

Grading Comments on TAM 202 HW#8, April 2 2001

1) Total pts = 10 ( 1.2, 1.36, 1.46, 2.2 (1 pt) )  
( 1.20, 1.23, 2.28 (2 pts) )

(2) Common Errors :

① 1.2 : Sign is important to indicate tensile or compressive stress! If you did not put a negative sign for the stresses in AB and BC, then they become tensile stresses.

② 1.20 = Although this truss structure is a bit complicated, you do not need to solve the forces for the whole structure. Always make a cut so that the internal force you want to know can show up. For example, we'd like to know  $F_{AD}$ , so we cut through AB, AD, and DE, and choose either right or left part of structure to analyze. It saves a lot of work! Also choose the right pt to take a moment about, as shown in the solution.

③ 1.23 = Taking the sum of the moments about some specific pt. will save you a lot of work. Make sure what are the internal forces and what are the external forces or reactions. For example, before you consider part FED, you need to find the reaction at F. See solution for details.

④ 2.28 = Total deflection =  $\int_0^h \epsilon dy$ ,  $y$  is the vertical coord. where,  $\epsilon = \frac{P}{EA}$ ,  $P = P \& V$ , but both  $V$  and  $A$  are function of position  $y$ , so you need to find those first.