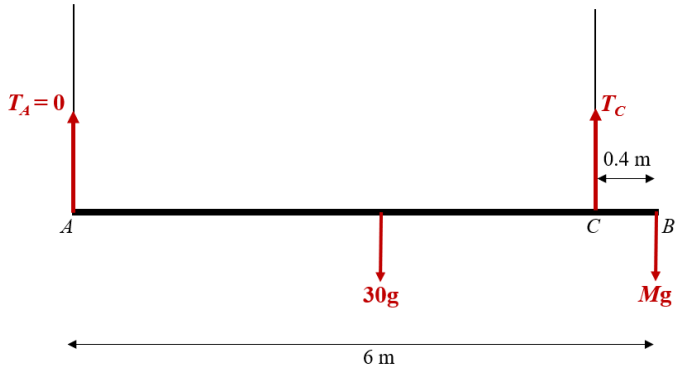
Question Number	Scheme	Marks
4 **(a)**		
	First relevant equation in T_A and/or T_C	M1
	Correct unsimplified equation Relevant equations: • M(B) $(T_A \times 6)+(T_C \times 0.4)=(30g \times 3)$ • M(A) $(T_C \times 5.6)=(30g \times 3)+(20g \times 6)$ • M(C) $(T_A \times 5.6)+(20g \times 0.4)=(30g \times 2.6)$ • M(G) $(T_A \times 3)+(20g \times 3)=(T_C \times 2.6)$ • Vert $T_A + T_C = 20g + 30g$	A1
	Second equation in T_A and/or T_C	M1
	Correct unsimplified equation	A1
	$T_C = 368$ or 370 (N)	A1
	$T_A = 123$ or 120 (N)	A1
		(6)
(b)		
	Form an equation in M only	M1
	M(C): $(Mg \times 0.4)=(30g \times 2.6)$	A1
	$M = 195$	A1
		(3)
		(9)
	Notes for Question 4	

	Mark parts (i) and (ii) together if required. Penalise use of $g = 9.81$ on first occasion only. Penalise over/under accuracy of final answer on first occasion only.	
4(a)	If more than two equations seen, mark the two that are used in the order they appear.	
M1	First relevant equation in T_C and/or T_A . Correct number of terms. Dimensionally correct (force $\times$ length in a moments equation).	
A1	Correct unsimplified equation	
M1	Form a second relevant equation in T_C and/or T_A. Correct number of terms. Dimensionally correct (force $\times$ length in a moments equation). Condone re-using T in M(A) and M(C) as long as clearly separate tensions.	
A1	Correct unsimplified equation	
A1	Correct answer for tension in C, 2/3sf. Accept $\frac{75}{2}g$, $37.5g$ ISW	
A1	Correct answer for tension in A, 2/3sf. Accept $\frac{25}{2}g$, $12.5g$ ISW	
4(b)		
M1	Uses moments to form an equation in M only. Correct terms included and dimensionally correct. May use two equations and eliminate T_C. Vert : $T_C = 30g + Mg$ M(A) : $(T_C \times 5.6) = (30g \times 3) + (Mg \times 6)$ M(G) : $(T_C \times 2.6) = (Mg \times 3)$ M(B) : $(T_C \times 0.4) = (30g \times 3)$ M0 if tension at A is never 0. M0 if a tension from part (a) is used.	
A1	Correct unsimplified equation in M only	
A1	Correct answer only.	