

NAME: KEMDIRIM / HIECHUKWU L.  
MATIC NO: 19/ENGG02/030  
DEPT: COMPUTER ENGINEERING  
COURSE: MAT 102

$$1) A = (6u^2 + 8)i + (4u - 10)j + 8u^3k$$

$$B = 3ui + 2(2u - 5)j + 5k$$

$$2) \frac{d}{du}(A \cdot B) = \frac{d}{du} [(6u^2 + 8)i + (4u - 10)j + 8u^3k] \cdot [3ui + 2(2u - 5)j + 5k]$$

$$= (18u^3 + 28u)i + (8u^2 - 40u + 50)j + 40u^3k$$

$$3) \frac{dA}{du} = (54u^2 + 24)i + (16u - 40)j + (120u^2)k$$