Question 11 (4 marks)

A truck transports a large 5.50×10^3 kg cylinder that has a radius of 2.00 m. The cylinder is fixed to the truck by four ropes, two on each side, on ring attachments as shown in the diagram below. If the maximum load on each of the ropes (T) is 5.50 kN, calculate the maximum allowable acceleration of the truck when it moves forward.

