Please submit the following questions for marks: **/30**

1. A 12.0-kg sled is pulled along a level ground. The horizontal force exerted on the sled is 10.0 N. Find the acceleration of the sled if the coefficient of friction is 0.0765.

2. The mass of an elevator plus occupants is 752 kg. The tension in the cable is 8950 N. At what rate does the elevator accelerate upwards?

3. a) Determine the acceleration of the system shown below/

b) Determine the tension in the rope.

$m_1 = 5.0$ kg

Frictionless surface

$m_2 = 5.0$ kg
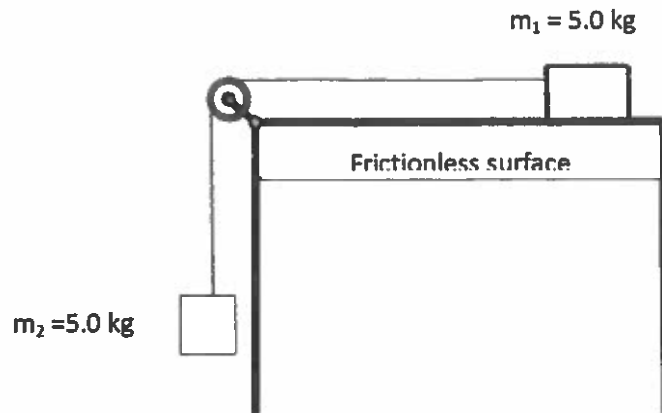
4. Suppose the above system rests on a sanded surface with coefficient of friction of 0.31. Determine the acceleration of the system.

5. A 2.0-kg mass and a 3.0-kg mass are attached to a lightweight cord that passes over a frictionless pulley. The nagging masses are left free to move. What is the acceleration (magnitude and direction) of both masses?

m_1=3.0 kg

m_2=2.0 kg