

# SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E – AERO/M&P/MECH

Title of the paper: Machine Drawing

Semester: III

Max.Marks: 80

Sub.Code: 15307(2003-05)6C0067(2006-2007) Time: 4 Hours

Date: 05-05-2009

Session: AN

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PART – A

(30 Marks)

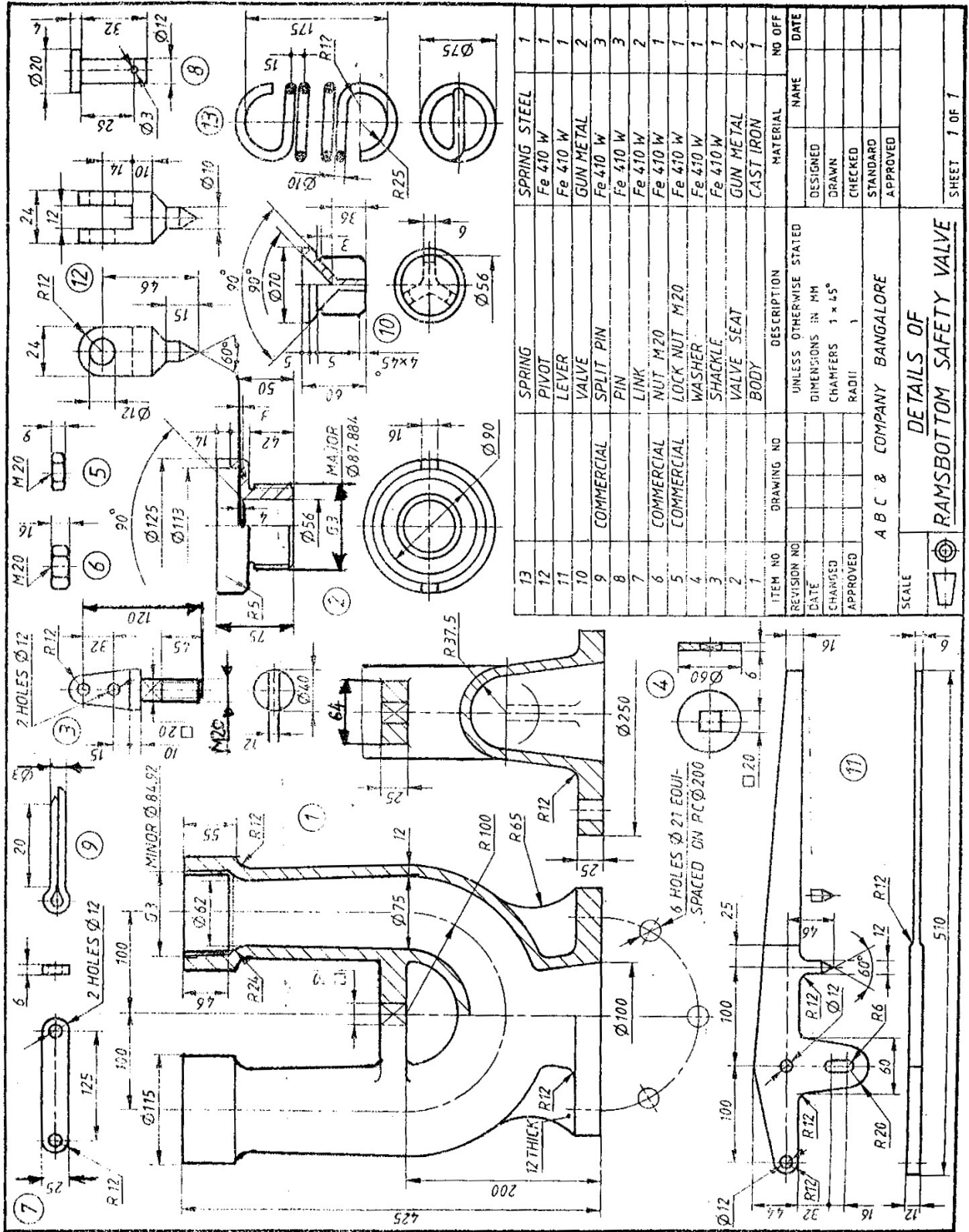
Answer All the Questions

1. Calculate the limits of tolerance and allowance for a 25mm shaft and hole pair designated H8/d9. (10)
2. Give the rough drawing (Front view top half in section) of an unprotected type Flange coupling with the proportions expressed in terms of the diameter “d” of the shafts. Assuming d=25mm. (10)
3. Give the surface texture symbol showing the following characteristics. (5)
  - (a) Roughness value or grade
  - (b) Machine allowance
  - (c) Direction of lay
  - (d) Sampling length
  - (e) Machining method/ Additional treatment.
4. Draw the conventional representation of the following; (5)
  - (a) External V-thread
  - (b) Spur gears in mesh

PART – B  
Answer All the Questions

(50 Marks)

5. The details of a RAMS BOTTOM SAFETY VALVE are shown. Draw the following views of the assembled valve to a suitable scale.
- (a) Front view showing right half in section (15)
  - (b) Top view (15)
  - (c) Right view in section (15)
- Indicate the important dimensions, print the Bill of materials and show the various parts assembled in the following. (5)



ITEM NO	DRAWING NO	DESCRIPTION	MATERIAL	NO OFF
13		SPRING	SPRING STEEL	1
12		PIVOT	Fe 410 W	1
11		LEVER	Fe 410 W	1
10		VALVE	GUN METAL	2
9		SPLIT PIN	Fe 410 W	3
8		PIN	Fe 410 W	3
7		LINK	Fe 410 W	2
6		NUT M20	Fe 410 W	1
5		LOCK NUT M20	Fe 410 W	1
4		WASHER	Fe 410 W	1
3		SHACKLE	Fe 410 W	1
2		VALVE SEAT	GUN METAL	2
1		BODY	CAST IRON	1

REVISION NO	DATE	UNLESS OTHERWISE STATED DIMENSIONS IN MM	NAME	DATE
CHANGED		CHAMFERS 1 x 45°	DESIGNED	
APPROVED		RADI	DRAWN	
			CHECKED	
			STANDARD	
			APPROVED	

SCALE	ABC & COMPANY BANGALORE
<b>DETAILS OF RAMSBOTTOM SAFETY VALVE</b>	

Details of a Ramsbottom Safety Valve

