use appropriate testing equipment (e.g., moisture meters, water spray tests) to assess the integrity of the waterproofing.	-	-	-	-
Maintain Waterproofed Surfaces	15	30	-	5
PC5. Identify areas requiring repairs or reapplication of waterproofing materials.	-	-	-	-
PC6. Select the appropriate materials and techniques for repairs based on the type of waterproofing system used (membranes or adhesives).	-	-	-	-
PC7. Reapply or replace damaged waterproofing materials, ensuring correct adhesion, alignment, and full coverage.	-	-	-	-
PC8. Perform necessary repairs to joints, seams, and edges to prevent water infiltration.	-	-	-	-
PC9. Apply touch-up coatings or sealants to areas showing early signs of deterioration.	-	-	-	-
PC10. Test the repaired areas to confirm the effectiveness of the maintenance work.	-	-	-	-
PC11. Advise clients or stakeholders on the expected lifespan of the waterproofing system	-	-	-	-
NOS Total	30	60	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ICE/CON/N0323
NOS Name	Inspect and Maintain Waterproofed Surfaces
Sector	Construction
Sub-Sector	
Occupation	Finishing Works
NSQF Level	4
Credits	2
Version	1.0
Next Review Date	NA

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Awarding Body. Each Performance Criteria (PC)/ Element will be assigned marks proportional to its importance in NOS. AB will also lay down proportion of marks for Theory and Practical Skills for each PC/ Element.

2. The assessment of the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by AB.

3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below.

4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.

5. To pass the Qualification Pack, every trainee must score 70% on overall QP.

6. The Assessor shall check the outcome of the practices while evaluating the steps performed to achieve the outcome.

7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.

8. After the certain number of iterations as decided by AB the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.

9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified time frame set by AB.

10. Minimum duration of Assessment of each QP shall be 8hrs/batch (max. 30 candidates).

Minimum Aggregate Passing % at QP Level : 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0301.Read and Interpret Construction and Design Drawings	30	60	-	10	100	15
ICE/CON/N9901.Implement Safe Work Practices and Environmental Stewardship at Construction Sites	30	60	-	10	100	10
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
Total	**80**	**150**	**-**	**20**	**250**	**30**

Elective: 1 Painting

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0302.Clean and Prepare Surfaces for Painting	30	60	-	10	100	15
ICE/CON/N0303.Prepare Paint Mix Including Digital Color Matching	30	60	-	10	100	15
ICE/CON/N0304.Apply Paints Using Traditional and Airless Spray Techniques	30	60	-	10	100	20

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0305.Identify and Repair Common Painting Issues	30	60	-	10	100	20
Total	**120**	**240**	**-**	**40**	**400**	**70**

Elective: 2 Tiling

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0307.Level and Prepare Surfaces for Tiling Work	30	60	-	10	100	15
ICE/CON/N0308.Measure and Cut Tiles as Per Layout Specifications	30	60	-	10	100	15
ICE/CON/N0309.Install Standard Tiles and Prefabricated Tile Sheets	30	60	-	10	100	20
ICE/CON/N0310.Apply Grouts and Sealants for Tiled Surfaces	30	60	-	10	100	20
Total	**120**	**240**	**-**	**40**	**400**	**70**

Elective: 3 Marble Laying

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0312.Prepare Surfaces for Marble Installation	30	60	-	10	100	15
ICE/CON/N0313.Measure and Cut Marble Using Advanced Tools	30	60	-	10	100	15

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0314.Install Marble Slabs and Tiles	30	60	-	10	100	20
ICE/CON/N0315.Polish and Seal Marble Surfaces using Epoxy Resins and Nano Coatings	30	60	-	10	100	20
Total	**120**	**240**	**-**	**40**	**400**	**70**

Elective: 4 False Ceiling and Drywall Installation

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0317.Prepare Framework for False Ceiling Installation	30	60	-	10	100	15
ICE/CON/N0318.Install Flush Jointed and Open Grid Ceiling Systems	30	60	-	10	100	15
ICE/CON/N0319.Install Pre Fabricated Ceiling and Drywall Systems	30	60	-	10	100	20
ICE/CON/N0320.Install Structural Wall Panels and Insulated Partitions	30	60	-	10	100	20
Total	**120**	**240**	**-**	**40**	**400**	**70**

Elective: 5 Waterproofing

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0322.Apply Waterproofing Techniques Using Membranes and Adhesives	30	60	-	10	100	40

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ICE/CON/N0323.Inspect and Maintain Waterproofed Surfaces	30	60	-	10	100	30
Total	60	120	-	20	200	70

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.