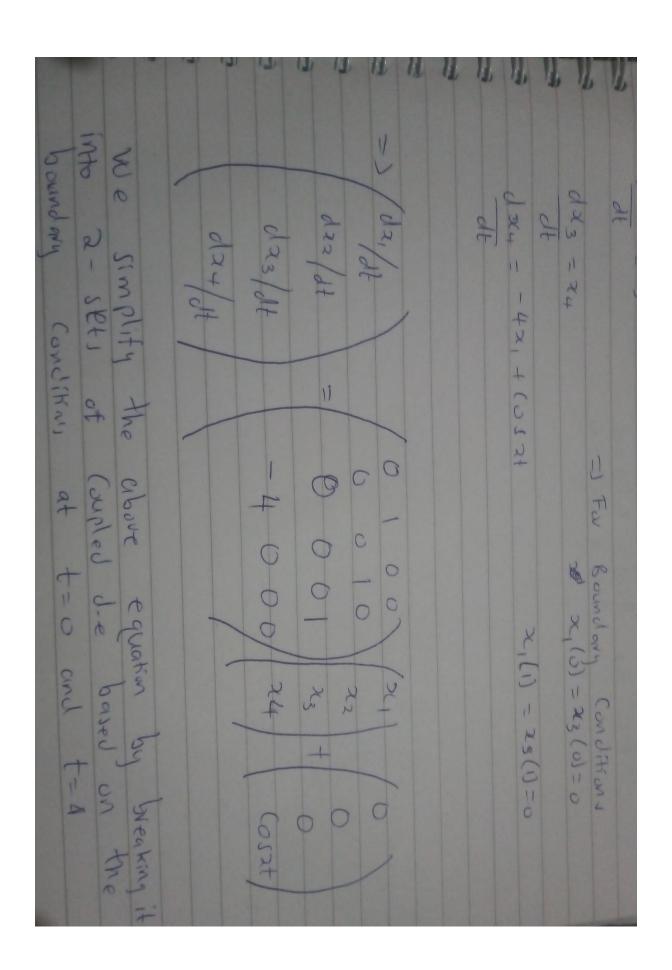
| la) | D | 1 | P | 1 | 1 | 1 | U | 1 | 1 |
|--|------------------------------|---|------------------------|--------------------------------------|---|------------------------------|--|---|---|
| 1 tro) + 44 +4 d +4 + 1 tro) - 14 + 14 b | We let the die be written as | B | Sulm ((1) = (1)(1) = 0 | Boundary Conditions y(a) = y'(a) = o | | 4""A) + 4 md) - Cosst 0, + " | (1) Converting ode into system of coupled odes | | |

10+ 2,= 4, 22= 5, x3= 11, x4= 5111 We let the die be 1=22, 22=23, 23=24, x4=5=-4x, + 6052t Boundary Conditions 4(0) = 4100 = 0 5" d) +4 yil = cosat, 0 < + 1 dry + 44y = cosat => d4y = -4y + cosat written as

et 2, = 4, 22 = 5, x3 = 411, 24 = 411 x, = x2, x2 = x3, x3 = x4, x4= 5 = -4x, + 6052t dx2 - x3 dx3 = 24 1x4 = -4x, + (012) let the die daty + 44y = cosat => d4y = -4y + cosat =) For Boundary Conditions -) [A x1=A , x2=B , 23=6 x1(1) = 25(1)=0



| At time t=0, the cosine thinkin becomes =) t=1 (osat6 = (os(2.0) -(0) =) t=4 (osat6 = (os(2.0) -(0) -(0 |
|--|
|--|

| At tan to, the cosine Junion $ \begin{array}{cccccccccccccccccccccccccccccccccc$ |
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