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Roll No.....

AU/IP/IEM/PR/ME-305 (GS)

B.E. III Semester Examination, June 2020

Grading System (GS)

Machine Drawing and Design

Time : Four Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

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

2. Discuss the basic design process with the help of flow diagram.

3. What is knuckle joint? Name its different parts and draw a simple front view of the joint using standard dimension taking diameter of circular rod to be 20 mm.

   OR

   List at least ten various elementary weld joints along with their simplified symbolic representations, as defined in Indian Standard IS 813:1986.

4. Define the following terms in relation with thread :
   i) Major diameter ii) Minor diameter
   iii) Pitch and iv) Lead

5. a) What are the advantages of welded joint.
   b) What are the four basic elements of weld symbol.

6. 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.

   OR

   Describe different types of rivet joints.

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

   OR

   What are the advantage of CAD? Explain five utility commands in CAD.

8. Discuss the following :(any two)
   i) Design by evolution
   ii) Design by innovation
   iii) New design

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