Q1) If \( f(x) = \frac{g(x^2)}{xe^x}, \ g'(4) = -1, \ g(4) = 4 \) find the slope of the normal line to the curve \( f(x) \) at \( x = 2 \).

Q2) Find all \( x \in (0, 2\pi) \) at which the tangent lines to \( f(x) = \tan x - \cot x \) are parallel to the line \( y = 4x - 1 \).
Q3) Find $\frac{d^{25}}{dx^{25}}(x \cos x)$. 