Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Assignment 3**

Consider the cantilever structure on pages 7-10 of the lecture notes. Simplify the setting by omitting the displacement transducer rods and weight of the cantilever. Represent the mass loading as a force moment pair acting on the axis of the cantilever and use the Bernoulli beam boundary value problem

 in ,  and at ,  at 

to find the vertical displacement  (positive upwards) at the free end  in terms of the geometric and material parameters of the structure.