Q1) Use variation of parameter method to find the general solution of following

\[ y'' + y = \cot x \]  

(6 points)

Q2) Give a form of \( y_p \) without calculating undetermined coefficients.  

\[ y^{(5)} - y^{(3)} = e^{-x} + x^2 - 3x + 1 \]  

(4 points)