50. (a) Choosing an axis through the hinge, perpendicular to the plane of the figure and taking torques that would cause counterclockwise rotation as positive, we require the net torque to vanish:

$$FL\sin 90^\circ - Th\sin 65^\circ = 0$$

where the length of the beam is $L = 3.2$ m and the height at which the cable attaches is $h = 2.0$ m. Note that the weight of the beam does not enter this equation since its line of action is directed towards the hinge. With $F = 50$ N, the above equation yields $T = 88$ N.

(b) To find the components of $\vec{F}_p$ we balance the forces:

$$\sum F_x = 0 \quad \Longrightarrow \quad F_{px} = T\cos 25^\circ - F$$
$$\sum F_y = 0 \quad \Longrightarrow \quad F_{py} = T\sin 25^\circ + W$$

where W is the weight of the beam (60 N). Thus, we find that the hinge force components are $F_{px} = 30$ N rightward and $F_{py} = 97$ N upward.