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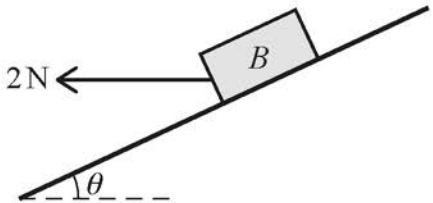

A block B of weight 10 N lies at rest in equilibrium on a rough plane inclined at θ to the horizontal. A horizontal force of magnitude 2 N, acting above a line of greatest slope, is applied to B (see diagram).

(a) Complete the diagram in the Printed Answer Booklet to show all the forces acting on B. **[1]**

It is given that B remains at rest and the coefficient of friction between B and the plane is 0.8.

(b) Determine the greatest possible value of $\tan\theta$. **[5]**