

Course Title : Applied Mechanics (ME1408)

Nature of Exam : Close Book

Duration : 2hrs

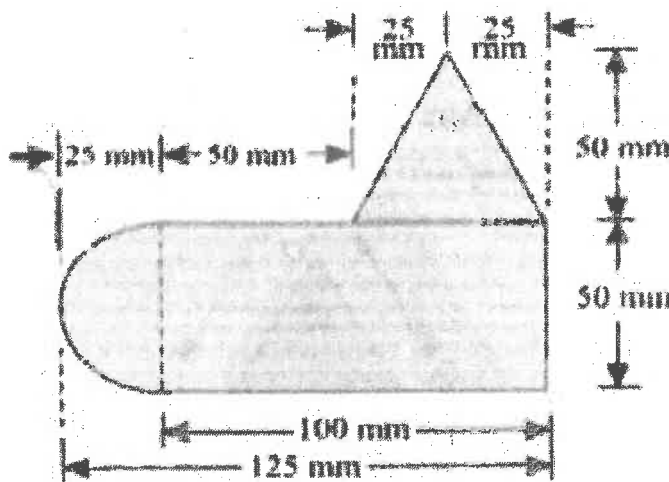
Roll No: _____

Maximum Marks : 50

Note:

1. All questions are compulsory and carry equal marks.
2. Assume data as and when required
3. Write only Roll No in Question Paper

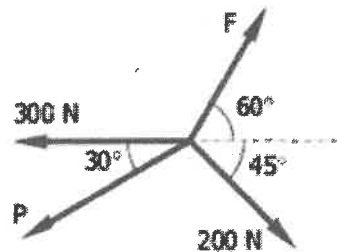
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|---|------|
| 1 Explain superposition law and law of transmissibility | MM 4 |
| 2 Write Impulse-Momentum equation. | MM 4 |
| 3 Differentiate centriod and center of gravity. | MM 5 |
| 4 Define a Free Body Diagram. Give two examples. | MM 5 |
| 5 Uniform lamina shown in below figure consists of rectangle, a semi circle and a triangle. Find the center of gravity. | MM 8 |



6

Determine the magnitude of P and F necessary to keep the concurrent force system in Fig. in equilibrium.

MM 8



7 F_1 and F_2 are two collinear forces. When they act in opposite directions, their resultant is 34N, when they act at right angles to each other, their resultant is 50N. Find F_1 and F_2 .

MM 8

8 Define Radius of gyration, product of inertia and principal moment of inertia

MM 8