

Quiz 24:

$$\therefore \text{curl}(F) = \begin{vmatrix} \mathbf{i} & \mathbf{j} & \mathbf{k} \\ \frac{d}{dx} & \frac{d}{dy} & \frac{d}{dz} \end{vmatrix}$$

$$\begin{vmatrix} yz+2y+3z & xz+2x+4z & xy+3x+4y \\ \frac{d}{dx} & \frac{d}{dy} & \frac{d}{dz} \end{vmatrix}$$

$$= (0, 0, 0)$$

$$\therefore \int_C F \cdot dr = \iint_S \text{curl}(F) \cdot ds = \iint_S (0, 0, 0) \cdot ds$$

$$= 0$$

