KUMARAGURU
college of technology
character is life

Register Number:……..

B.E DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Third Semester

MECHANICAL ENGINEERING

MEC104: Machine Drawing

Time: Four Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1 What do you understand by (a) scale = 5:1 and (b) scale = 1:10?

2 Discuss the various ways of arranging dimensions.

3 Sketch the conventional representation of the following:

(a) External threads (b) internal threads

4 Explain the following, indicating the symbol to be used in each case:

(a) First angle projection (b) Third angle projection

5 Describe the different types of sectional views. Explain each one of them by a Suitable example.

6 Sketch the symbols for the following characteristics used for form tolerances.

a) Straightness

b) Circularity

c) Cylindricity

d) Flatness

7 What is a fastener and what is meant by fastening?

8 Differentiate between clearance fit and transition fit.

9 Sketch the following welding symbols along with the respective illustrations

(a) Single V-butt weld

(b) Fillet weld

10 Why the hole basis system is preferred rather than shaft basis system?

PART B (1 x 20 = 20 Marks)

11. a) (i) Draw the assembled view of a COTTER JOINT with Sleeve, details of which are given in Fig .1 to 1:1 scale. 15

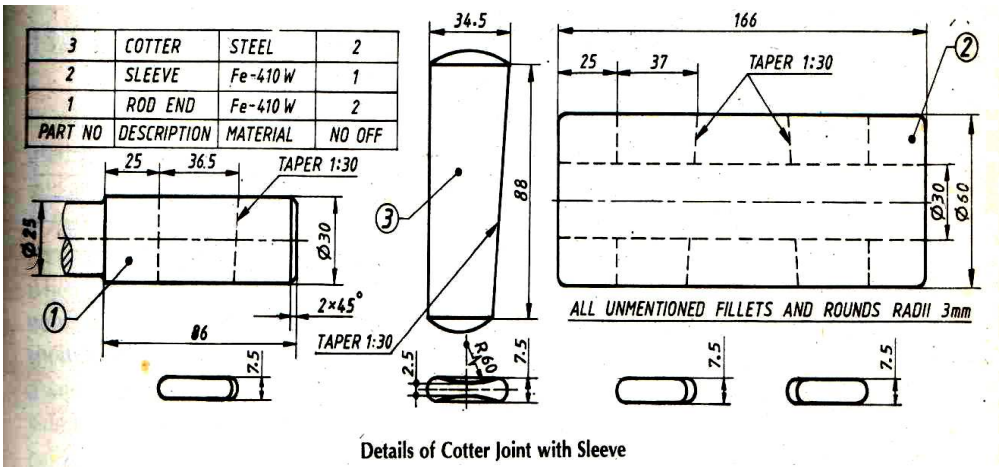

Fig (1)

(ii) What is meant by the term "fit" and how are fits classified? (5)

(OR)

b) Sketch the half sectional front view of a KNUCKLE JOINT. Details of which are given in Fig .2 to 1:1 scale.

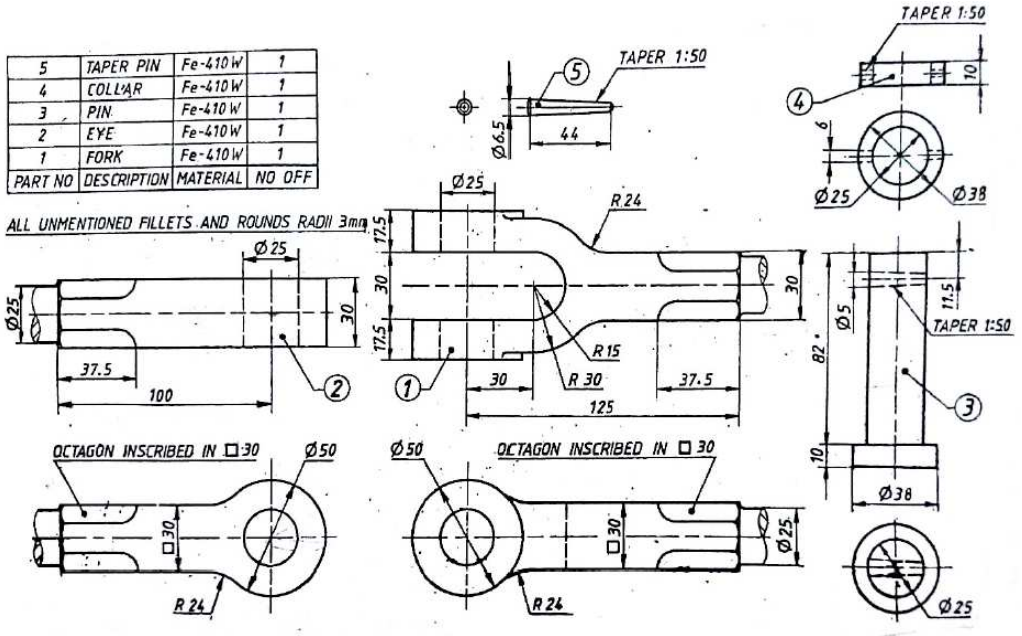

Fig (2)

PART C (1 x 60 = 60 Marks)

12. a) BEARING Parts of a PLUMMER BLOCK are shown in Fig .3 Draw the following views to 1:1 scale, of the

(i) Front view showing right half in section. (40)
(ii) Top view (20)

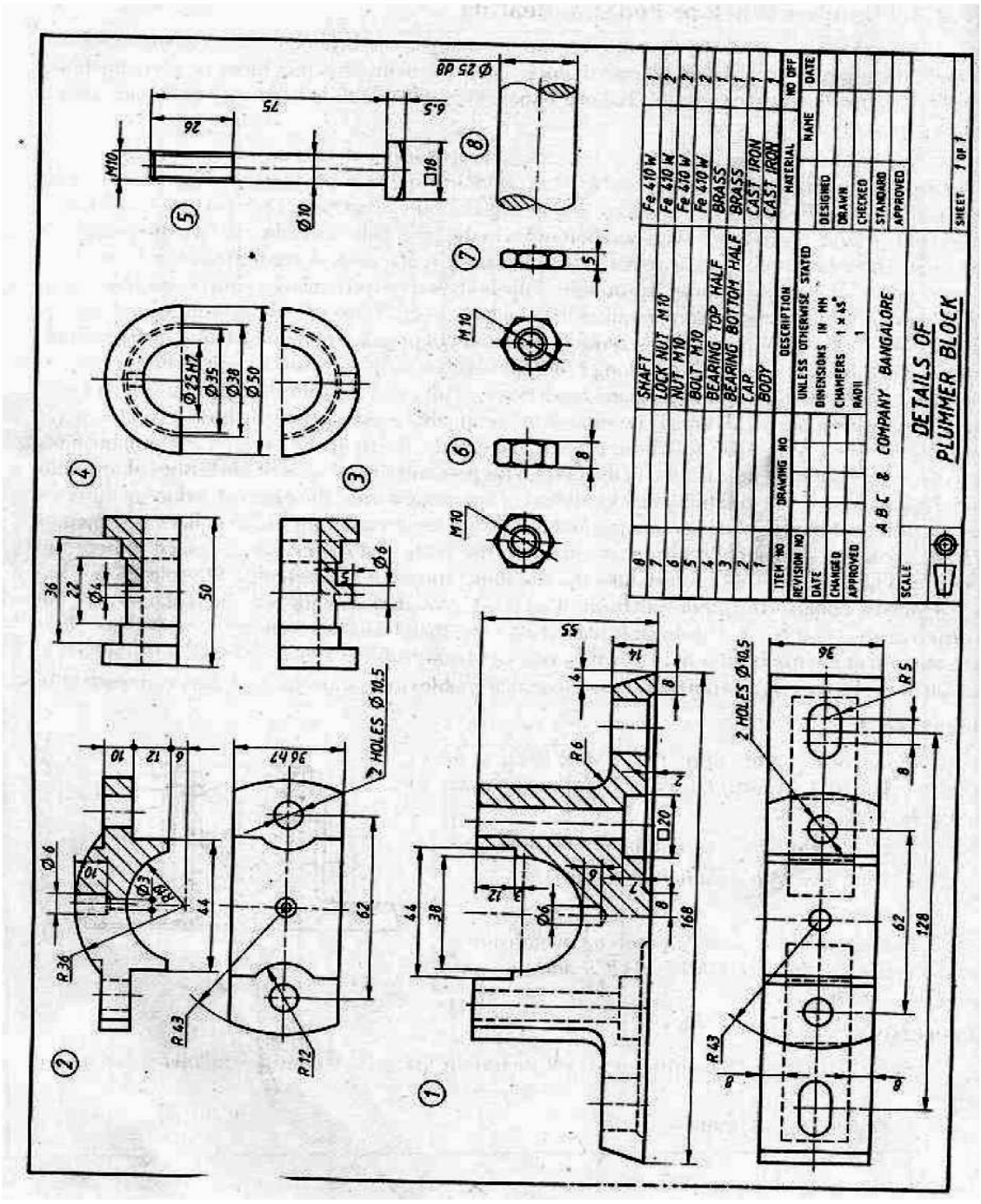

Fig (3)

(OR)

b) Assemble the parts of a Screw Jack shown in Fig .4 and draw the

(i) Front view showing right half in section. (40)

(ii) Top view. (20)

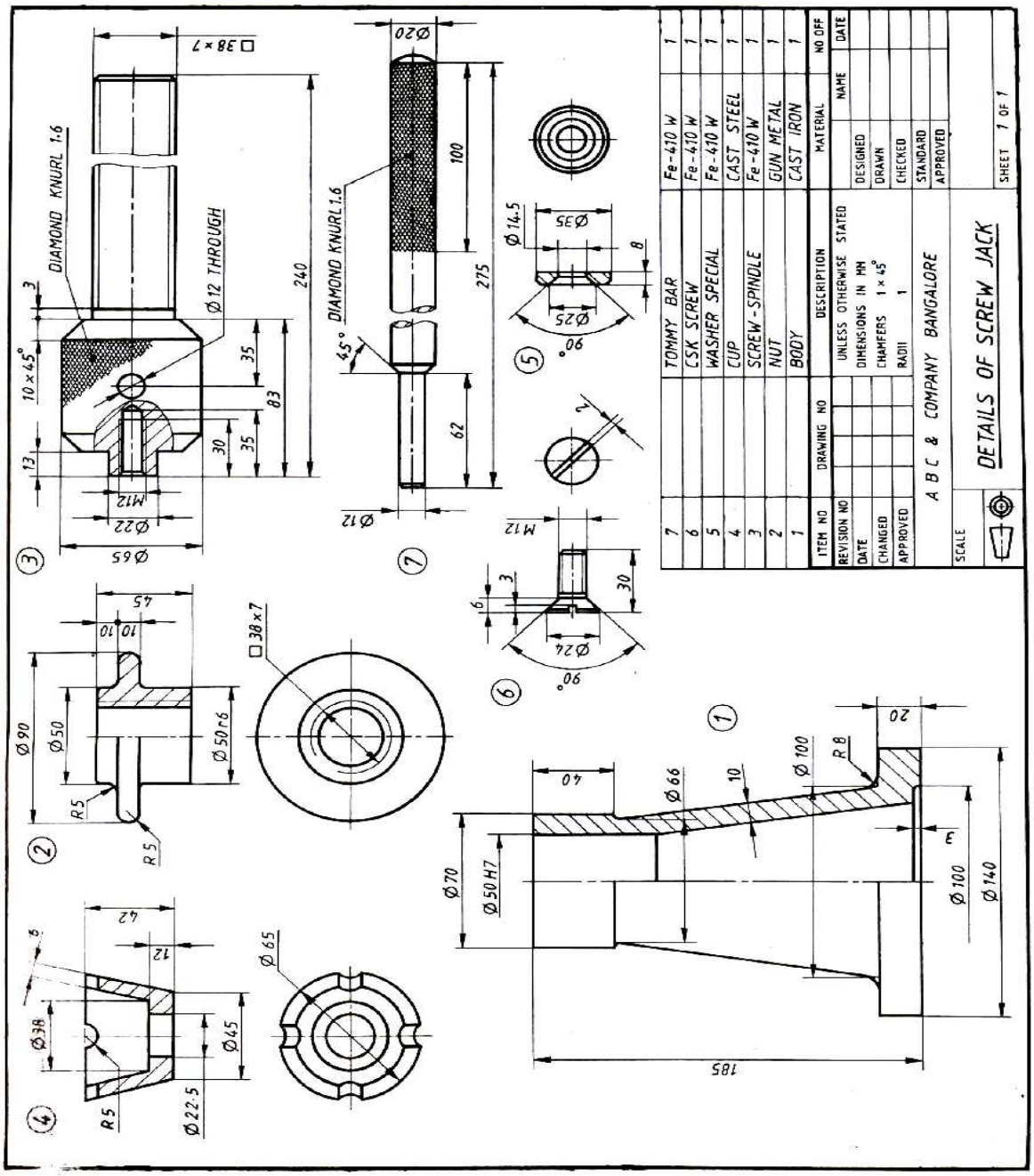
DETAILS OF SCREW JACK
A B C & COMPANY BANGALORE
SCALE
SHEET 1 OF 1
ITEM NO
DRAWING NO
DESCRIPTION
MATERIAL
NO OFF
REVISION NO
DATE
CHANGED
APPROVED
UNLESS OTHERWISE STATED
DIMENSIONS IN MM
CHAMFERS 1 × 45°
RADII 1
NAME
DATE
DESIGNED
DRAWN
CHECKED
STANDARD
APPROVED
7 TOMMY BAR Fe-410 W 1
6 CSK SCREW Fe-410 W 1
5 WASHER SPECIAL Fe-410 W 1
4 CUP CAST STEEL 1
3 SCREW-SPINDLE Fe-410 W 1
2 NUT GUN METAL 1
1 BODY CAST IRON 1
DIAMOND KNURL 1.6
Ø 12 THROUGH
□ 38 × 7
10 × 45°
Ø 65
Ø 22
M12
Ø 20
Ø 14.5
Ø 35
Ø 25
90°
Ø 12
M12
Ø 24
Ø 90
Ø 50
Ø 50 r6
R5
Ø 38
Ø 45
Ø 22.5
Ø 70
Ø 50 H7
Ø 66
Ø 100
R 8
Ø 140
185

Fig (4)

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