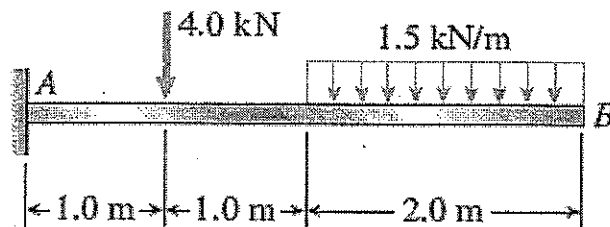明志科技大學 102 學年度研究所碩士班一般考試暨在職專班招生命題用紙

所別：機電工程研究所　　組別：　精密機械組　科目：　材料力學

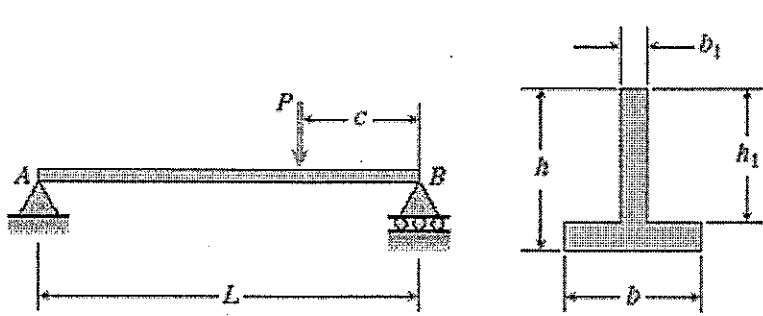注意：□不准□一般計算器■工程用計算器，考試時間總計：100 分鐘。試題共 2 頁第 2 頁

3. (20 Marks)

Calculate the shear force V and bending moment M at a cross section located 0.5 m from the fixed support of the cantilever beam AB shown in the figure.

4. (30 Marks)

Determine the maximum tensile stress and maximum compressive stress due to the load P acting on the simple beam AB.

$P = 5.4$ kN
$L = 3.0$ m
$c = 1.2$ m
$b = 75$ mm
$b_1 = 25$ mm
$h = 100$ mm
$h_1 = 75$ mm