



**DIPLOMA IN MECHANICAL ENGINEERING**

**CENTRALIZED QUESTION BANK**

**1020234320- ADVANCED MANUFACTURING  
TECHNOLOGY PRACTICAL**

**DIRECTORATE OF TECHNICAL  
EDUCATION GOVERNMENT OF  
TAMILNADU**

**DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025**

**Course:** Mechanical Engineering

**Subject :** Advanced Manufacturing Technology Practical

**QP Code :** 1020234320

**Time :** 3 Hours

**Date :**

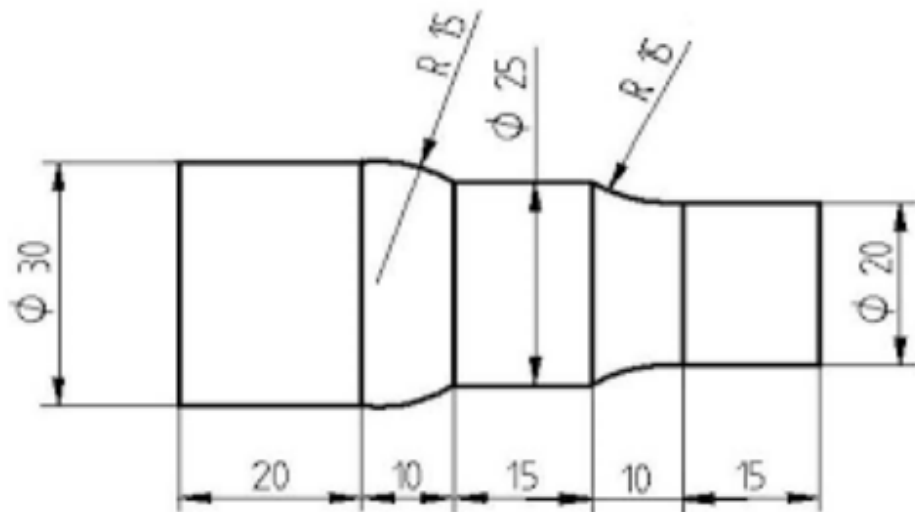
**Session:**

**Max Marks:** 100

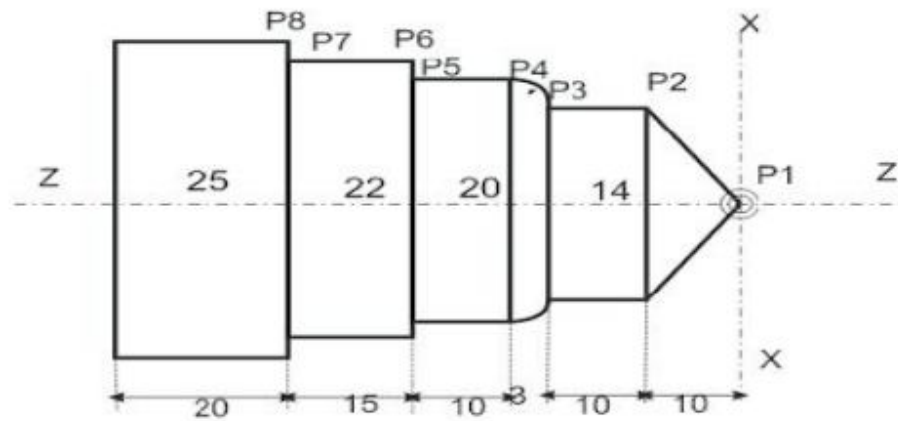
**Answer the following questions**

1. CNC Turning Machine Material: M.S / Aluminium / Acrylic fibre / Plastic

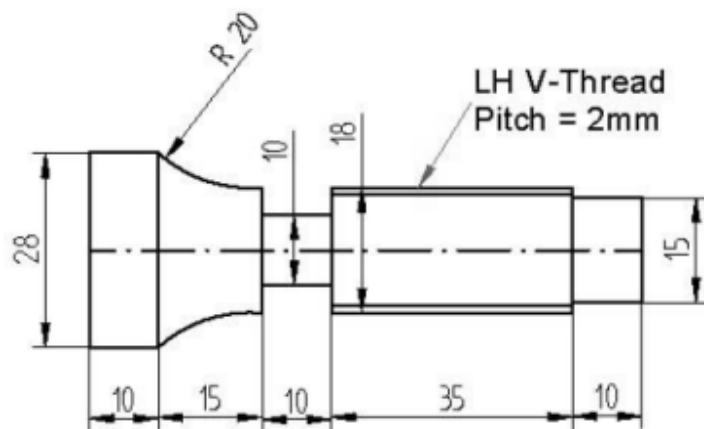
Using Linear and Circular interpolation - Create a part program and produce component in the Machine.



2. Using Stock removal cycle – Create a part program for multiple turning operations and produce component in the Machine.



- 3 Using canned cycle - Create part program for thread cutting, grooving and produce component.

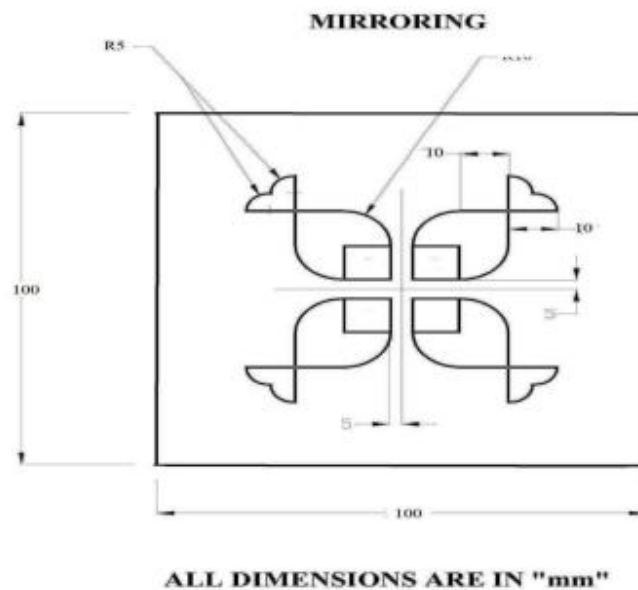


CNC Milling Machine Material: M.S / Aluminum / acrylic fibre / plastic

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- Technical drawing of a square plate with rounded corners and four holes. The overall width and height are 110.00. The corner radius is 15.00. The holes are 4x Ø 10.00mm. A counterbore is shown on one hole with dimensions 4x Ø 10.00mm and 10.00mm depth.

- 6 Using subprogram - Create a part program and produce the component in the Machine.



- 7 Model the given engineering component and prepare the .stl file to print using a 3D printer or simulator. - Geneva Wheel
- 8 Model the given engineering component and prepare the .stl file to print using a 3D printer or simulator. - C Clamp with V Block.
9. Position and record the point to point motion of the robot arm or in a simulator. (5 Positions)
- 10 Position and record the continuous motion of the robot arm or in a simulator. (The profile should have Straight line, Circular and inclined line)

#### Allocation of Marks

Sl No	Description	Marks
1	Aim & Tools required	10
2	Writing CNC Program / Modelling	20
3	Simulation / Slicing	20
4	Editing in the machine or simulator / Interfacing	30
5	Finish / Output	10
6	Viva Voce	10
<b>Total</b>		<b>100</b>