$Quiz\ 7.6-Rotational\ Motion$

Name:
Rigid Rotor
Consider a 3-dimensional rigid rotor with a moment of inertia $I=7.4\times 10^{-47}~kgm^2$
$\circ\;$ Give the energy (in $J)$ and total angular momentum of the $l=2$ energy level
$\circ~$ List all of the allowed values for the $z\text{-}\mathrm{component}$ of the angular momentum