Question	Answer	Marks	AO Element	Notes	Guidance
1(a)	(a =) $(v - u) \div t$ **OR** $(62 - 6.0) \div 35$ **OR** $56 \div 35$ (1) 1.6 m/s^2 (1)	**2**			
1(b)	(F =) ma **OR** $\Delta p \div \Delta t$ **OR** $2.5 \times 10^5 \times 1.6$ **OR** $(62 \times 2.5 \times 10^5 - 6.0 \times 2.5 \times 10^5) \div 35$ (1) 4.0×10^5 N (1)	**2**			
1(c)	(p =) mv **OR** $2.5 \times 10^5 \times 6.0$ (1) 1.5×10^6 kg m / s (1)	**2**			
2(a)	total mass of passengers = 73 × 65 (kg) **OR** 4700 kg (1) (total mass of bus, driver and 73 passengers) = 21 000 kg (1)	**2**			
2(b)	(F =) ma in any form (1) (F =) 15 000 N (1)	**2**			
3	extension **AND** tension / force / load mentioned (1) extension is directly proportional to tension / force / load (1)	**2**			

Question	Answer	Marks	AO Element	Notes	Guidance
4(a)	260 N	**1**			
4(b)	$k = F / x$ in any form words, symbols or numbers **OR** ($k =$) F / x **OR** 260 / (0.94 – 0.63) **OR** 260 / 0.31 (1) 840 N / m (1)	**2**			
5(a)	*statement:* (acceleration is) to right/backward (1) *explanation*: force (from water / on model) to right /backwards **OR** acceleration in same direction as force (from water / on model) (1)	**2**			
5(b)	*statement*: (acceleration) more (when empty) (1) *explanation*: mass less (and force is constant) (1) meaningful reference to F=ma / Newton's 2nd law / change in momentum (1)	**3**			
					[Total: 20]