



Answer All the Questions ($5 \times 10 = 50$)

S. No.	Question	Max Marks	CO	BL
1.	Solve $(D^2 - 6D + 9)y = 4e^x$ by the method of undetermined coefficients.	10	1	BL1
2.	Find the general solution of $\frac{3y-3z}{3yz}p + \frac{z-x}{zx}q = \frac{4x-4y}{4xy}$	10	1	BL5
3.	a) Solve $(D^2 - 2D + 1)y = xe^x \sin x$ (5M) b) Solve $p - x^2 = q - y^2$ (5M)	10	1	BL1
4.	Find the general solution of the partial differential equation $px(z - 2y^2) + qy(z - y^2 - 2x^3) = z(z - y^2 - 2x^3)$	10	2	BL3
5.	Find the complete and singular solutions of the partial differential equation $z = px + qy + p^2 + 3pq + 2q^2$	10	2	BL5