Total No. of Questions :8] *[Total No. of Printed Pages :4*

Roll No .....

AU/IP/IEM/ME/PR - 305

B.E. III Semester

Examination, June 2015

Machine Drawing And Design

Time : Four Hours

Maximum Marks : 70

Note: 1. Attempt all questions.
2. Assume suitable data, if necessary, clearly mentioned it.
3. Neat sketches is to be drawn, whenever required.
4. Use of Machine Design Data / Hand Book is permitted.

Unit - I

1. a) Draw any five conventional representations of machine components. 7

   b) Draw a sectional front view and top view of the double riveted lap joint with chain riveting, to join plates of thickness 10 mm. 7

OR

2. Draw the full sectional front view and right side view (right half in section) of the Bearing block, shown in figure-1. 14

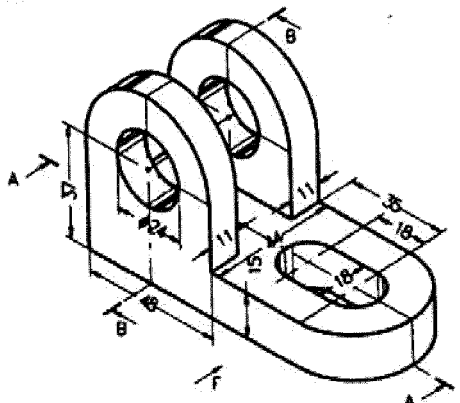

Figure - 1

Unit - III

5. a) What do you mean by factor of safety? Write an expression for factor of safety for ductile and brittle materials. 7

   b) Write different theories of failure and explain any two of them. 7

OR

6. a) What are the advantage of CAD? Explain five utility commands in CAD. 7

   b) What are the important factors which should be considered while designing a product? Explain with suitable example. 7

Unit - IV

7. Design riveted joints for the longitudinal and circumferential seams of a boiler having 1.25 m diameter to withstand maximum pressure of 2.5 N/mm^2. 14

OR

8. Two mild steel rods transmit an axial tensile load of 150KN and are connected by a knuckle joint. Design and draw the joint, completely. 14

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Unit - II

3. Part drawing of pedestal bearing is given in figure-2 assembled them and draw;

a)	Front view, left half in section	14
b)	Top view, left half in section	10
c)	Bill of materials	4

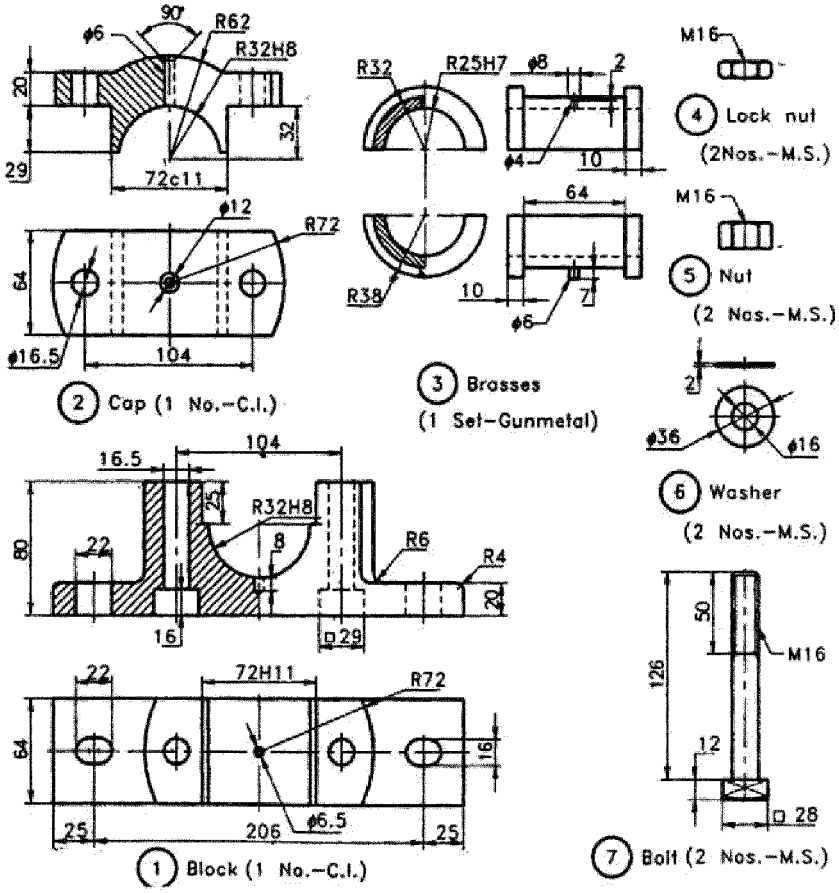

Figure - 2

OR

4. The various parts of cross-head are shown in figure-3. Assembled them and Draw;

a)	Sectional view, upper half in section	14
b)	Top view	10
c)	Bill of materials	4

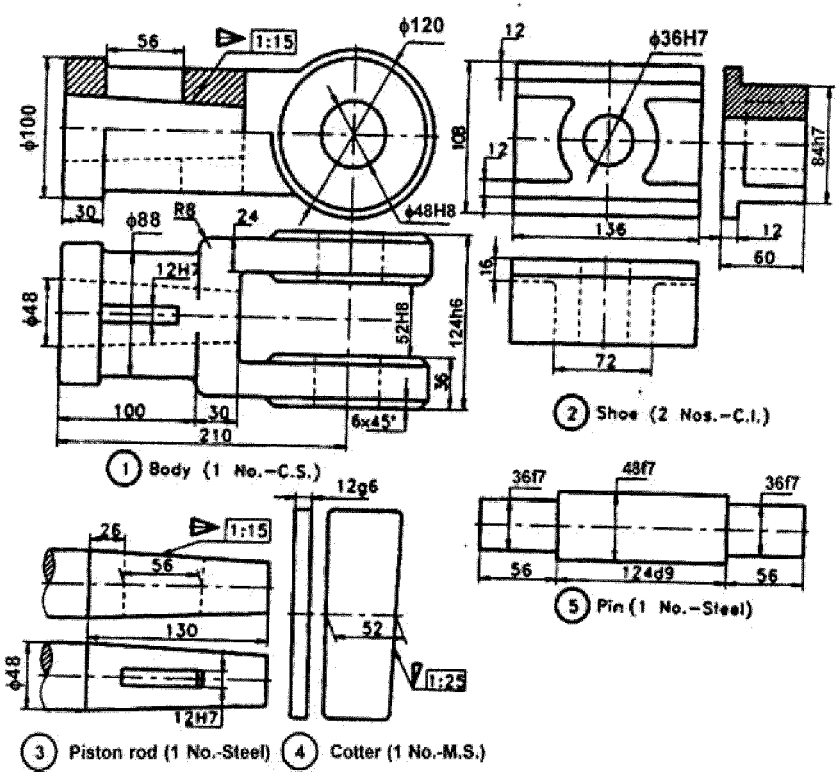

Figure - 3