Question Number	Scheme	Marks
6(a)	$\frac{1}{2}mv^2 - mgl$ or $mgl - \frac{1}{2}mv^2$ seen or implied	B1
	Use of EPE	M1
	$\frac{mg}{2l}l^2$	A1
	$\frac{mg}{2l}(l\sqrt{2}-l)^2$	A1
	$\frac{1}{2}mv^2 + \frac{mg}{2l}(l\sqrt{2}-l)^2 = mgl + \frac{mg}{2l}l^2$	M1
	Solve for v^2	dM1
	$v^2 = 2gl\sqrt{2}$ *	A1*
		(7)
(b)	$T = \frac{mg(l\sqrt{2}-l)}{l} = mg(\sqrt{2}-1)$	M1 A1
	$\pm N + T\cos 45^o = \frac{mv^2}{l}$	M1A1A1
	$\pm N + mg(\sqrt{2}-1)\times\frac{\sqrt{2}}{2} = \frac{m}{l}\times 2gl\sqrt{2}$	dM1
	$N = \frac{1}{2}mg(5\sqrt{2}-2)$ *	A1*
		(7)
		(14)

Notes	
(a)	
B1	Difference between KE and GPE, seen either way round.
M1	Use of EPE formula at top or at *B*
A1	Correct EPE at top
A1	Correct EPE at B
M1	Use of conservation of energy, with 1 GPE, 1 KE and 2 EPE terms, condone sign errors
dM1	Solve for v^2, dependent on previous M
A1*	Exact given answer correctly obtained
(b)	
M1	Use of Hooke's Law at *B* – this may appear in an attempted equation of motion
A1	Correct unsimplified tension at *B*
M1	Equation of motion at *B* horizontally with correct terms, condone sign errors
A1	Correct equation with at most one error
A1	Correct equation
dM1	Sub for *T* and v^2. Dependent on both previous M marks
A1*	Given answer correctly obtained (exactly). If $N = -\frac{1}{2}mg\left(5\sqrt{2}-2\right)$ then clear justification is required to reach the given answer eg use of 'magnitude' or modulus signs.