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India **skills**

# Test project

*Wall Floor & Tiling*

*Category: Construction and Building Technology*

## **Wall & Floor Tiling**

### **Skill Explained**

The work of tiller includes laying of tiles of ceramics, mosaics or natural stone on walls, floors staircases swimming pools, outside installations and facades to provide protective and decorative finishes .A tiller generally works on commercial and residential projects from drawings and instructions. . Successful tillers requires endurance, concentration, an eye for details with continuing responsibility to work professionally in order to meet the requirements of the customer.

**Eligibility Criteria-** Competitors born on or after 01 Jan 1997 are eligible to attend the Competition

**Duration of Test Project-** 18 hours

**Total 3 Modules**

**Preface**

**Section A-**Test Project

**Section B-**Marking Scheme

**Section C-**Infrastructure List (Tool and equipment including raw material)

**Section D-** Instruction for Competitors including Personnel Protective Clothing

**Section E-** Health, Safety and Environment

## Section A

Total Modules 3

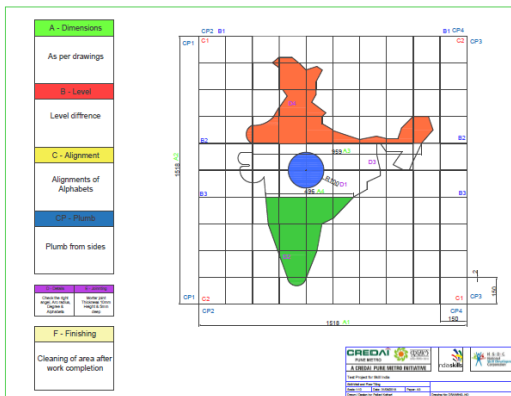
Wall A, Wall B and Floor

Wall for Tiling work is provided. For Floor the bed to be prepared by trainee

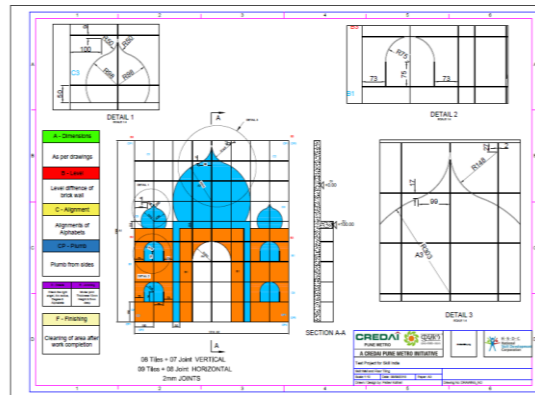
Test Project is divided in three parts:

1. Wall A tiling work
2. Wall B Tiling Work
3. Floor Tiling Work includes preparation of bed

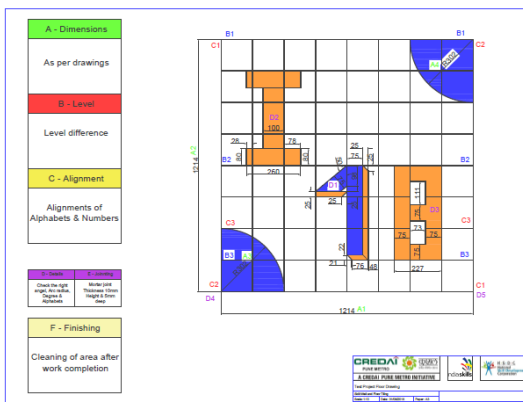
(NOTE - For drawing reading atleast 1 hour before competition is required.)



**WALL A – India Map**



**WALL B - TajMahal**



**FLOOR**

## Section B

The Assessment is done by awarding points by adopting two methods, Measurement and Judgments

- Measurement –One which is measurable
- Judgments-Based on Industry expectations
- Aspects are criteria's which are judged for assessment

The assessment will be for **three parts** of project separately:

1. Wall A Tiling Work
2. Wall B Tiling Work
3. Floor Tiling Work - 4 Hours for performing practical

Cleaning time is included in practical time

### WALL A MARKING SCHEME

Marking:_Measurement						
Competitor Name :						
Sub Criterion - Wall A - India Map						
Aspect ID	Aspect Of Sub Criterion	Max Mark	Aspect of Sub Criterion - Description	Requirement of Size	Result or Actual Value	Mark Awarded
A1	Dimension	2	Length of wall A	1518mm		
A2		2	Height of module	1518mm		
A3		1	Length at the bottom of orange part of map	959mm		
A4		1	Length at top of green part of map	496mm		



J1	Missing/Cutting Of Tiles	2	Piece of tiles missing, wrong colour tiles placed, Cutting of tiles not done properly				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J2	Jointing	2	Uniformity of Joints for vertical and horizontal, regular joints size of 2mm				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J3	Finishing	2	Overall Impression, Sharp Edge, Shape of Structure				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J3	Appearance	2	Cleaning Of Tiles and Overall Area around				
<b>Total Marks (Judgement)</b>		<b>8</b>					

**TOTAL MARKS FOR WALL A - 35 MARKS**

REMARKS -  
Discipline & H & S

**WALL B – MARKING SCHEMES**

Marking_:_Measurement						
Competitor Name :						
<b>Sub Criterion - Wall B - Taj Mahal – 3D</b>						
Aspect ID	Aspect Of Sub Criterion	Max Mark	Aspect of Sub Criterion - Description	Requirement of Size	Result or Actual Value	Mark Awarded
A1	Dimension	2	Length of wall B	1214mm		
A2		2	Height of module	1366 mm		
A3		1	Radius of bigger dome	303 mm		
A4		1	Radius of arc of door	150mm		
B1	Level	2	Top of third row from bottom	0mm		
B2		2	At the bottom of smaller domes	0mm		
B3		2	Top of module	0mm		
C1	Surface Alignment	2	Left side top to right side bottom	0mm		
C2		2	Right side top to left side bottom	0mm		
C3		2	Middle of second tile from bottom	0mm		
C4		2	At the middle of fourth tile from bottom	0mm		
CP1	Plumb	2	Left side - side view	0mm		
CP2		2	Left side - front view	0mm		
CP3		2	Right side - side view	0mm		
CP4		2	Right side - front view	0mm		
D1		1	Radius of left side smaller dome	98mm		

D2		1	Right angle at top left side	90 degrees		
D3		2	Right angle at 3D Section	90 degrees		
<b>Total Marks (Measurement)</b>		<b>32</b>				

Marking: Judgment							
Competitor Name:							
Sub Criterion - Wall B - TajMahal – 3D							
Aspect ID	Aspect Of Sub Criterion	Max Mark	Aspect of Sub Criterion - Description	Mark Awarded			
				J1	J2	J3	T
J1	Missing/Cutting Of Tiles	2	Piece of tiles missing, wrong colour tiles placed, Cutting of tiles not done properly				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J2	Jointing	2	Uniformity of Joints for vertical and horizontal, regular joints size of 2mm				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J3	Finishing	2	Overall Impression, Sharp Edge, Shape of Structure				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				



J3	Appearance	2	Cleaning Of Tiles and Overall Area around				
<b>Total Marks (Judgement)</b>		<b>8</b>					

**TOTAL MARKS FOR WALL B - 40 MARKS**

**REMARKS**

**Discipline & H & S**

**FLOOR MARKING SCHEMES**

Marking:_Measurement						
Competitor Name :						
<b>Sub Criterion - Floor</b>						
Aspect ID	Aspect Of Sub Criterion	Max Mark	Aspect of Sub Criterion - Description	Requirement of Size	Result or Actual Value	Mark Awarded
A1	Dimension	2	Length of floor	1214mm		
A2		2	Width of floor	910 mm		
B1	Level	2	Middle of first row from wall	0mm		
B2		2	Middle of fourth row from wall	0mm		
B3		2	Middle of fifth row from wall	0mm		
C1	Surface Alignment	2	Left side to right side	0mm		
C2		2	Right side to left side	0mm		
D1	Details	1	Width of 1	75 mm		
D2		1	Width of I	100mm		

D3		1	Width of 8 at the middle	75mm		
D4		1	Length of base of I	260mm		
D5		1	Right angle of floor	90 degrees		
<b>Total Marks (Measurement)</b>		<b>18</b>				

Marking: Judgment							
Competitor Name:							
Sub Criterion - Floor							
Aspect ID	Aspect Of Sub Criterion	Max Mark	Aspect of Sub Criterion - Description	Mark Awarded			
				J1	J2	J3	T
J1	Missing/Cutting Of Tiles	2	Piece of tiles missing, wrong colour tiles placed, Cutting of tiles not done properly				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J2	Jointing	2	Uniformity of Joints for vertical and horizontal, regular joints size of 2mm				
		0	Below Industry Standard				
		1	Industry Standard				
		2	Surpasses Industry Std. in some ways				
J3	Finishing& Appearance	2	Overall Impression, Sharp Edge, Shape of Structure & CLEANING				
		0	Below Industry Standard				
		1	Industry Standard				

		2	Surpasses Industry Std. in some ways				
<b>Total Marks (Judgement)</b>		<b>6</b>					

**TOTAL MARKS FOR FLOOR - 25 MARKS**

**REMARKS -**

**Discipline & H & S**

**TOTAL MARKS FOR TEST PROJECT – 100 MARKS**

**AREA OF WORKSTATION –**

**Shape and Area -**

The shape of workstation preferably to be 'Square'

- Workstation Area – approximately 9sqm (3m\*3m) or 100sq.ft (10ft\*10ft)
- Platform for marking and cutting the tiles – 8feet \* 4feet (plywood platform) and in the form of table is preferable or minimum 200mm rise from the floor
- Wall for test project – Minimum 17000mm\*1700mm is required with min.300mm width

**Section C**

- **Workshop Installation-Tools & Equipment positioned by Organizers**
- **Tool Kit-Tool & Equipment allowed to be brought by competitors for competitions**

<b>Infrastructure List - Wall &amp; Floor Tiling</b>	
<b>Workshop Installation</b>	<b>Quantity</b>
Water Tank	1
Water Bucket	1
Water Mug	1
Mortar Bucket/Pan	1
Shovel for cleaning of area	1
<b>Workshop Installation – Tools</b>	<b>Quantity</b>
Spirit Level 1m	1
Spirit Level 2m	1

Measuring Tape	1
Tile Cutting Machine	1
Trowels Big / Teeth Trowel	1
Trowel Small	1
Rubber Hammer	1
Straight Edge 6 feet	2
Right angle big	1
Grout Pad	1
Rounder Big - ( considering tile size)	1
Spacers	2 packet
Diamond Cutter	1
Tile Blades	1
<b>Materials/ Consumables</b>	<b>Quantity</b>
Plywood 2m * 1.5m (If table is possible)	1
Broom	1
Dustpan	1
Sponge	2
Tiles 150*150*6 mm white	270
Tiles 150*150*6 mm blue	60
Tiles 150*150*6 mm orange	100
Tiles 150*150*6 mm green	18
Tile grout - Chemical grout – 1kg	5 bags
Tile Adhesive / Tile fixo 25kg	3 bags
Masking Tape 2 inch	1
Water	As required
<b>Health &amp; Safety Instruments</b>	<b>Quantity</b>
Ear Plug	2 pair
Knee pad	1 pair
Nose mask	2
Goggle	2
Safety Shoes	1 pair
Hand Gloves	2 pair
<b>Stationary</b>	<b>Quantity</b>
Calculator	1 (to be brought by participants)
Scale 300mm	2
Protractor Small	1
Geometric Compass box	1
Marker Pen (CD Marker)	5
Pencil	1

Extension Box	1 (if required)
<b>Optional Tools (to be brought by competitors)</b>	<b>Quantity</b>
Jolly Cutting Machine	1
Spartek Machine	1
Tile Cutting Machine	1
Himeri / Rubber for finishing	1
Bigger Compass	1

## Section D

### 1. Time:

Drawing Reading – Either previous day or 1 hour before competition

Working Time – 18.00 Hours ( 3 Days)

- Wall A and B – 14 Hours
- Floor – 4 Hours

### 2. Drawing –

Read the drawing carefully. Understand Dimensions, Alignment, Plumb, Level and Cutting of tiles.

### 3. Tile Size –

150 \* 150 \* 6 mm

Joint Size – 2mm

Mortar & Grout must be provided by organizing committee

### 4. Mark the color of tiles

### 5. PLANNING –

Before starting to the work kindly submit the planning stating activity and time for that.  
(This includes marking, cutting and time distribution for laying each layer of tile)

### 6. Cleaning of module, tools and area around must be done in working time

NOTE – Wall will be provided

Floor bed to be made by competitor – (3 inches)

### 7. Health, Safety and Environment

Safety requirement while constructing Wall and Floor Tiling -

During Cutting and Constructing Tiles for the Wall and Floor Project following PPE's are mandatory--

- Safety shoes- All The time during the competition
- Safety Helmet- All The time during cutting
- Safety Jacket- All The time during the competition
- Ear Plugs and Nose Mask- Compulsory during Cutting of Tiles
- Hand Gloves- Handling, cutting and pasting application of tiles on wall and floor
- Goggle- During Cutting
- Knee pad – During Marking and Cutting

		
<b>High Visibility Jacket</b>	<b>Safety Helmet</b>	<b>Safety Shoes</b>
		
<b>Safety Goggles</b>	<b>Hand Gloves</b>	<b>Ear Plugs</b>

#### Safety Guidelines ---

Check for hazards at workplace and surrounding and notify the supervisor immediately  
Always inspect the machine before starting to work. Ensure that all the protection guards are in place.

Turn the motor off during cleaning and while carrying out adjustments of the machine and in emergency.

When operating the machine, keep your hands,ear at a safe distance

Concentrate on work and do not talk with others while working

Ensure regular cleaning of workplace

#### 8. Cleaning –

Cleaning of module must be done in working time though 30 min extra are provided for cleaning of area around it.

- Clean all area
- Remove excess Material

- Clean tools & Keep on safe place

## **Section E**

1. All accredited participants, and supporting volunteers will abide by rules and regulations with regards to Health, Safety, and Environment of the Competition venue.

2. All participants, technicians and supporting staff will wear the required protective Personnel clothing.

3. All participants will assume liability for all risks of injury and damage to property, loss of property, which might be associated with or result from participation in the event. The organizers will not be liable for any damage, however in case of Injury the competitor will immediately inform the immediate organizer for medical attention.