

**October 2018**

*Time – Three hours  
(Maximum Marks: 75)*

*(Sketch 'E' and 'F' to accompany)*

*[N.B: (1) Answer any SEVEN questions in each PART – A and answer division (a) or division (b) in PART – B.*

*(2) Each question carries 5 marks in PART – A, 40 marks in Part – B.*

*(3) All questions are to be answered in the Drawing sheet only.]*

**PART – A**

1. Sketch and show the following components of sectional view:  
(i) Cutting plane line (ii) Location of cutting plane (iii) Hatching lines  
(iv) Direction of viewing.
2. Draw revolved section or removed section.
3. Give examples for unilateral and bilateral tolerance.
4. Why hole basis systems are widely used?
5. Define lay.
6. How will you represent the machining symbol when removal of material is not permitted?
7. Sketch and give the proportions of a rectangular sunk key.
8. Sketch acme thread or knuckle thread and show the proportions.

**PART – B**

9. (a) The details of screw jack are shown in Sketch 'E'. Assemble and draw the following views and add a bill of material.
 

(i) Left-half sectional	(25 Marks)
(ii) Plan	(10 Marks)
(iii) Bill of material	(05 Marks)
- (Or)
- (b) Assemble and draw the following views for the details of 'simple eccentric' shown in Sketch 'F'.
 

(i) Top-half sectional front view	(25 Marks)
(ii) Top view	(10 Marks)
(iii) Bill of material	(05 Marks)

[Turn over.....]

Technical drawing of a screw jack assembly, showing various components and their dimensions. The drawing includes a main assembly view and detailed views of individual parts.

**Main Assembly View (Top):**

- 1** BODY (CI) - 1 OFF: The main body of the jack, with dimensions 185 (total width), 100 (inner width), 140 (outer width), 70 (height), 50 (height), 66 (height), 40 (height), 10 (height), 20 (height), and 3 (height).
- 2** NUT (GUN METAL) - 1 OFF: The nut, with dimensions 90 (width), 50 (width), 45 (height), 10 (height), 10 (height), and 10 (height).
- 3** SET SCREW (MS) - 1 OFF: The set screw, with dimensions 30 (length), 24 (width), 6 (width), and 90° (angle).
- 4** CUP (CI) - 1 OFF: The cup, with dimensions 65 (width), 45 (width), 22.5 (width), 12 (width), 6 (width), and R5 (radius).
- 5** WASHER (MS) - 1 OFF: The washer, with dimensions 8 (width), 14.5 (width), 25 (width), and 90° (angle).
- 6** TOMMY BAR (MS) - 1 OFF: The tommy bar, with dimensions 100 (length), 275 (length), 62 (width), 12 (width), 45° (angle), and 100 (width).
- 7** SCREW - SPINDLE (MS) - 1 OFF: The spindle screw, with dimensions 157 (length), 35 (width), 83 (width), 30 (width), 35 (width), 22 (width), 12 (width), 10x45° (angle), and 38x7 (width).

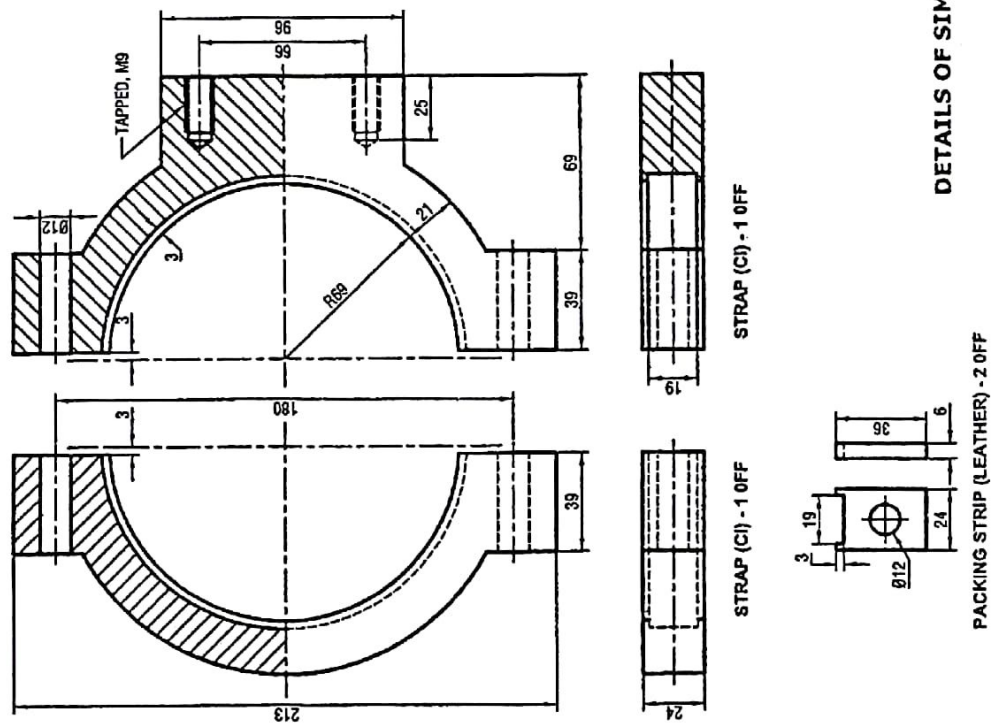
**Dimensions:**

- 185 (Total width)
- 100 (Inner width)
- 140 (Outer width)
- 70 (Height)
- 50 (Height)
- 66 (Height)
- 40 (Height)
- 10 (Height)
- 20 (Height)
- 3 (Height)
- 90 (Width)
- 50 (Width)
- 45 (Height)
- 10 (Height)
- 10 (Height)
- 10 (Height)
- 65 (Width)
- 45 (Width)
- 22.5 (Width)
- 12 (Width)
- 6 (Width)
- R5 (Radius)
- 30 (Length)
- 24 (Width)
- 6 (Width)
- 90° (Angle)
- 8 (Width)
- 14.5 (Width)
- 25 (Width)
- 90° (Angle)
- 100 (Length)
- 275 (Length)
- 62 (Width)
- 12 (Width)
- 45° (Angle)
- 100 (Width)
- 157 (Length)
- 35 (Width)
- 83 (Width)
- 30 (Width)
- 35 (Width)
- 22 (Width)
- 12 (Width)
- 10x45° (Angle)
- 38x7 (Width)

**ALL UNMENTIONED FILLETS AND ROUNDS RADI 3mm.**

**ALL DIMENSIONS ARE IN mm**

**DETAILS OF SCREW JACK**



### DETAILS OF SIMPLE ECCENTRIC

For more Study Materials, Download the App "Diploma Pro" Link : [bit.ly/diplomapro](https://bit.ly/diplomapro)