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18ME36A/18MEA306/18MA36

Third Semester B.E. Degree Examination, January 2020

**COMPUTER AIDED MACHINE DRAWING**

Time: 3 Hours

Max. Marks: 100

- Note:
1. Answer any one question from each of the parts A,B,C
  2. Use **FIRST ANGLE** projection only.
  3. Missing data if any may suitable be assumed
  4. All the calculations should be on answer sheet supplied
  5. All the dimensions are in mm
  6. **Part C Assembled View should be in 3D and the other 2 views in 2D**

**PART-A**

- Q. No. 1** A Square pyramid of 50 mm edge of base and height 70 mm rests on its base on HP with one of its base edges parallel to VP. It is cut by an inclined section plane in such a way that the true shape of section is a trapezium whose parallel sides measure 40 mm and 20 mm. draw sectional top view and the true shape of section. What is the inclination of the section plane with HP? Measure the perpendicular distance between the parallel sides in the true shape of section. **(25 Marks)**
- Q. No. 2** Draw the conventional form of following threads for pitch 30 mm (at least 3 threads each) a) BSW thread b) Sellers thread. **(25 Marks)**

**PART-B**

- Q. No. 3** Draw a knuckle joint to connect two rods of 25 mm diameter showing sectional front view and top view. Indicate all the proportions with dimensions. **(25 Marks)**
- Q. No. 4** Draw two views of a split muff coupling of diameter of shaft of 25mm. **(25 Marks)**

**PART-C**

- Q. No. 5** Figure: 1 Shows the details of "Machine Vice". Assemble the parts and draw the following: a) Sectional front view b) Top view **(50 Marks)**
- Q. No. 6** Figure: 2 Shows the details of "Lever safety Valve". Assemble the parts and draw the following: a) Sectional front view b) Top view **(50 Marks)**

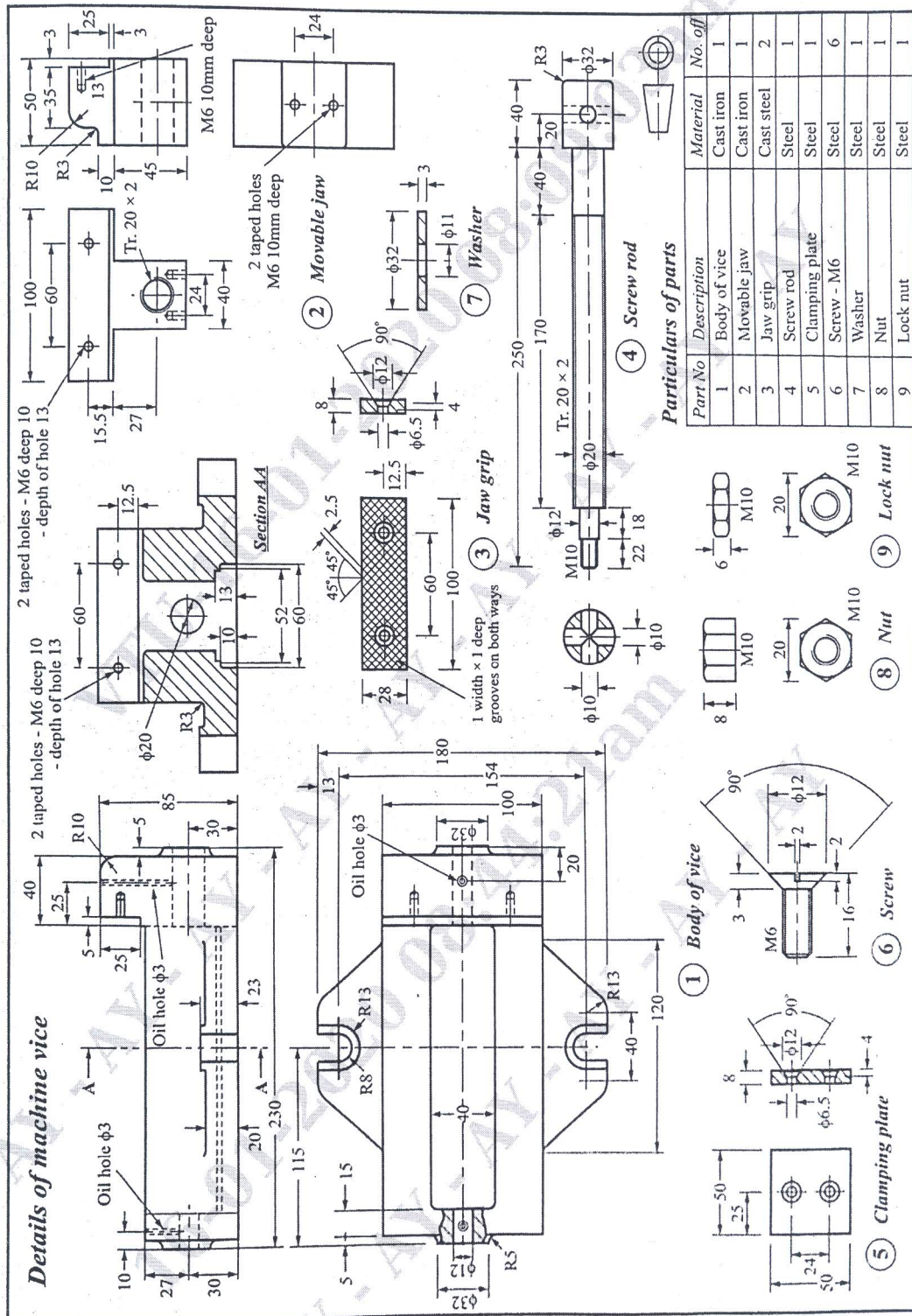
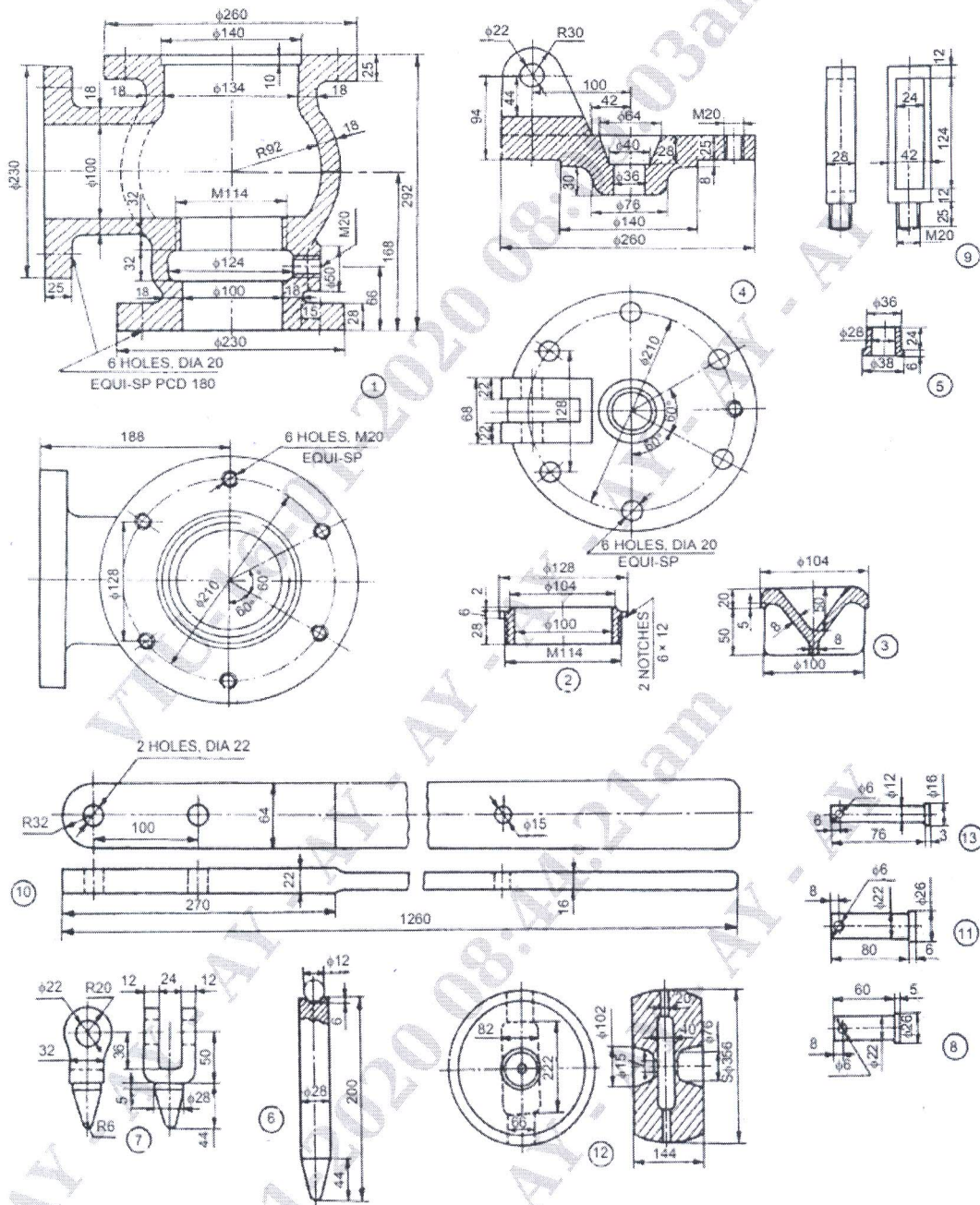


Figure 1: Details of Machine Vice

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Parts list

Part No	Name	Matl	Qty	Part No	Name	Matl	Qty
1	Body	CI	1	8	Toggle-pin	MS	1
2	Valve seat	GM	1	9	Lever guide	MS	1
3	Valve	GM	1	10	Lever	FS	1
4	Cover	CI	1	11	Fulcrum pin	MS	1
5	Cover bush	Brass	1	12	Weight	CI	1
6	Spindle	MS	1	13	Lever pin	MS	1
7	Toggle	MS	1	14	Stud with nut M20	—	6

Figure 2: Details of Lever safety Valve