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10AU36A/46A

Third/Fourth Semester B.E. Degree Examination, May/June 2016

(Automobile Engineering)

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** projection only.
3. Missing data if any may suitably be assumed.
4. All the calculations should be on 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 3D and other 2 views in 2D.**

PART-A

1) An equilateral triangular prism of 60mm base side and axis length 100mm is resting on the HP with its axis vertical and one of its base edges parallel to VP and nearer to it. It is cut by an inclined section plane perpendicular to the HP and 60^0 to the VP and 10mm in front of the axis. Draw the sectional front view and true shape of section. **[20 Marks]**

2) Draw two views of square headed bolt and nut for a 30mm diameter bolt. Take the length of the bolt equal to 100mm. **[20 Marks]**

PART-B

3) Draw the sectional front view and top view of a single- riveted butt joint with double cover straps to connect two plates of 12mm thickness. Use snap head rivets and show all the calculations on the answer sheet. Use chain riveting arrangement. **[20 Marks]**

4) Draw the side view and sectional front view of a Universal coupling by taking the shaft diameter as 25mm. **[20 Marks]**

PART-C

5) Details of a "PLUMMER BLOCK" are shown in figure 1. Assemble the parts and draw the following views of the assembly:
   a) Front view showing right half in section.
   b) Top view. **[60 Marks]**

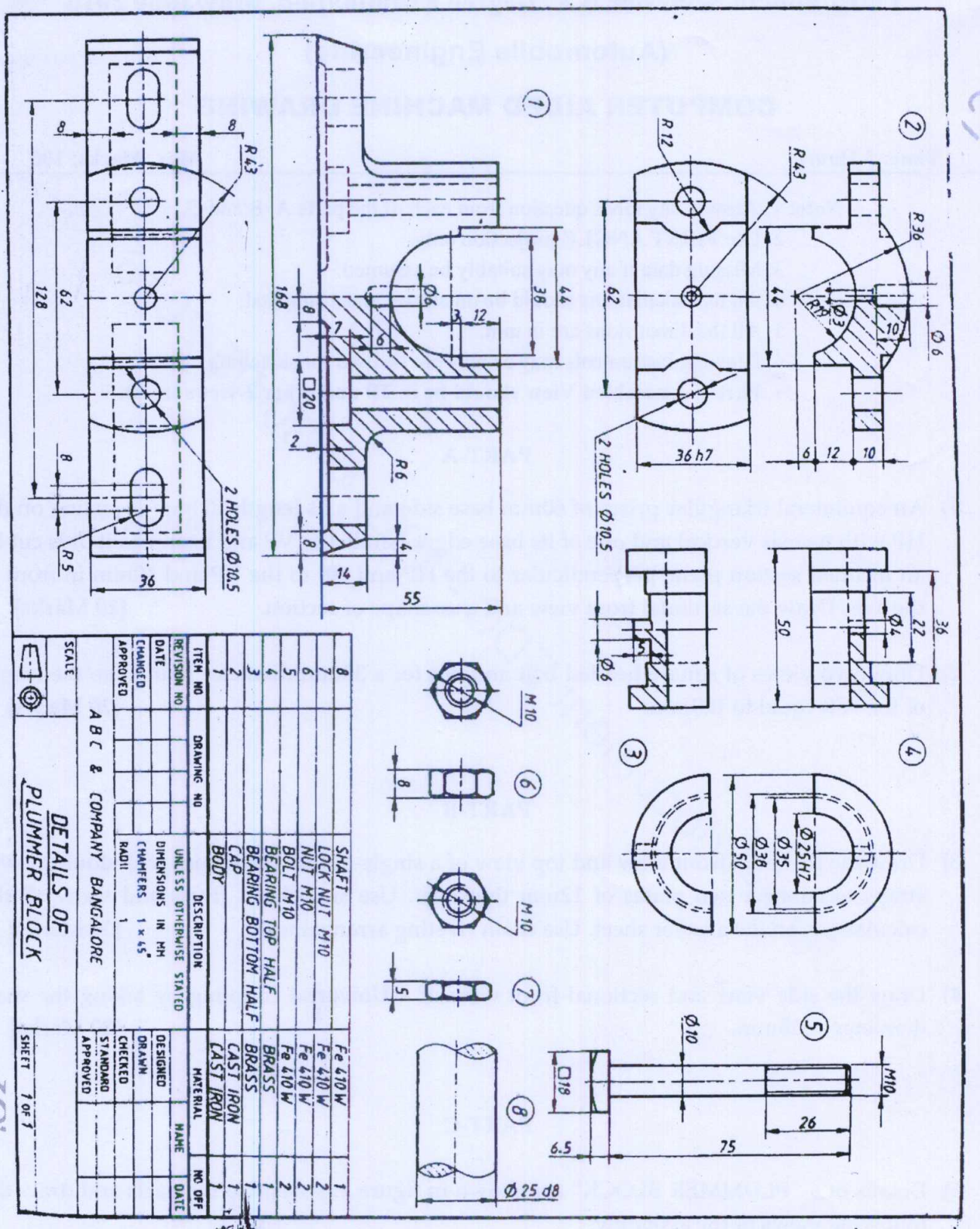
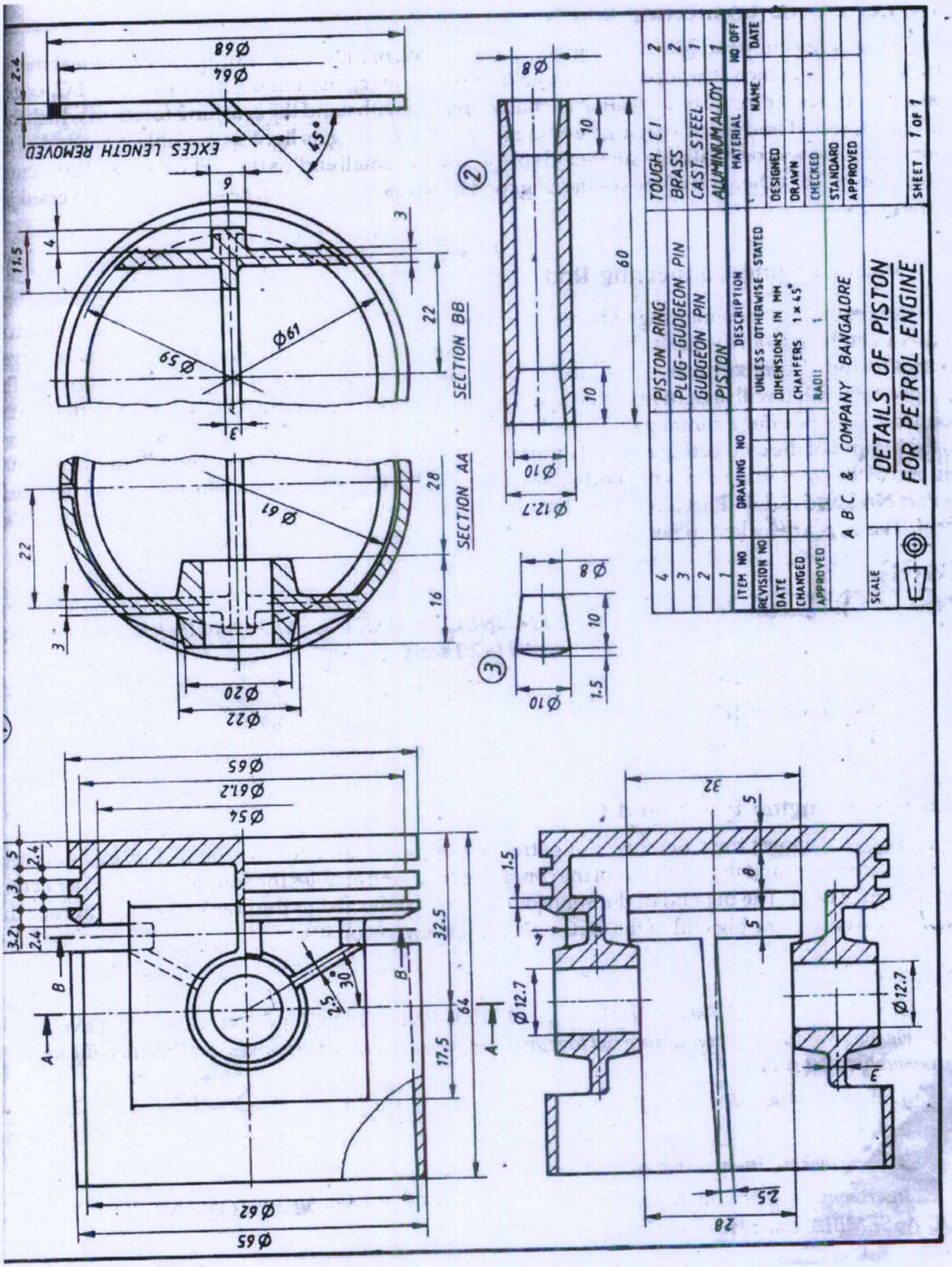

DETAILS OF
PLUMMER BLOCK
A B C & COMPANY BANGALORE
SCALE
SHEET 1 OF 7
ITEM NO
DRAWING NO
DESCRIPTION
MATERIAL
NO OFF
REVISION NO
DATE
CHANGED
APPROVED
UNLESS OTHERWISE STATED
DIMENSIONS IN MM
CHAMFERS 1 x 45°
RADII 1
DESIGNED
DRAWN
CHECKED
STANDARD
APPROVED
NAME
DATE
8 SHAFT Fe 410 W 1
7 LOCK NUT M10 Fe 410 W 2
6 NUT M10 Fe 410 W 2
5 BOLT M10 Fe 410 W 2
4 BEARING TOP HALF BRASS 1
3 BEARING BOTTOM HALF BRASS 1
2 CAP CAST IRON 1
1 BODY CAST IRON 1
2 HOLES Ø10.5
M10
Ø25 d8

Figure 1

6) Figure 2. Shows the details of Petrol engine piston. Assemble the parts and draw the following views. Dimension the drawings.
   a) Sectional view from the Front.
   b) Side view.

[60 Marks]



Details of a Petrol Engine Piston
Fig. 2