

# SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E - Mechanical / Mechanical& Production/  
Aeronautical

Title of the paper: Machine Drawing

Semester: III

Max. Marks: 80

Sub.Code: 15307(2002/2003/2004/2005)/6C0067

Time: 3 Hours

Date: 06-05-2008

Session: AN

---

PART – A

(30)

Answer All the Questions

1. A steel pin having a normal diameter of 30mm is to be an easy running fit in the bore of a bronze bush. Sketch free hand indicating the limit dimensions for the steel pin and the bore of the bush. (10)
2. Draw the three views of ISO threaded hexagonal bolt 150mm long, 24mm diameter and a thread length of 60mm with a hexagonal nut. Indicate all the proportions and the calculated dimensions. (10)
3. Sketch the symbols for the following characteristics used for form tolerances  
(a) Symmetry                      (b) Perpendicular                      (c) Coaxiality  
(d) Straightness                      (e) Circularity. (5)
4. Sketch the conventional representation for the following machine elements.
  1. External threads
  2. Helical torsion spring
  3. Disc spring
  4. Bevel gears
  5. Rack and pinion (5)

PART – B  
Answer All the Questions

(1 x 50 = 50)

5. The detail of a screw jack is shown in the figure. Assemble the parts of the jack and draw the following views of the assembly.

1. Front view in half section.
2. Top view.



