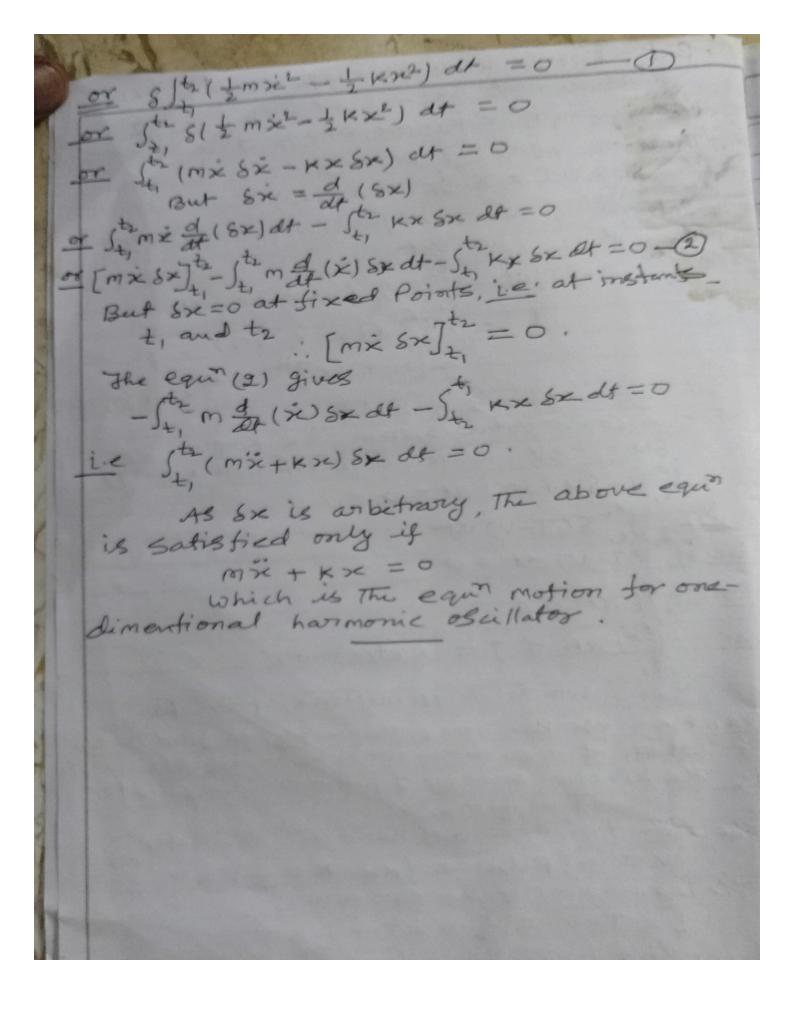
Dr. Sheva Kant Mishra Dept. of Physics H. D. Jain College, A B. Se. Part III Paper - 5 Classical Mechanics

Created in Photo-to-PDF One Click Converter. Download here: https://firehawk.ai/phototopdf/



Derivation of Eulen-lagrange's equation from Hamilton's Principle Page No. 3 The Lagrangian function is given by = L(9, 92, 93, 9x, 9, 92, 93 ... 2x ... x). In boilet we may write L = L(q, q, t).

If the lagrangian does not depend upon time explicity, we have L = L(q, q).Z 3L 89x + 5 3L 89x Z 3L SEX St + Z 3E SEX SEX SEX tecording to Hamilton's becomes

36 84 At - ESt, at (39m) 89m dt = 0 (E (3L d (3L)) Sex et = 0 ine d (dL) - dL = 0, K=1,2,3, ... which is Lagrange's Landion-Modified Hamilton's Principle we have $SJ = SS_{2}^{2}L(2,2,4)$ dt = 0 - 0 H(2P,t)= = Px2x-L(2,2,t). :. L(2,2,t) = EPK2K-H(2,f,t) Then equin @ becomes 6J= 85, [EPK2x-H(2,P#)] dt =0