Department of Mathematics and Statistics (KFUPM)
Math-333 Semester-181 QUIZ III

NAME: S.No. ID:
Maximum Marks: 08 Section:03 Time Allowed: 40 minutes

(1) Evaluate

$(i)\ \mathcal{L}\{t\cosh(2t)\}$ $(ii)\ \mathcal{L}^{-1}(\frac{s+1}{s^2+s+1})$

(2) Use **Convolution Theorem** to find inverse Laplace transform of $G(s) = \frac{1}{(s^2+1)^2}$.

(3) Solve the DE : $y'' - y' - 2y = t^2\delta(t-\pi) + u(t-\pi), \quad y(0) = 0, \quad y'(0) = 0.$