

**B.Tech. – VIEP – MECHANICAL ENGINEERING  
(BTMEVI)**

**Term-End Examination**

**December, 2016**

00562

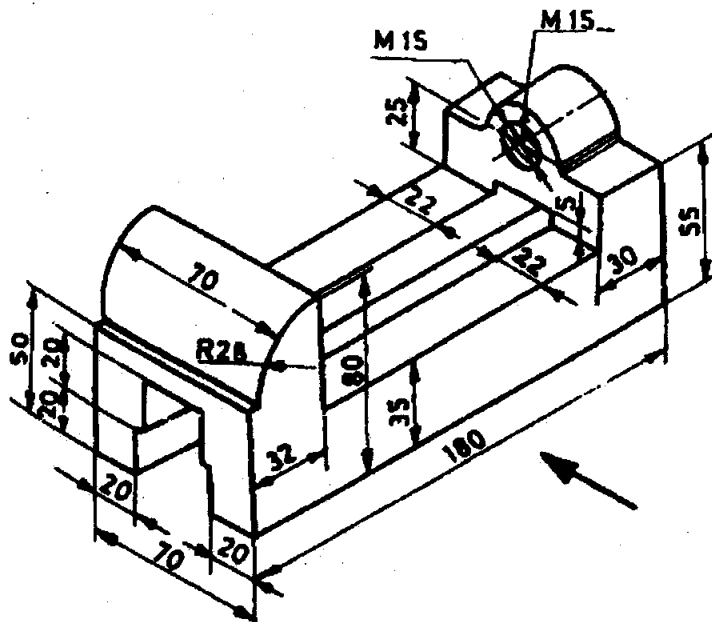
**BIME-003 : MACHINE DRAWING**

*Time : 3 hours*

*Maximum Marks : 70*

**Note :** *Question no. 6 is compulsory. Attempt any three questions from the remaining.  
Use of calculator is permitted.*

1. (a) What do you understand by (i) Scale = 5 : 1, and (ii) Scale = 1 : 100 ?  
Explain. 4
- (b) Sketch the conventional representation of the following : 10
  - (i) External threads
  - (ii) Internal threads
  - (iii) Bearing
  - (iv) Compression spring
  
2. (a) List the six possible orthographic projections that may be obtained for an object in space. Specify their relative positions. 4
- (b) Draw (i) the sectional view from the front, and (ii) the view from above of the Vice Body shown in Figure 1. 10



Vice Body

Figure 1

3. (a) Draw the three views of a hexagonal headed bolt of nominal diameter 25 mm and length 100 mm with a hexagonal nut and washer. 11  
 (b) What are the uses of flexible couplings ? Describe in brief. 3
4. (a) Differentiate between lap joint and butt joint. 3  
 (b) Through sketches, illustrate the chalking and fullering operations. 7  
 (c) What is a production drawing of a component ? Describe in brief. 4
5. (a) In how many different ways can a circle be drawn in AutoCAD ? List the commands for each. 9  
 (b) When is a projection of an object called an orthographic projection ? Discuss in brief. 5
6. Details of a screw jack are given in the Figure 2. Draw the front view full in section for the assembly. 28

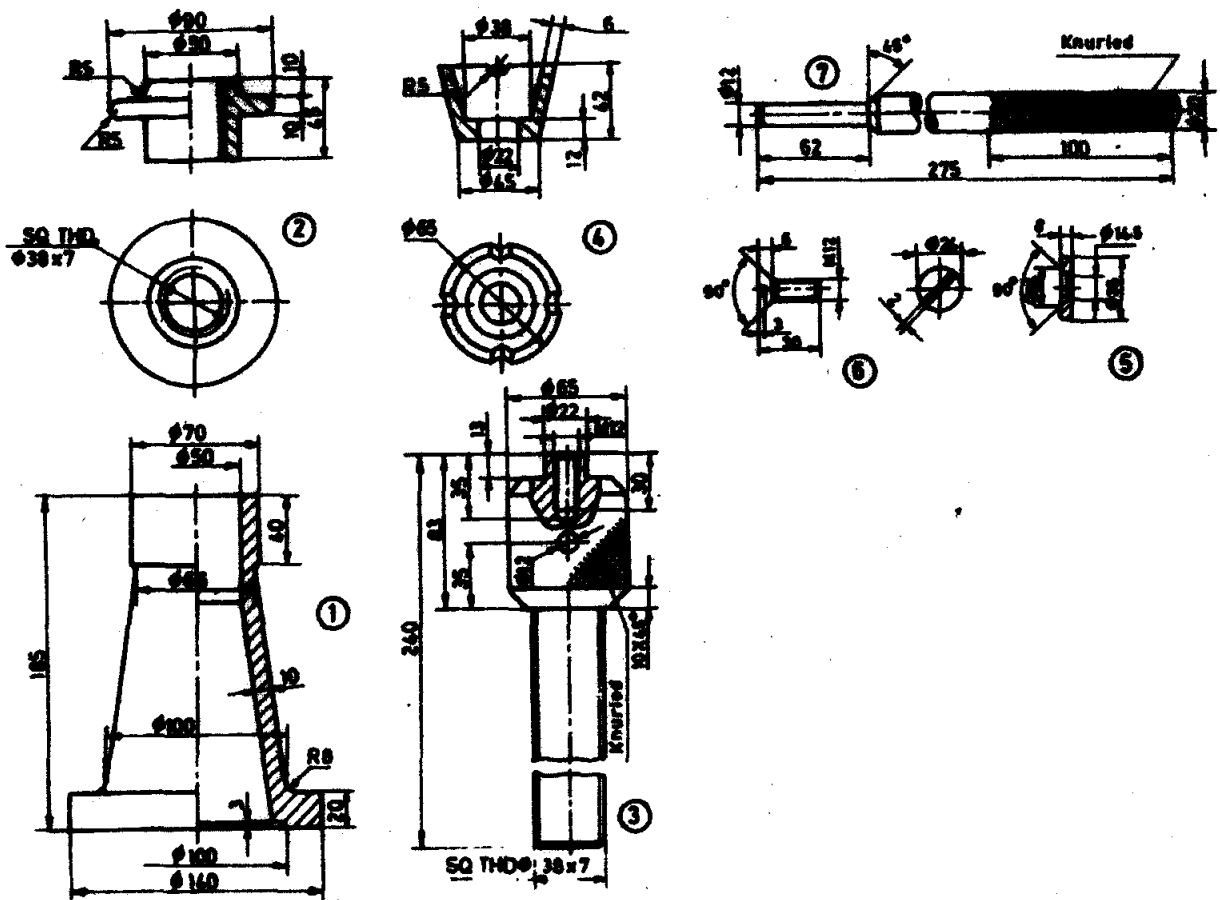


Figure 2

**Parts list**

<i>Part No.</i>	<i>Name</i>	<i>Material</i>	<i>Qty.</i>
1	Body	CI	1
2	Nut	GM	1
3	Screw	MS	1
4	Cup	CS	1
5	Washer	MS	1
6	Screw	MS	1
7	Tommy bar	MS	1