## Exercise: Chapter 6

Answer ALL questions. (15 Marks)
(a) Izwan knobbed his tractor to a sledge which is full with wood and pulls it a distance of 20 m along the ground. The total weight of sledge together with its load is $14,700 \mathrm{~N}$. The tractor exerts a 5000 N force at an angle above the ground. If the frictional force is 3500 N :
(i) Determine the work done by each force acting on the sledge.
(ii) Calculate the total work done by all the forces.
(iii) If the sled's initial speed is $2.0 \mathrm{~m} / \mathrm{s}$, what is the speed of the sled after it moves 20 m ?


Answer:

1. (i) -70000 Nm or -70 kJ , (ii) 10 kJ , (iii) $4.2 \mathrm{~m} / \mathrm{s}$
