



NYPUNYAM
SKILLS FOR TOMORROW

SKILL FIESTA 2016



KASE

KERALA ACADEMY FOR SKILLS EXCELLENCE

Skill Development Mission of Government of Kerala



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SKILLS FOR TOMORROW

February 5-7 | **2016**, Thiruvananthapuram, Kerala

ZONAL CHAMPIONSHIP
4th to 11th December 2015



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Trade: Plumbing

Module : A & B

Submitted by : Mathaikunju A.Y

Members (North zone) : Shoukathali VM
: Ramanchandran TM
: Viju Kumar KC

Zonal Location : Mathaikunju A.Y
(Middle Zone) : Vasudevan TV
: Subash KC

Validated by : NSDC Expert –
Prasana Kumar Patro
Training Manager
OP Jindal Community College
Punjipathra, Raigarh, CG

Time duration of the test : 4Hrs



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TEST PROJECT DOCUMENTATION

The Test project contains the following:

- 1- Task description
- 2- Installation drawing scale 1:10
- 3- Water pipe
- 4- Waste pipe
- 5- GI fittings
- 6- PVC Fittings

BRIEF ABOUT THE PROJECT

1. Your assignment is to plan and build between the coldwater line and soil waste line on the basis of the architectural plan.

Here only everybody to show skill about GI pipe laying with various fittings and soil waste laying with various pvc fittings

This project to be made by 2000mmx2000mmx12mm thick ply wood a board frame which is designed by wooden plank 2"x3"x2000MM(This project board must be fit on wall of the workshop area)

Project Briefe : Competency and scope of work

1 – The individual needs to know and understand:

- The purposes, uses, maintenance and care of all equipment, together with their safety implications

- The purposes, uses, care and potential risks associated with materials
- The purposes and uses of manufacturers' specifications and drawings
- Search methods for specific and non-specific information, specifications and guidance
- The time available an associated with each activity
- The parameters within which activities need to be scheduled
- The health and safety standards applying at any one time
- The use of new technologies as a work aid
- Principles and their application to good housekeeping in the work environment

- Prepare and maintain a safe, tidy and efficient work area

Select and use appropriate personal protective clothing in all circumstances

- Select and use appropriate hand tools to complete every task safely
- Use the specified precautions when manual handling items and for long and heavy items
- Schedule work to maximize efficiency and minimize disruption
- Plan, prepare and complete each task within the available time
- Restore the work area to an appropriate condition

2 – The individual needs to know and understand:

- Drawing notation and the symbols for pipe work, fittings and appliances
- The technical language associated with the skill



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3- The individual needs to know and understand:

The information requirement underpinning the design of any installation system:

- The principles and conventions used in specifications and drawings
- The range of specifications and drawings in use, and their purposes
- The uses and limitations of the generally available drawing tools

Estimate the requirement for equipment and materials

4 – Install plumbing pipe-work brackets and clips on prefabricate ply wood board the required pipe-work layouts into sub-assemblies

1. The uses and limitations of the specified bending and jointing methods, materials and fittings in order to complete a leak-free installation
2. Methods of connection to services from utilities provider
3. The range and characteristics of jointing methods, materials and fittings
4. Properties of the piping material (MS- Mild Steel, PVC- polyvinyl chloride)
5. In order to handle, cut, joint and form sub-assemblies
6. The safe operation of the cutting, threading, and testing equipment if provided

Final outcome expected from the candidate:-

1. Competitor shall able to know read and interpret plumbing drawing & create freehand sketches for the purposes of pipe line assembling.
2. Utilizes the appropriate personal protective equipment for every work.
3. Fix the correct number and diameter of pipe brackets/clips in the configuration.
4. Determine the optimum way to use the given material to ensure module completion.
5. Limit and avoid scrap/wastages
6. Determine the correct position for cutting and safely the pipe material.
7. Measuring, setting out and marking of materials and pipe-work
8. Connecting by threading, clamping and push fitting

Repair, maintain or replace a range of plumbing appliances/Problem solving, innovation and creativity

The candidate able to know and understand:

- 1- Features of excellent for customer services
- 2- Handover the installation to the customer
- 3- Isolate and Drain the installation to enable repair or replace

Materials, Tools & Equipments to be provided for each candidate as below:

Materials

Sl	Material Descriptions	Quanti	
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No		ty	
1	GI Pipe ϕ 25 mm	2 M	
2	GI Coupling 25 mm	2 Nos	
3	GI Bend 25 mm	1	
4	GI union 25 mm	1	
5	GI Elbow 25 mm	1	
6	GI Reducer 25 mm	2	
7	Water Tap 15 mm	1	
8	Hex Nipple 15 mm	1	
9	110 mm PVC pipe 4 kg/cm ²	2 M	
10	63 mm PVC pipe 4 kg/cm ²	1 M	
11	110 mm PVC coupling 4 kg/cm ²	1	
12	110 mm PVC Tee 4 kg/cm ²	1	
13	110 mm PVC vent cowl 4 kg/cm ²	1	
14	110 mm PVC Bend 4 kg/cm ²	1	
15	110x110x63mm PVC RS Tee 4 kg/cm ²	1	
16	63 mm PVC Bend 4 kg/cm ²	1	
17	PVC Clamp 110 mm	4	
18	GI Clamp 63 mm	5	
19	GI coated Self threads Screw 6x20mm	30	
20	12 mm Ply wood with 8'x4'	2	
21	Wooden Batten 2"x1"x 1M	10 Nos	
22	Wooden primer	0.5 Ltr	
23	Marking Pencil	1	
24	Permanent Marker	1	
25	Teflon Tape	2	
26	Cutting oil	100 ml	
27	Seal leak compound/Lead	50 g	
28	Thread roll	1	

Tools & Equipments

Sr No	Description of Tools & Equipments	Qty
1	Steel Rule 600 mm	1
2	Steel Rule 300 mm	1
3	Hacksaw Frame 300 mm	1
4	Scriber 200 mm	2
5	Measuring Tap 5 mtrs	2
6	Centre Punch 100 mm	2
7	Engineers square 200mm	1
8	Hammer Ball peen/ Claw hammer 450 gms	1
9	Flat file Rough 300	1
10	Half round file 250 mm	1
11	Spirit Level 300 mm(Magnetic torpedo)	1



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12	Plumb Bob 200 gms	1
13	Stilson Pipe Wrench 350 mm	2
14	Stilson Pipe Wrench 250 mm	1
15	Screw driver 10×250 mm	1
16	Srew Driver 8×200	1
17	Multigrip Plier 250 mm	1
18	Divider 200 mm	1
19	Adjustable Spanner 250 mm	1
20	Divider Spring Type 200 mm	1
21	Pipe vice 75 mm	1
22	Bench Vice (jaw 150 mm)	1
23	Straight Edge	1
24	Pocker	1
25	oil Cane 500 ml	1
26	Bucket 10 lts	1

NB: These above tools & equipments along with materials to be verified by the expert.



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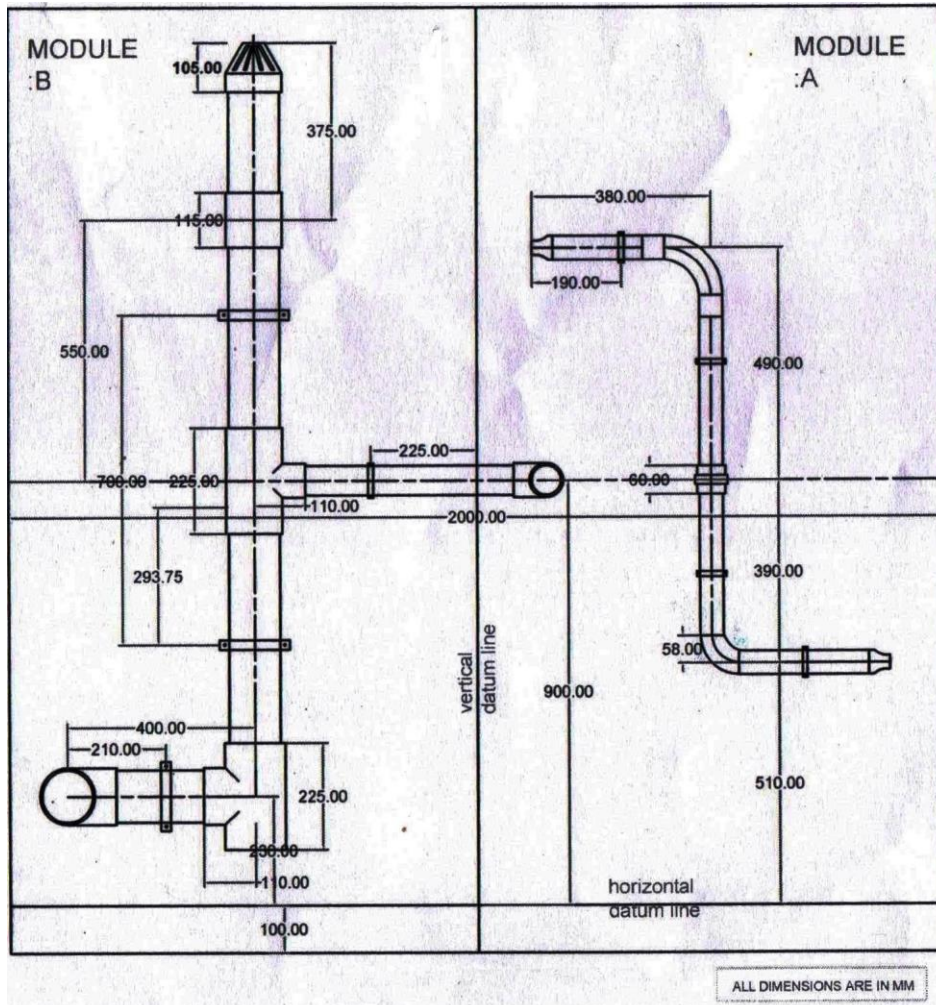
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DIAGRAM IF ANY



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TECHNICAL DETAILS IF ANY

The Test Project drawing may be changed 30% of dimensions as per expert team and workshop supervisor to be decided at the time of competition.

INSTRUCTIONS TO THE COMPETITOR (DO & DONTS)

- 1- Aware of technical description, rules, safety rules & test project
- 2- Aware of evaluation criteria & competition time table
- 3- Work station allotment will be by drawing
- 4- Marking scheme including assessment criteria and all pre-filled objective and subjective marking forms for the test project
- 5- Before competition starts, competitors shall have prepare their work place and to become familiar with tools & equipments also raw material and Processes
- 6- If any thing missing as per infrastructure list he must inform to expert
- 7- Before starting the competition every competitor get 15 minutes to discussion



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About test project

- 8- After Module 'A' finished , competitor should get 15 Minutes time to discussion
about next module
- 9- Have the right to expect fairness, honesty and transparency during the competition in
Terms of
 - a. Clear & explicit written instructions
 - b. All the competitor will given test projects at a time
 - c. Marking schemes shall be uniform
 - d. All materials as per technical description and infrastructure list will be provided
 - e. No hindrance to the competitors from officials and spectators be tolerated

Don'ts

- ✓ Avoid smoking & alcohol
- ✓ Strictly follow decent mannerism
- ✓ Present yourself in decent dress depicting our culture
- ✓ Don't create close intimacy with anybody. Upkeep your integrity.
- ✓ Don't talk on subjects you don't know
- ✓ Don't interfere to other's business



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MARKING SCHEME (OUT OF 100)

A. SUBJECTIVE MARKS

Subjective Test Module
Skill Competition

Skill Number _____ Skill Plumbing & Heating Competition Day 2

Competitor No _____ Competitor Name _____

Sub Criterion **Module 'A' - Method of working performance**

Aspect ID	Max Mark	Aspect of Criterion - Description	Requirement or Normal Size	Result or actual value	Mark Awarded
1	3.0	Handling of Hacksaw	Yes/no		
2	5.0	Operating of Ratchet Die	Yes/no		
3	3.0	Personal Protective Equipments	Yes/no		
4	3.0	Method of using Tafflone Tape	Yes/no		
5	2.0	House Keeping	Yes/no		

16.00

Maximum Marks for Sub criterion

Marks Awarded

Mark Awarded is the Max Mark minus any specified deductions for difference between Requirement and Result

Signature confirming the accuracy of this printed result

Compatriot Expert

Chief Expert

Date & Time

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B. OBJECTIVE MARKS

Objective Test Module
Skill Competition

Skill Number _____ Skill Plumbing & Heating Competition Day _____

Competitor No _____ Competitor Name _____

Sub Criterion **Module 'A' - Dimension**

Aspect ID	Max Mark	Aspect of Criterion - Description	Requirement or Normal Size	Result or actual value	Mar Awarded
1	2.0	Horizontal datum line to centre of union	900		
2	2.0	Horizontal datum line to centre of water tap	510		
3	2.0	Horizontal datum line to centre of Bend	1390		
4	2.0	Vertical datum line to centre of union	500		
5	1.0	Vertical datum line of GI pipe to the end of Reducer(Top)	380		
6	1.0	Vertical datum line of GI pipe to the end of Reducer(Bottom)	380		
7	1.0	Horizontal datum line to centre of Bend	490		
8	2.0	Horizontal datum line to centre of GI Clamp(Bottom)	550		
9	1.0	Centre to centre of GI Clamp	440		

14.00

Maximum Marks for Sub criterion Marks Awarded

Mark Awarded is the Max Mark minus any specified deductions for difference between Requirement and Result

Signature confirming the accuracy of this printed result

Comatriot Expert

Chief Expert

Date & Time	
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Objective Test Module
Skill Competition

Skill Number _____ Skill Plumbing & Heating Competition Day _____

Competitor No _____ Competitor Name _____

Sub Criterion **Module 'B' - Dimension**

Aspect ID	Max Mark	Aspect of Criterion - Description	Requirement or Normal Size	Result or actual value	Mark Awarded
1	1.0	Horizontal datum line to centre of PVC 110mm Tee	230		
2	2.0	Horizontal datum line to centre of RS PVC 110mmx 63 mm RS Tee	900		
3	2.0	Horizontal datum line to centre of 110mm PVC coupling	550		
4	2.0	Horizontal datum line to centre of Top of Vent cowl	925		
5	2.0	Vertical Centre line to centre of PVC 110mm Elbow Bottom	400		
6	2.0	Vertical Centre line to centre of PVC 63mm Bend	625		
7	1.0	Centre to centre of GI Clamp	700		
8	1.0	Vertical datum line centre of GI Clamp (top)	225		
9	2.0	Vertical of centre line to centre of GI clamp	200		
		Centre to centre of GI Clamp			

15.0

Maximum Marks for Sub criterion

Marks Awarded

Mark Awarded is the Max Mark minus any specified deductions for difference between Requirement and Result

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Compatriot Expert

Chief Expert

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Objective Test Module
Skill Competition

Skill Number _____ Skill Plumbing & Heating Competition Day _____

Competitor No _____ Competitor Name _____

Sub Criterion **Module 'A' – GI Pipe fitting joint quality**

Aspect ID	Max Mark	Aspect of Criterion - Description	Requirement or Normal Size	Result or actual value	Mark Awarded
1	3.0	25mmx 15mm Rs Joint (Top)	Yes/no		
2	3.0	25mm Coupling joint	Yes/no		
3	3.0	25mm Bend joint	Yes/no		
4	3.0	25mm Bend joint	Yes/no		
5	3.0	25mm coupling joint	Yes/no		
6	6.0	25mm GI union joint	Yes/no		
7	6.0	25mm GI Elbow joint	Yes/no		
8	3.0	25mmx 15mm Rs Joint (Bottom)	Yes/no		
9	3.0	Water Tap joint to RS coupling	Yes/no		

_____ 33.00 Maximum Marks for Sub criterion Marks Awarded

Mark Awarded is the Max Mark minus any specified deductions for difference between Requirement and Result

Signature confirming the accuracy of this printed result

Compatriot Expert

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Chief Expert

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Date & Time	
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Objective Test Module
Skill Competition

Skill Number _____ Skill Plumbing & Heating Competition Day _____

Competitor No _____ Competitor Name _____

Sub Criterion **Module 'B' PVC Fittings**

Aspect ID	Max Mark	Aspect of Criterion - Description	Requirement or Normal Size	Result or actual value	Mark Awarded
1	1.0	110mm PVC pipe fit into 110mm Elbow	Yes/no		
2	2.0	110mm PVC pipe fit into 110mm Tee	Yes/no		
3	2.0	110mm PVC pipe fit into 110mm RS Tee	Yes/no		
4	1.0	63mm PVC pipe fit into RS Tee	Yes/no		
5	1.0	63mm PVC pipe fit into Bend	Yes/no		
6	2.0	110mm PVC pipe fit into Coupling	Yes/no		
7	1.0	110mm PVC pipe fit into Vent Cowl	Yes/no		

_____ 10.00 Maximum Marks for Sub criterion Marks Awarded _____

Mark Awarded is the Max Mark minus any specified deductions for difference between Requirement and Result

Signature confirming the accuracy of this printed result

Compatriot Expert

Chief Expert

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Objective Test Module
Skill Competition

Skill Number _____ Skill Plumbing & Heating Competition Day _____

Competitor No _____ Competitor Name _____

Sub Criterion Module 'A' & 'B' Material Uses

Aspect ID	Max Mark	Aspect of Criterion - Description	Requirement or Normal Size	Result or actual value	Mar Awarded
1	1.0	Extra material	Yes/no		
2	1.0	Extra joint	Yes/no		
3	2.0	Module 'A' complete with in time	Yes/no		
4	2.0	Module 'B' complete with in time	Yes/no		
5	2.0	Module complete as drawing	Yes/no		

_____ 8.00 _____ Maximum Marks for Sub criterion _____ Marks Awarded _____

Mark Awarded is the Max Mark minus any specified deductions for difference between Requirement and Result

Signature confirming the accuracy of this printed result

Compatriot Expert

Chief Expert

Date & Time	
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Assessment Criteria

This section defines the assessment criteria and the number of marks (Subjective and Objective) awarded. The total number of all marks for all assessment criteria must be 100 marking

**Mark summary Form
Skill Development**

Competitor No
Competitor Name

Skill Plumbing

Criterion I D	Criterion Description		Mark Awarded	Total Award
			Day 1	
A	Dimension Module 'A'	Max Actual	14.00	<input type="text"/>
B	Dimension Module 'B'	Max Actual	15.00	<input type="text"/>
C	Plumb, Level	Max Actual	4.00	<input type="text"/>
D	GI Pipe Joint Quality Module 'A'	Max Actual	33.00	<input type="text"/>
E	PVC pipe fittings Module 'B'	Max Actual	10.00	<input type="text"/>
F	Module 'A' & 'B' Material uses	Max Actual	8.00	<input type="text"/>
G	Module 'A' Method of working performance	Max Actual	16.00	<input type="text"/>

Result confirmed By _____

Chief Expert- _____

Jury President _____

Compatriot Expert _____

Max	<input type="text"/>	100.00
Actual	<input type="text"/>	<input type="text"/>
Total		