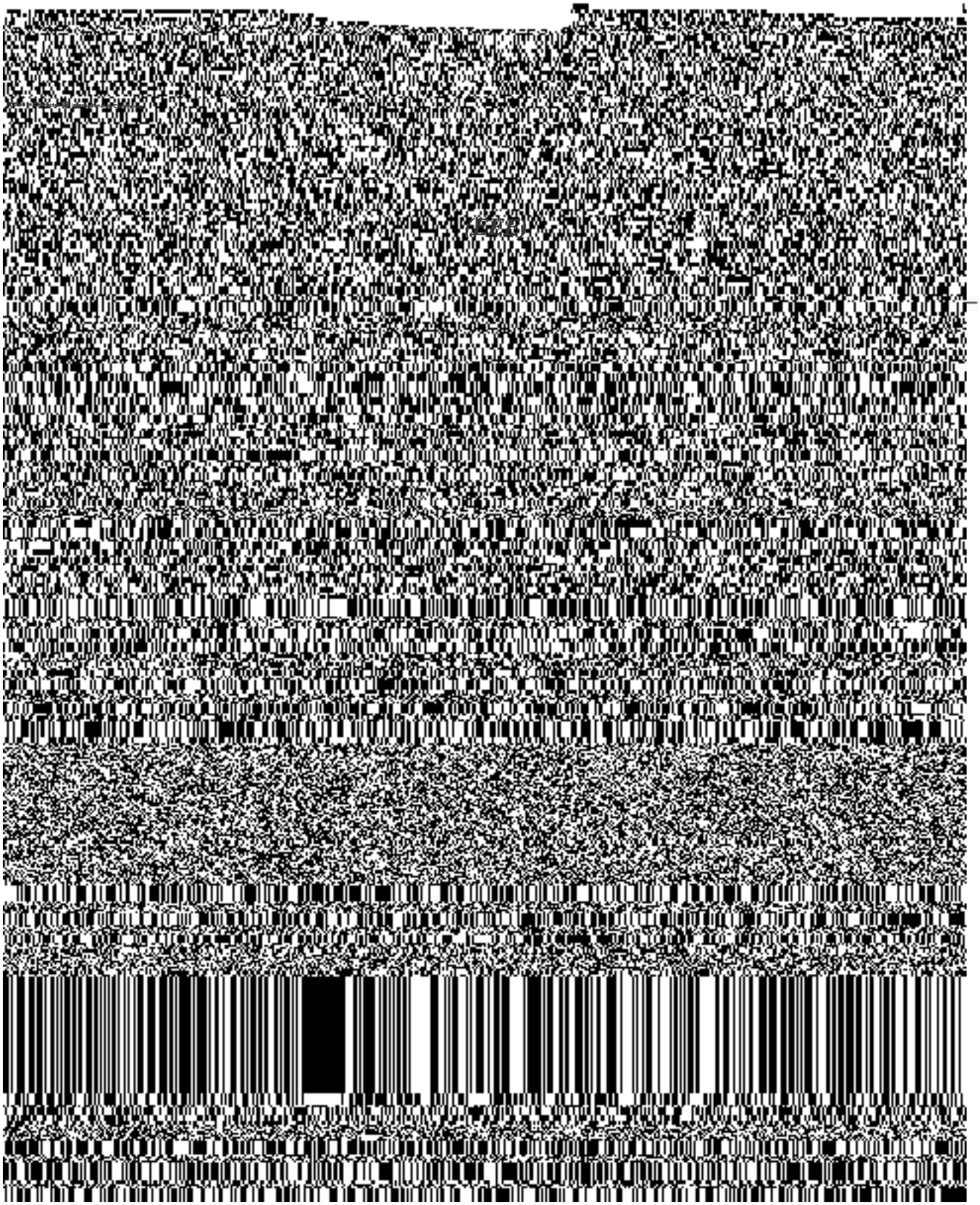

OR

16	Solve the D.E $\frac{d^2y}{dx^2}$ - 4 $\frac{dy}{dx}$ +12y = e^{3x} given that y(0) = 0 and $y'(0) = 0$. [10M]	CO3	L3
17	Prove that $div(\emptyset\bar{a}) = (grad\emptyset).\bar{a} + \emptyset\, div\bar{a}$. [10M]	CO4	L3

OR

18	Prove that $\nabla x(\nabla x\bar{a}) = \nabla(\nabla.\bar{a}) - \nabla^2\bar{a}$. [10M]	CO4	L3
19	Verify gauss divergence theorem for F = $x^3\bar{\imath} + y^3\bar{\jmath} + z^3\bar{k}$ taken over the cube bounded by x=0,x=a,y=0,y=a,z=0,z=a. [10M]	CO5	L4

OR

20	Find the work done by $\bar{F}$=(2x – y -3) $\bar{\imath}$ + (x +y -z)$\bar{\jmath}$ + (3x – 2y – 5z) $\bar{k}$ along a curve C, $x^2 + y^2 = 4$: z = 0. [10M]	CO5	L3