4. Forces, Density and Pressure

4.1 Turning effects of forces

Paper 2

Marking Scheme

Q1.

(a)	the point where (all) the weight (of the object) is taken to act	**B1**

Q2.

(d)	$\cos\theta = (0.93 - 0.29) / 0.93$ so $\theta = 47°$	**A1**
(e)	moment = $(0.30 \times 9.81) \times 0.93 \times (\sin 47°$ **or** $\cos 43°)$ **or** moment = $(0.30 \times 9.81) \times [0.93^2 - (0.93 - 0.29)^2]^{0.5}$	**C1**
	= 2.0 N m	**A1**

Q3.

(a)(i)	force × <u>perpendicular</u> distance (of line of action of force to the point)	**B1**

Q4.

(a)	the point where (all) the weight (of the body) is taken to act	**B1**
(b)(ii)	the (line of action of the) force (at B) passes through (point) A **or** the (line of action of the) force (at B) has zero (perpendicular) distance from (point) A	**B1**