NAME: S.No.   ID:
Maximum Marks: 10   Section:18   Time Allowed: 30 minutes
(1) Solve by **Undetermined Coefficients** method $y'' - 3y' = 8e^{3x} + 4\sin(x)$.

(2) Solve by Method of **Variation of Parameters** $4y'' - y = x\ e^{\frac{x}{2}}$.

(3) Use the substitution $t = -x$ to solve the IVP: $4x^2 y'' + y = 0$, $y(-1) = 2, y'(-1) = 4$.