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10ME36A / 46A

Third / Fourth Semester B.E. Degree Examination  
(ME/IP/IM/MA/AE)

### COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 100

- Note: 1. Answer any ONE question from each of the parts A, B and C.  
2. Use FIRST ANGLE Projections only.  
3. If any data is missing it may be suitably assumed and mentioned.  
4. All the calculations should be on the answer sheet supplied.  
5. All the dimensions are in mm.  
6. Drawing instruments may or may not be used for sketching.  
7. Part C assembled view should be in 3-D and other views in 2-D

#### PART - A

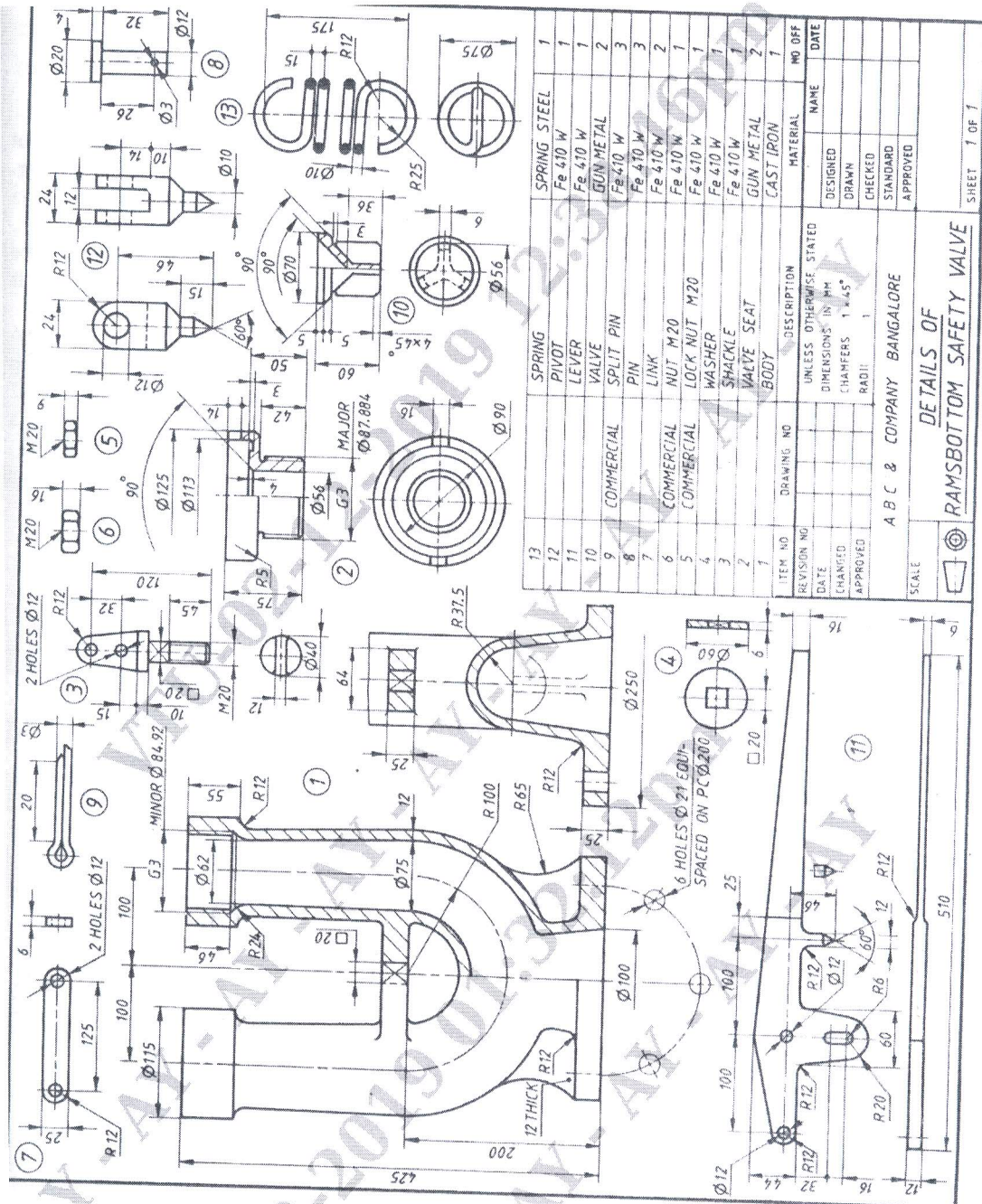
- 1) A triangular pyramid of base sides 50mm and axis 80mm long stands vertically with its base on HP, such that one of the base edges is perpendicular to VP. A sectional plane perpendicular to VP and parallel to one of the slant edges of the pyramid passes at a distance of 25mm from it. Draw the sectional top view and true shape of the section. Also determine the inclination of the section plane with HP.
- 2) Draw two views of a square headed bolt and nut with washer (assembly) for a 25mm diameter bolt. Take the length of the bolt equal to 100mm.

#### PART - B

- 3) Draw the sectional front view and top view of a double-riveted lap joint with zigzag riveting to connect two plates of 12mm thickness. Use snap head rivets and show all the calculations on the answer sheet.
- 4) Draw the side view and half-sectional front view of a protected type flange coupling by taking the shaft diameter as 20mm.

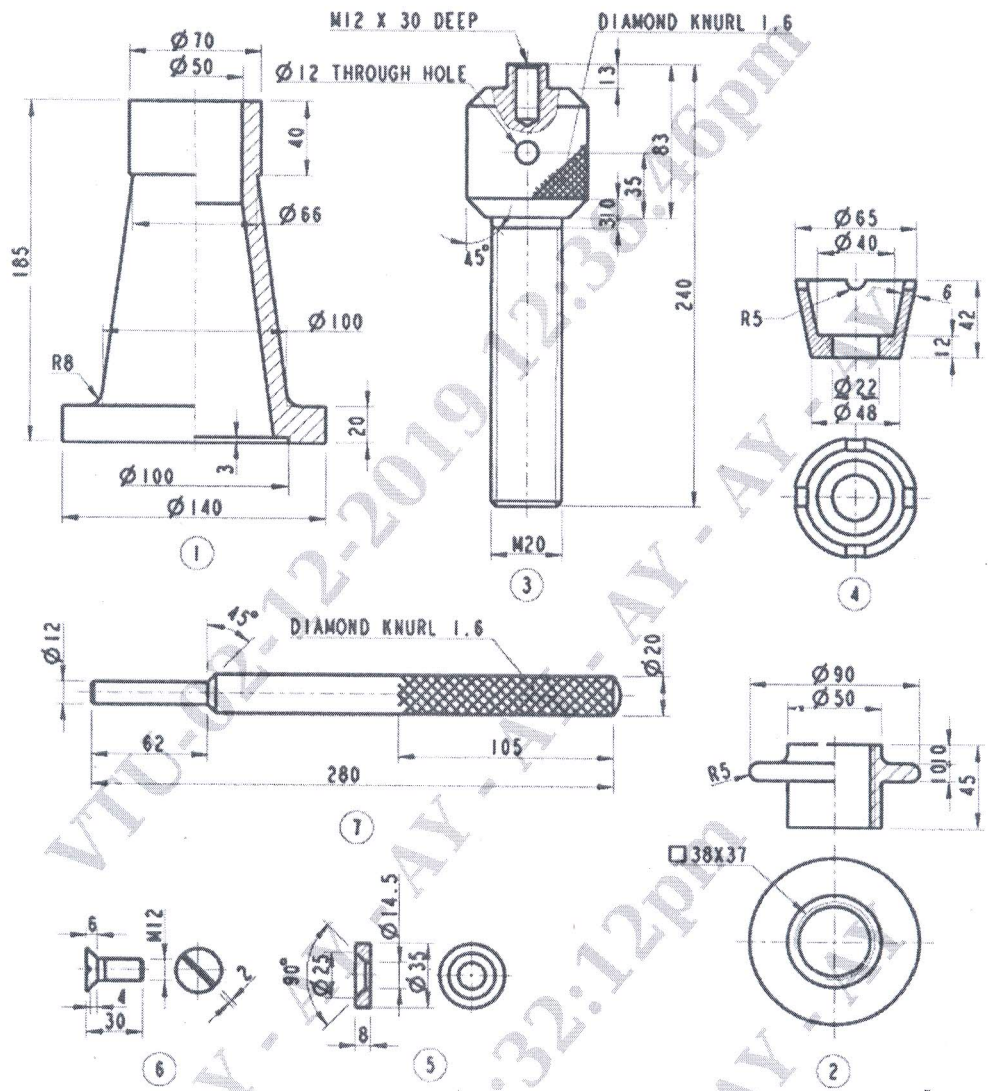
#### PART - C

- 5) Figure 1. Shows the details of a Rams bottom safety valve. Assemble the parts and draw i) Sectional Front View ii) Top view iii) Assembled 3D view.



6) Figure 2. Shows the details of a Screw jack. Assemble the parts and draw i) Sectional Front View ii) Top view iii) Assembled 3D view.





7	TOMMY BAR	Fe 410W	1
6	CSK SCREW	Fe 410W	1
5	WASHER SPECIAL	Fe 410W	1
4	CUP	CAST STEEL	1
3	SCREW-SPINDLE	Fe 410W	1
2	NUT	GUN METAL	1
1	BODY	CAST IRON	1
PART No.	DESCRIPTION	MATL.	No. OFF

Fig. 9.2 Detail of Parts View of Screw Jack