



Reg. No. :

Name :

**Fourth Semester B.Tech. Degree Examination, May 2013
(2008 Scheme)**

**Branch : Mechanical Engineering
08.406 : MACHINE DRAWING (M)**

Time : 4 Hours

Max. Marks : 100

1. Answer **any two** questions from Part A. Part B is compulsory.
2. **Only** first angle projection to be used.
3. **Any** missing dimension may be **suitably** assumed.

PART – A

1. Dimensions of a hole and its mating shafts are given below, according to the basis of hole system;

Hole : 27.500 mm

: 27.575 mm

Shaft : 27.470 mm

: 27.445 mm

Find the values of the hole tolerances. Check the calculated dimensions. Also represent these dimensions schematically.

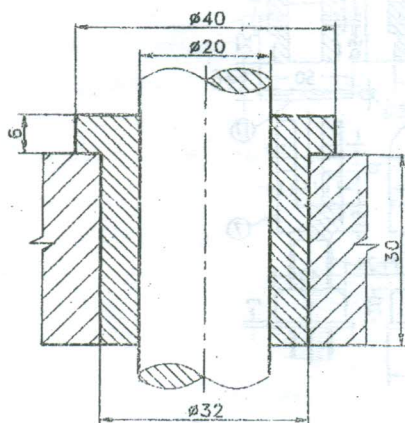
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2. The figure shows a shaft running in a gun metal bush fitted inside a C.I. block with light press fit. If the shaft has easy running fit inside the bush.

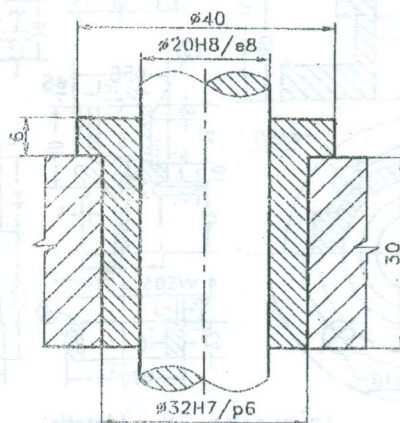
a) Sketch the given figure and indicate the fits using ISO symbols.

b) Determine the values of the tolerance symbols used.

10



a) Basic dimensions



b) Toleranced dimensions





3. Differentiate between Ra and Rz values. How is surface roughness represented on drawings ?

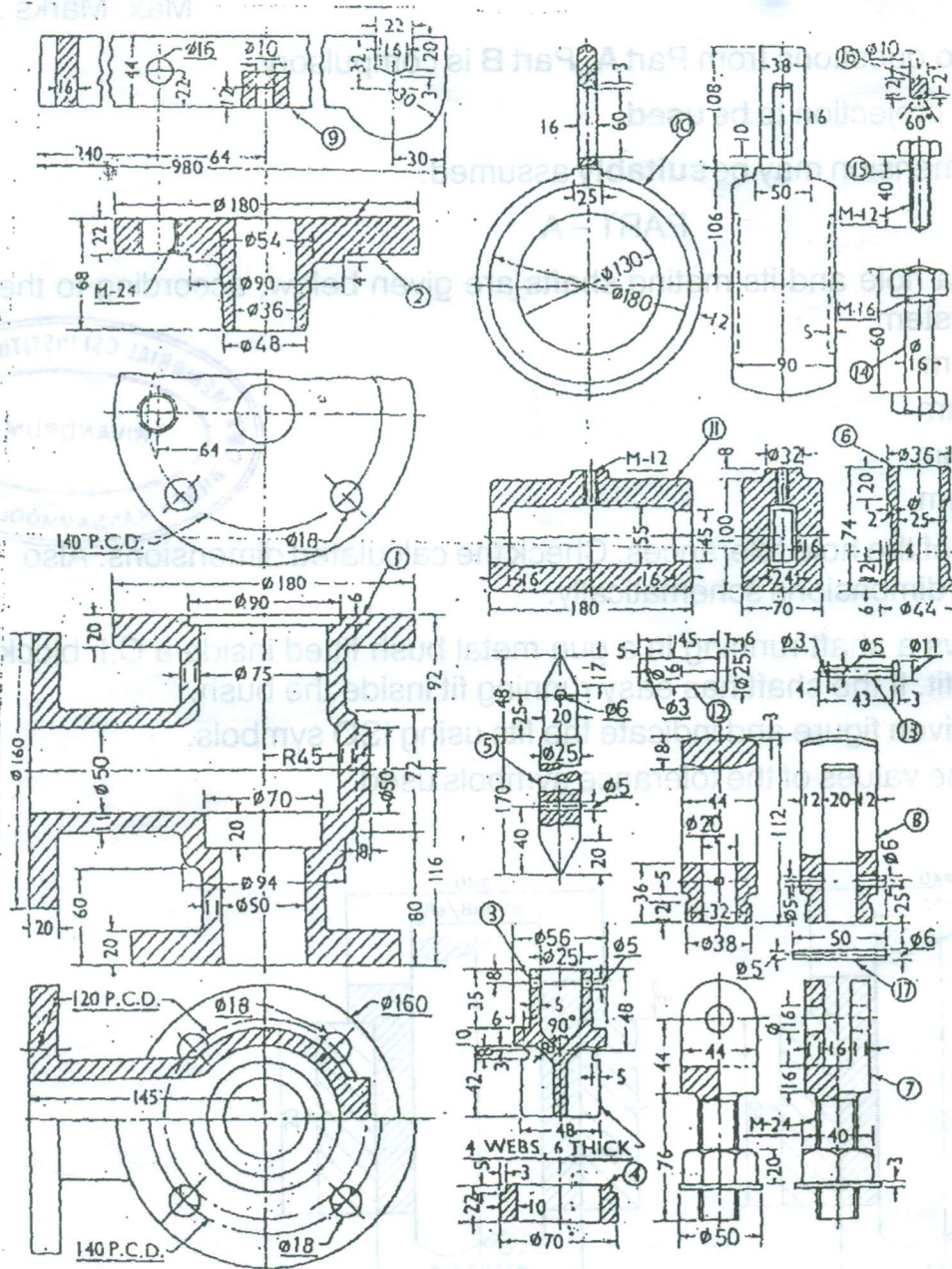
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PART – B

4. Draw an assembly of the lever safety valve, details of which are given in figure showing the following views :

- i) Sectional front view
- ii) Top view.

80



Lever safety valve (details)

FIG.



18.	Split-pin (not shown)	C-30	2	
17.	Pin (stirrup)	G.M.	1	
16.	Bearing	Steel	1	
15.	Set-screw	C-30	1	
14.	Bolt and nut	C-30	4	
13.	Pin (valve)	G.M.	1	
12.	Pin (fulcrum)	G.M.	1	
11.	Counter-weight	C.I.	1	
10.	Weight	C.I.	1	
9.	Lever	C-30	1	
8.	Stirrup	G.M.	1	
7.	Fulcrum with nut and washer	G.M.	1	
6.	Bush	G.M.	1	
5.	Spindle	G.M.	1	
4.	Seat	G.M.	1	
3.	Valve	G.M.	1	
2.	Cover	C.I.	1	
1.	Body	C.I.	1	

No.	Name of part	Material	No. of	Remark
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PARTICULARS OF PARTS