

Q22

$$z = g = 1 - x^2 - y^2 \quad \iint_D (-P \frac{dy}{dx} - Q \frac{dx}{dy} + R) dA$$

$$\iint_D (-xy - 2x) - (y^2 - 2y) + 2x = 2x^2y + 2y^2 + 2x$$

$$\iint_D 2x^2y + (2y^2 + 7)2 \rightarrow \iint_D 2x^2y + (2y^2 + 7)(1 - x^2 - y^2)$$

Ans $\rightarrow 83/100$