

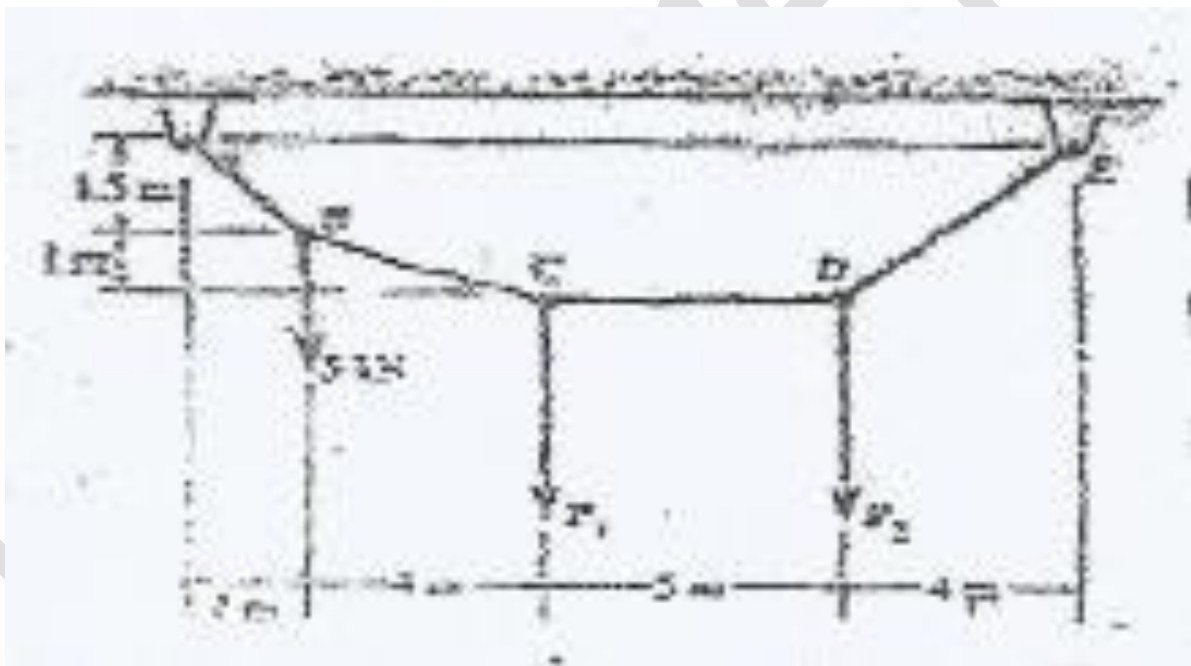
COMPETITIVE ENTRANCE EXAMINATION INTO H. T. T. C.**BAMBILI BAMENDA 2011 SESSION**

Paper 1 (Major), for Mechanical Design, Mechanical Manufacturing and Automobile mechanics

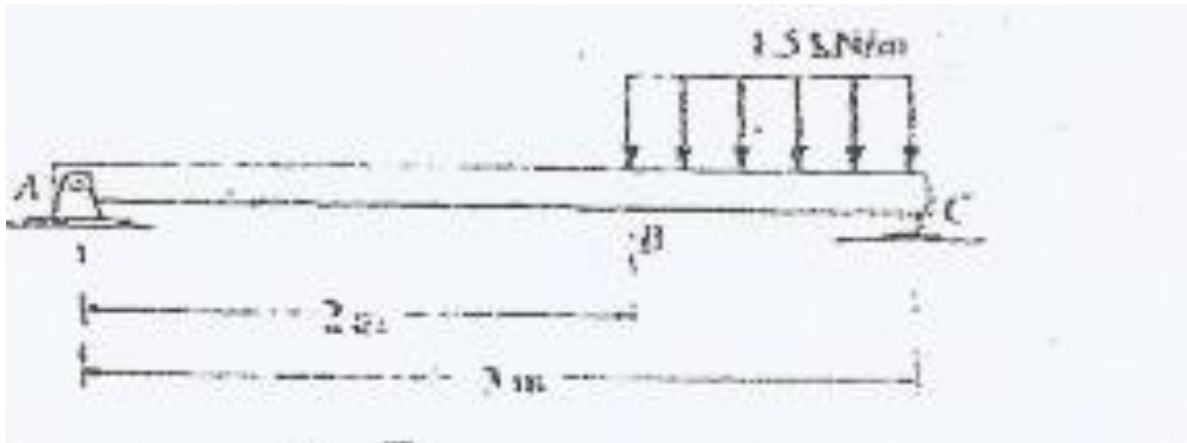
APPLIED MECHANICS FOR BAC F1, BT, MF/CM (CH), BT MA

DURATION: 3hrs. Coefficient 4

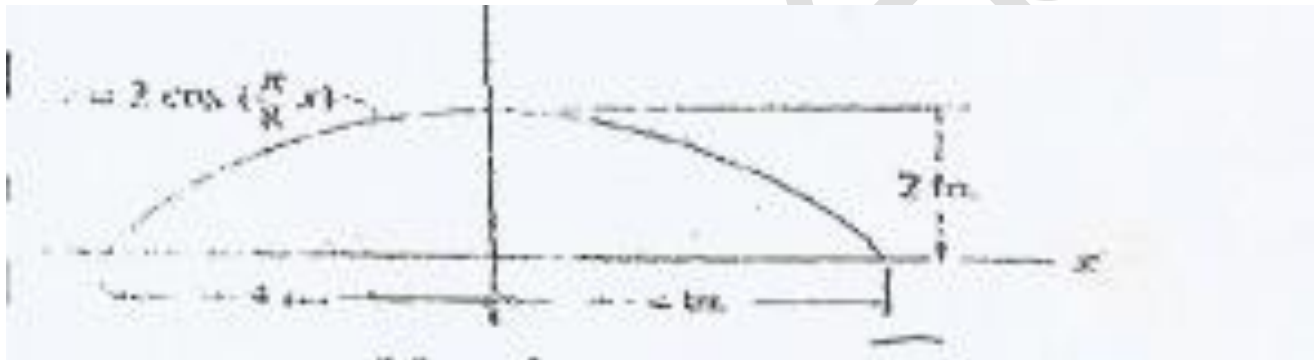
Exercise 1: Determine the forces P_1 and P_2 needed to hold the cable in position shown, that is segment CD remains horizontal, also find the maximum tension in the cable 5mks.



Exercise 2: Draw the shear and moment diagrams for the beam. 6mrks.



Exercise 3: Determine the moment of inertia of area about the x axis. 4marks.



Exercise 4: The component of force F acting along a line aa' is required to be 30N. Determine the magnitude of F and its component along the line bb' . 4mrks.

