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Unit - IV

4. Design the bolt for the bracket shown in figure 3. Working tensile stress is 80 MPa and shear stress is 45 MPa. 14

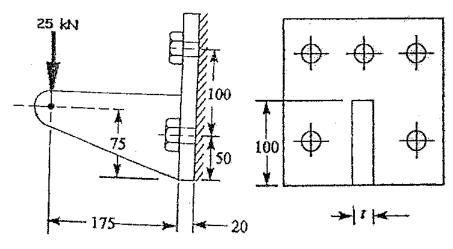


Figure-3

OR

Design a knuckle joint to connect two rods which transmits a tensile load 50 kN. Working stress 80 MPa and 40 MPa in compression, tension and shear respectively.

Roll No

AU/IP/ME/PR-305

B.E. III Semester

Examination, June 2014

Machine Drawing And Design

Time: Four Hours

Maximum Marks: 70

Note: Total number of questions 4. Attempt one question from each unit. Attempt suitable data if necessary and mention the same proper justification.

Unit - I

- . a) What do you understand by tolerance?
 - b) Show applications of different types of lines using a appropriate sketch.

OR

c) Draw sectional front and top view of double riveted lap joint with zig-zag riveting for plate thickness of 12mm.

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Unit - II

2. Draw the assembled half sectional front view and top view of pedestal bearing shown in figure 1.

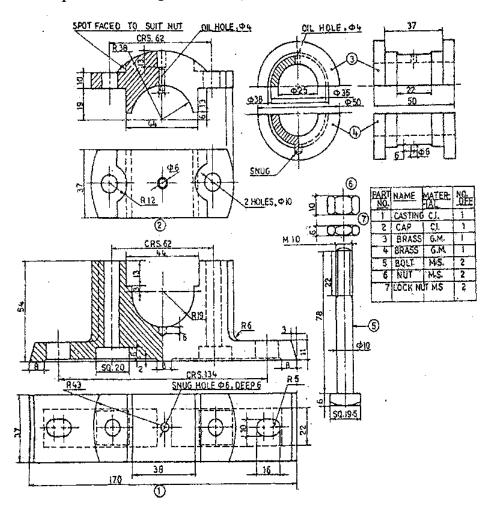
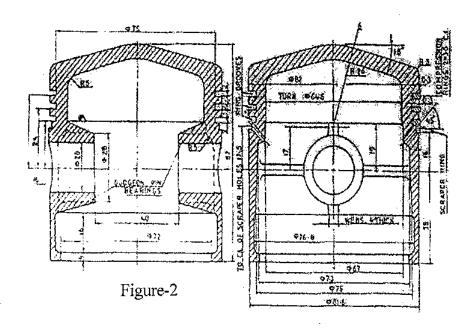


Figure-1

OR

Draw the sectional front view, top view and side view of trunk piston of IC engine shown in figure 2.



Unit-III

- 3. a) State use of fillet and chamfer tool in 3D drafting software.
 - b) What do you understand by problem formulation in design?
 - c) Distinguish between static and dynamic loading with example.
 - d) Draw a flow chart showing general process of design. 7
 OR

Explain rational and empirical design process.

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