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Matic No: 17/ENG 06/064.

Dep: Mechanical

Solu.

If $\phi = x^2 y z^3 + x y^2 z^2$, write a Matlab program to determine gradient at point $P(1, 3, 2)$.

- 1) Command window
- 2) clear
- 3) clc
- 4) Syms x, y
- 5) $A = (x^2 * z * y * z^3) + (x * y^2 * z^2)$.
- 6) $u = \text{diff}(A, x)$.
- 7) $v = \text{diff}(A, y)$.
- 8) $w = \text{diff}(A, z)$.
- 9) $x = 1$
- 10) $y = 3$
- 11) $z = 2$
- 12) $u_n = \text{subs}(u)$.
- 13) $v_n = \text{subs}(v)$.
- 14) $w_n = \text{subs}(w)$.