



NYPUNYAM

SKILL FIESTA 2016



**KASE**

KERALA ACADEMY FOR SKILLS EXCELLENCE  
Skill Development Mission of Government of Kerala



**NYPUNYAM**

SKILLS FOR TOMORROW

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

# **FITTER**

## **SKILL FIESTA - 2016**



## **Test Project Format – State Level**

### **Trade: Fitter**

Duration of the Test: **6 Hours**

### **Project Brief:**

The task is to make a open and angular fit in assembly between pos 1 and 2 as per the drawing, from M. S blocks in 6 hours within the tolerance limit and finish specified.

### **Final Outcome expected from the Candidate:**

The candidates are expected to make the parts and assemble it with screw and dowels to the accuracy and finish, specified in the drawing. Assembly requirements are to be taken care.

### **DESCRIPTION OF PROJECT / TASKS**

The project is an assembly of two parts with open and angular fittings secured with screw and dowels.

#### **Raw material sizes**

Pos 1 - 60.5 X 18.5 X 15.5 - 1 No

Pos 2 - 60.5 X 15.5 X 15.5 - 1 No

SHCS (Allen screw STD) M5 X 20 – 1 No

Dowel (STD) – Ø 6 X 12 – 2 Nos

This project model test is to check the capability of the candidate in understanding the design drawing, the project and functional aspect , verifying the initial raw material size of the model, preparing the process plan for executing the model , his skill in making it with the specified dimensions in tolerances and assembling the final model to meet the requirements of the drawing.

The candidate will get a good exposure and confidence in doing various projects in the mechanical field.



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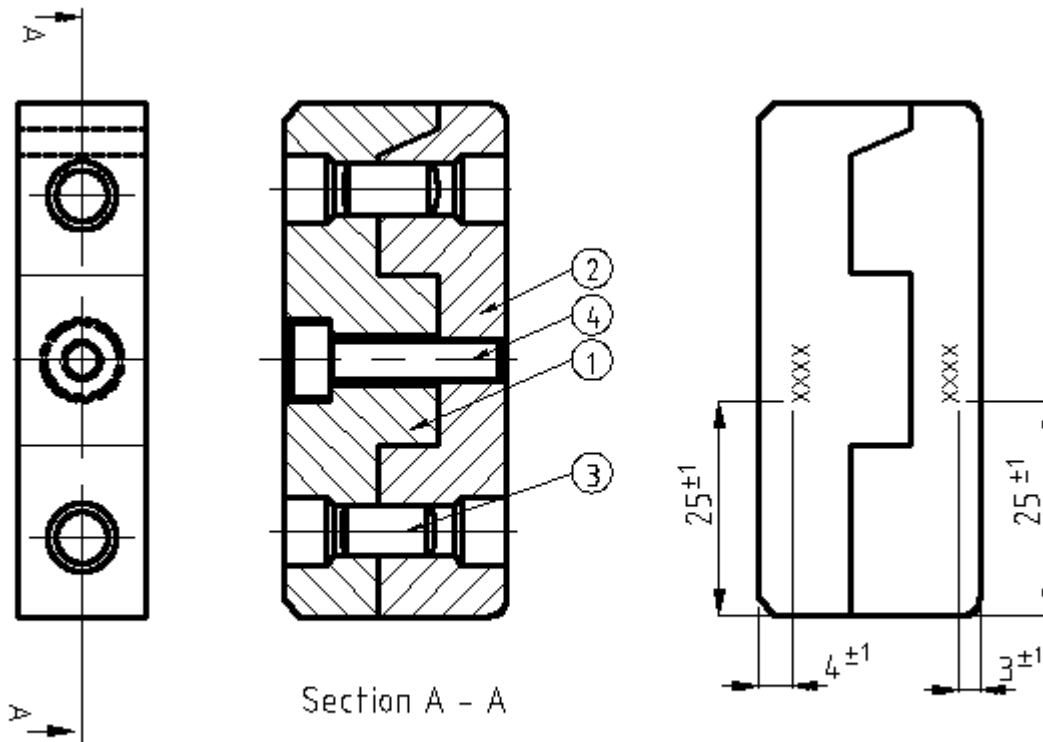


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## DIAGRAM (ASSEMBLY AND DETAIL DRAWINGS)

### Assembly Drawing



Above drawing is only for the position of number punching

### Note:

XXX Number punching

- \* The fit should be a sliding fit between pos1 & pos 2 in the center portion and matching on all other surfaces.
- \* In assembly all surfaces of pos 1 and pos 2 should match, and maximum clearance permitted between the matching surfaces are 0.05mm.
- \* Drilling and reaming to be done in assembly.
- \* Provide chamfers on unspecified edges maximum 0.5mm



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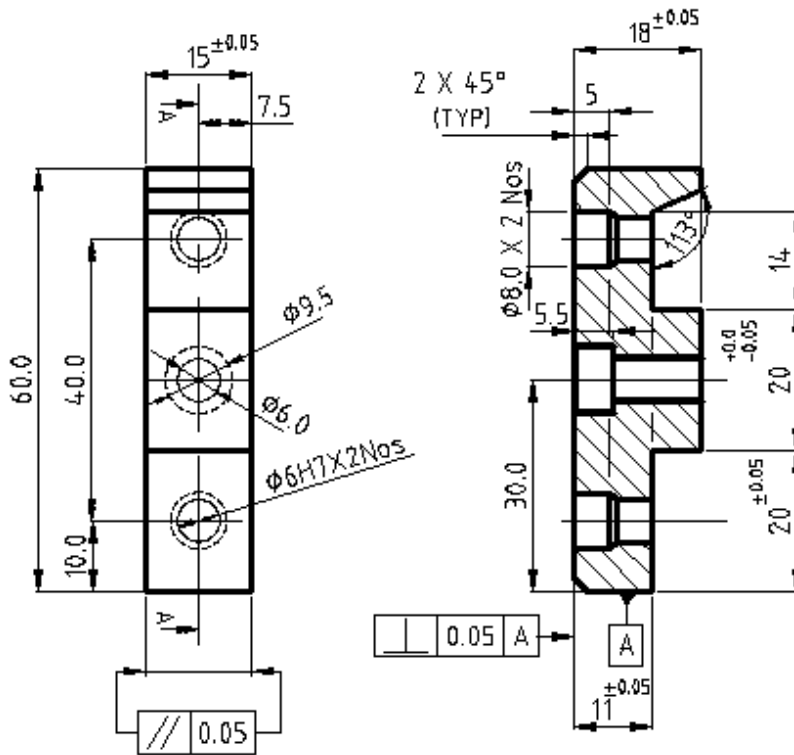
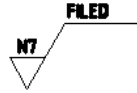


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# Detail Drawing

POSITION NO 1



Section A - A

General Tolerance	
0	= ±0.2
0.0	= ±0.1
0.00	= ±0.05



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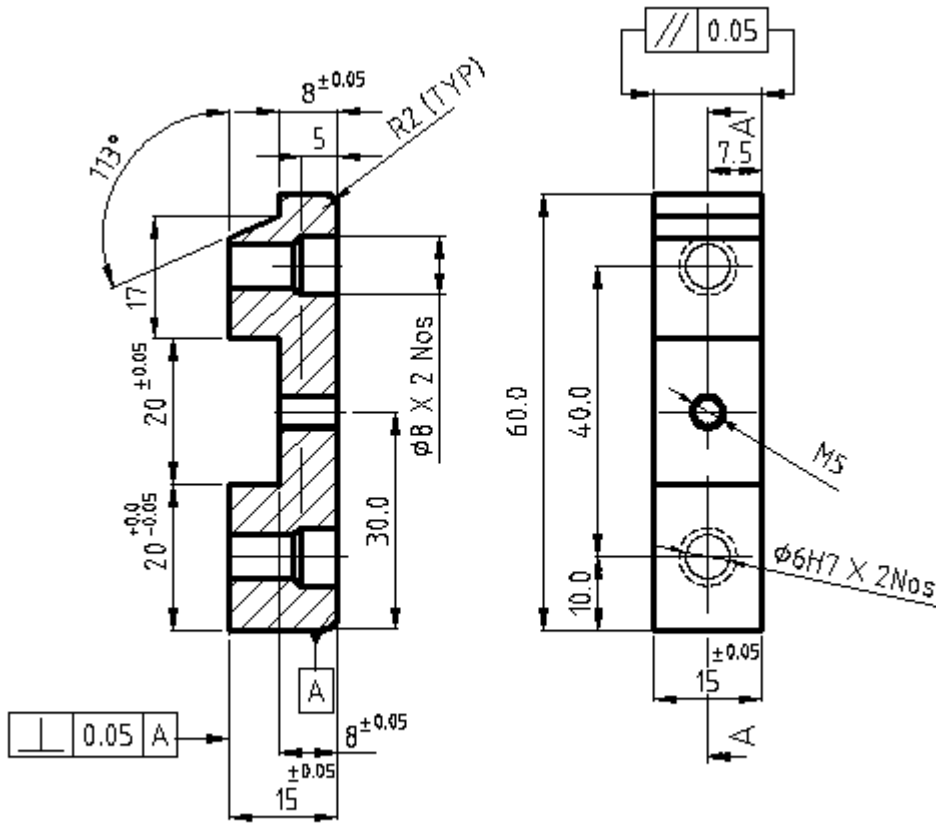
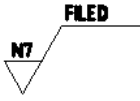
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# POSITION NO 2



Section A - A

General Tolerance	
0	= ±0.2
0.0	= ±0.1
0.00	= ±0.05



### **TECHNICAL DETAILS :**

- The fit should be a sliding fit between pos1 & pos 2 in the center portion and matching on all other surfaces.
- In assembly all surfaces of pos 1 and pos 2 should match, and maximum clearance permitted between the matching surfaces are 0.05mm.
- Drilling and reaming to be done in assembly.
- Provide chamfers on unspecified edges maximum 0.5mm
- After assembly the outer surface of pos 1 and 2 s (four surfaces) should match with in 0.1mm.

### **INSTRUCTIONS TO THE COMPETITOR**

- Study the drawing before starting the test.
- Verify the raw material size supplied.
- Prepare a work schedule (process plan) step by step.
- Provide a sliding fit and a proper angular matching in the assembly.
- After assembly the outside surfaces of pos 1 and 2 should be in level with in 0.1 mm.
- Provide neat chamfer (maximum 0.5) on all unspecified corners.
- After assembling the screws should not protrude outside.
- Dowels should engage in both positions uniformly.
- The overall finish and appearance after assembly carries marks.
- Use goggles while working on the drilling machines.
- Wear safety shoes while working.
- Order of cutting tools and measuring instruments on bench and machine carries marks.
- Working method on bench and machine carry marks.
- Maintain good work discipline during the test.

### **MARKING SCHEME (OUT OF 100)**

- A. **SUBJECTIVE MARKS - 45 ( Includes fit and function)**
- B. **OBJECTIVE MARKS – 55 (Dimensions only)**