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Sub:	Computer Aided Machine Drawing				Sub Code:	17ME36A	Branch:	MECH.
Date:	17/10/2018	Duration:	90 min's	Max Marks:	50	Sem / Sec:	3 (B)	

Scheme & Solution

1. Draw two views of a hexagonal headed bolt and nut with washer (assembly) for a 25mm diameter bolt. Take the length of the bolt equal to 100mm and a thread length of 50mm. 25 Marks

Solution:

Given: $L = 100 \text{ mm}$

$d = 25 \text{ mm}$

$X = 50 \text{ mm}$

$W_c = 2d = 50 \text{ mm}$

$B_t = 0.8d = 20 \text{ mm}$

$R_d = 0.9d = 22 \text{ mm}$

Chamfer angle = 30°

Chamfer at bolt end

= $0.1d \times 45^\circ$

$N_t = 0.9d = 22 \text{ mm}$

$W_d = 2d + 3 = 53 \text{ mm}$

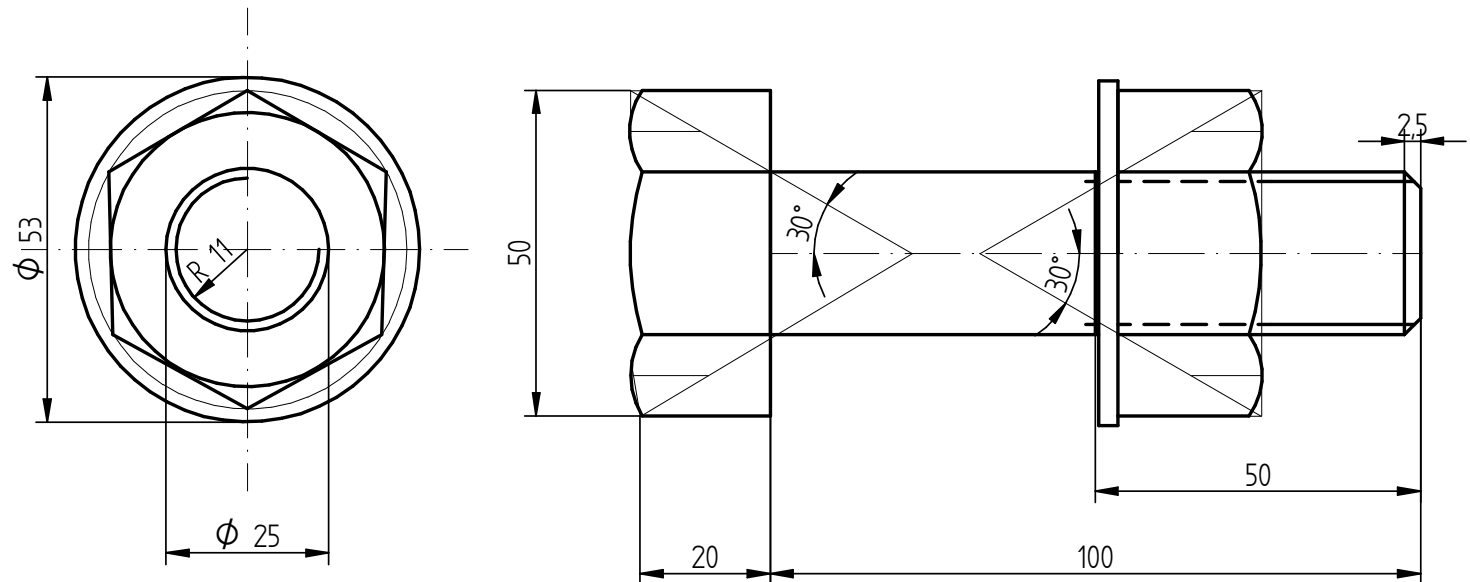
$W_t = 0.12d = 3 \text{ mm}$

Dimension – 2 Marks

Calculations – 3 Marks

Front View – 10 Marks

Side View – 10 Marks



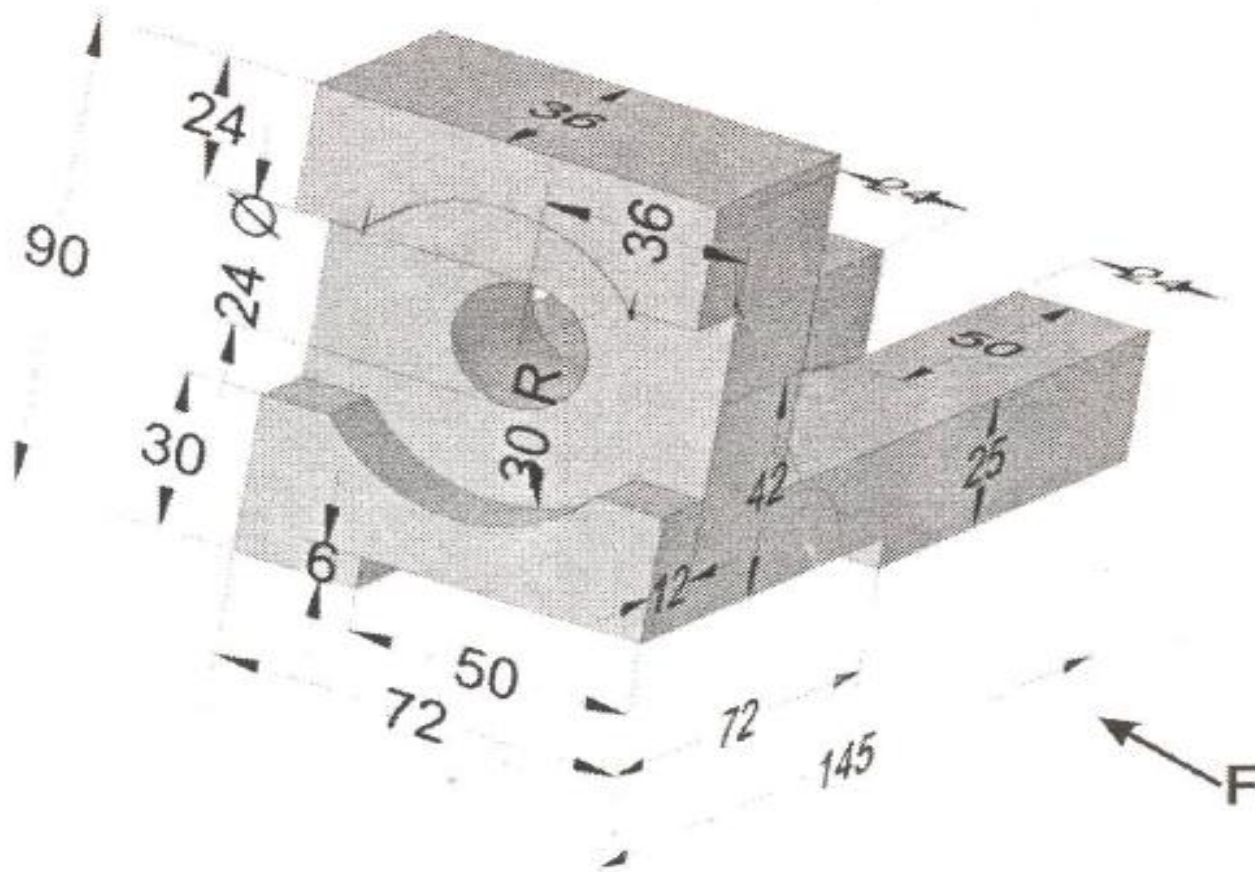
2. Draw the following views for the given machine component.

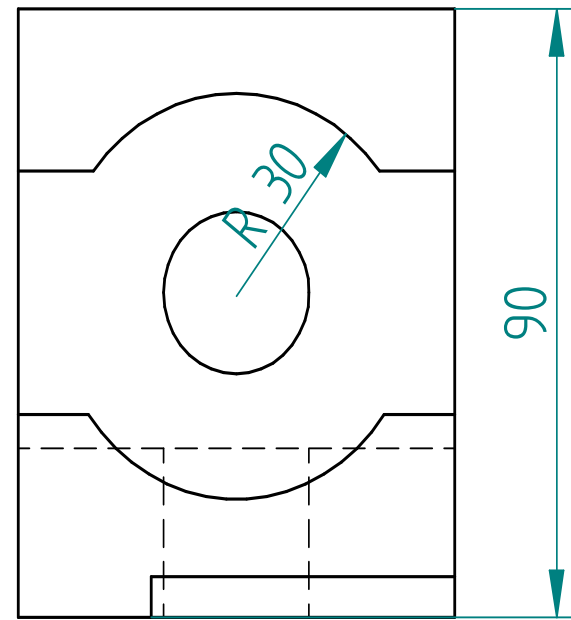
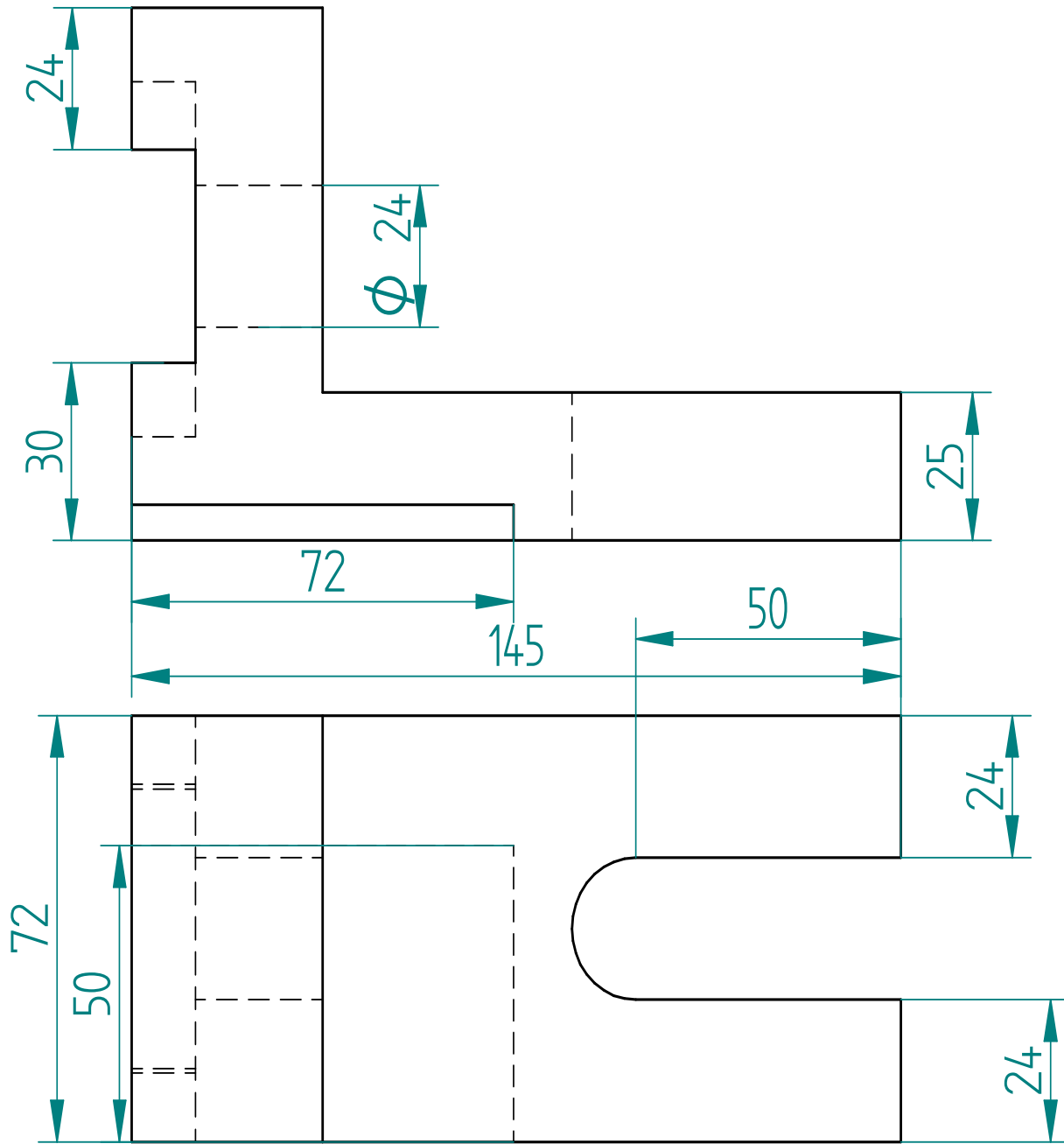
(a) Front view

(b) Top view and

(c) Left side view

25 Marks





- Dimensions - 2 Marks
- Front View - 8 Marks
- Top View - 8 Marks
- Side View - 7 Marks