

5 **(i)** Prove the identity $\frac{\cos \theta}{\tan \theta(1 - \sin \theta)} \equiv 1 + \frac{1}{\sin \theta}$. [3]

(ii) Hence solve the equation $\frac{\cos \theta}{\tan \theta(1 - \sin \theta)} = 4$, for $0^\circ \leq \theta \leq 360^\circ$. [3]