CLASS: XI	INDIAN SCHOOL MUSCAT FIRST PERIODIC TEST MARKING SCHEME	SUBJECT: PHYSICS
	SET - A	
QP.NO.	VALUE POINTS	SPLIT UP MARKS
1.	The moment of inertia of a plane lamina about an axis perpendicular to its plane is equal to the sum of the moments of inertia of the lamina about any two mutually perpendicular axes in its plane and intersecting each other at the point where the perpendicular axis passes though it.	1M
2.	w = 4 rad s^{-1}, v = rw =4 X 1 = 4ms^{-1}, L = mvr L = 0.8Kgm^2s^{-1}	1M
3.	Moment of inertia of a stone tied to longer string is more than the moment of inertia of a stone tied to a smaller string.	1M
4.	Angular momentum(L)	1M
5.	A body is said to be more stable when its CENTER OF GRAVITY is kept as low as possible. In a double decker bus, the c.g. of our body is obviously at higher place than the lower deck.In addition, if we stand the c.g. goes the higher, which will lead for a great imbalance to be followed by a severe fall off.	1M
6.	$r = \frac{m_1r_1+m_2r_2+m_3r_3}{m_1+m_2+m_3} r = \frac{(0,0)+(2R,0)+(R,\sqrt{3}R)}{3}$ r = (R , R/√3)	2M
7.	Definition SI Unit is metre. ($M^0L^1T^0$)	1M ½ ½
8.	Derivation: $\boldsymbol{\tau} = d\,\mathbf{L}/dt$,	2M
9.	from the principle of conservation of angular momentum $I'\omega' = I\omega$ T^1 = 6hr Day will be decreased by (24hr – 6hr) = 18hr	1M 2M
10.	Derivation : $R_{cm} = (m_1r_1 + m_2r_2) / (m_1 + m_2)$	3M
11.	$E_k = ½ Iw^2$ Rotational kinetic energy depends on the factors: (i) Moment of inertia (ii) angular speed of the body.	2M 1M