

Question number	Answer	Notes	Marks
5 (a) (i)	moment = force x (perpendicular) distance (from the pivot);	ACCEPT Moment = $F \times d$ or correct rearrangement REJECT moment = force x distance <u>moved</u> REJECT 'm' or 'M' for 'moment'	1
(ii)	Substitution in correct equation; Calculation; Consistent Units; e.g. If calculated in metres 7×0.04 ; 0.28 or 0.3; Nm; e.g. If calculated in centimetres 7×4 ; 28 or 30; Ncm;	Correct final value = 2 irrespective of working ACCEPT newton metres, N.m REJECT 'nm', 'NM', J, N/m ACCEPT newton centimetres, N.cm REJECT 'ncm', 'NCM', J, N/cm	3
(b)	Length/distance to pivot of lever R less than lever A / closer to pivot; ORA So more (force) needed to cause the <u>same moment</u> ; ORA (i.e. if force was the same, moment would be less)	ACCEPT Less than 0.04 m IGNORE 'less leverage' ACCEPT appropriate use of equation / Force = 14 N ACCEPT Overcoming friction for one mark IGNORE references to principle of moments (stated or implied) REJECT 'momentum' for 'moment'	2

Total 6 Marks