

Question Number	Scheme	Marks
5(a)	(\uparrow) $\pm F = 0.2g - 2.5 \cos \alpha$ Allow use of (μR) for F	M1 A1
	$F = 0.46$ (N) oe including fractions , upwards	A1
		(3)
5(b)	(\uparrow) $F + 0.2g = 6.125 \cos \alpha$	M1A1
	(\rightarrow) $R = 6.125 \sin \alpha$ (4.9)	M1A1
	$F = \mu R$	B1
	Solve for μ	DM1
	$\mu = 0.35$ oe including fractions.	A1
	N.B. If F and R are interchanged in their equations, max B1 can be scored.	(7)
		(10)
Notes for question 5		
5(a)	M1 Correct no. of terms, condone sin/cos confusion and sign errors, allow if they have T instead of 2.5	
	A1 Correct equation . Allow $+F$ or $-F$	
	A1 Need both magnitude (must be positive) and direction	
5(b)	M1 Correct terms, condone sin/cos confusion and sign errors errors allow if they have T instead of 6.125 (but M0 if using $T = 2.5$)	
	A1 Correct equation	
	M1 Correct terms, condone sin/cos confusion and sign error allow if they have T instead of 6.125 (but M0 if using $T = 2.5$)	
	A1 Correct equation	
	B1 $F = \mu R$ seen but B0 if they use a value for R found in (a)	
	DM1 Dependent on both M's	
	A1 cao	