

淡江大學 105 學年度日間部轉學生招生考試試題

系別：土木工程學系三年級

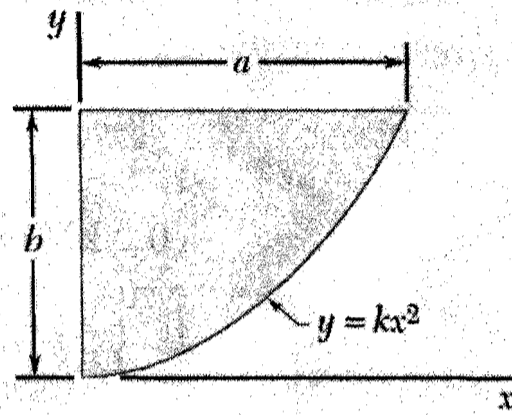
科目：工程力學(含靜力學、材料力學)

考試日期：7月22日(星期五) 第1節

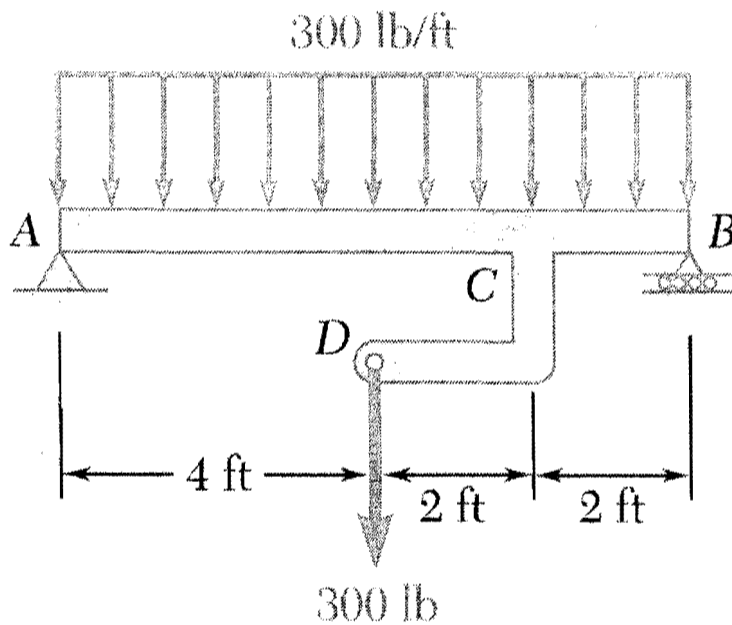
本試題共 4 大題， 2 頁

本試題雙面印刷

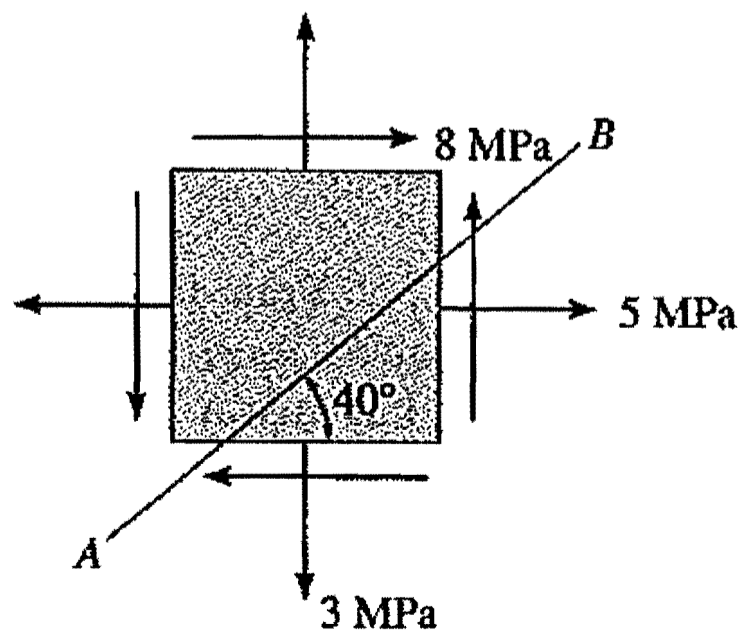
1. (20%) Determine by direct integration the moment of inertia of the shaded area  $I_y$  with respect to the y axis.



2. (30%) Draw the shear-force and bending-moment diagrams for beam AB.



3. (20%) Determine the normal stress and shear stress acting on the inclined plane AB



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4. (30%) A beam has a cross section and loaded as shown in the figure.
- (1) Draw the shear-force and bending moment diagrams for this beam.
  - (2) Determine the maximum tensile and compressive stresses in this beam.
  - (3) Determine the maximum shear stress on the web .

