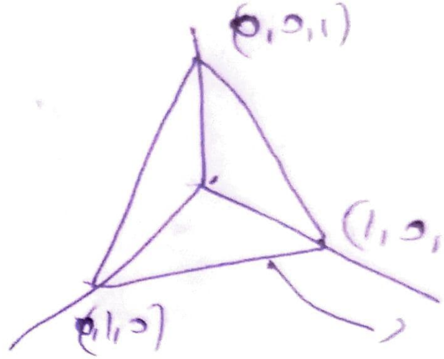
$$\nabla \times F = \begin{vmatrix} \hat{i} & \hat{j} & \hat{k} \\ \frac{\partial}{\partial x} & \frac{\partial}{\partial y} & \frac{\partial}{\partial z} \\ zx & xy & yz \end{vmatrix}$$



$$\hat{i}(z-0) + \hat{j}(0-x) + \hat{k}(y-0)$$

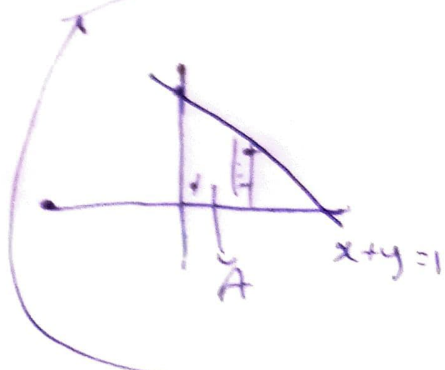
$$= z\hat{i} + x\hat{j} + y\hat{k}$$

$$\frac{x}{1} + \frac{y}{1} + \frac{z}{1} = 1$$

$$\hat{n} = \frac{\hat{i}+\hat{j}+\hat{k}}{\sqrt{3}}$$

Since curve is closed, use stokes theorem.

$$\int F \cdot dr = \iint (\nabla \times F) \cdot \hat{n}\, dS = \iint \frac{x+y+z}{\sqrt{3}} \times \frac{dx\,dy}{\frac{1}{\sqrt{3}}}$$



$$= \iint x+y+(1-x-y)\, dx\,dy \Rightarrow \iint_A dx\,dy$$

$$= \int_{x=0}^{1} \int_{y=0}^{1-x} dy\,dx = \int_{x=0}^{1} (1-x)\,dx$$

$$\Rightarrow \left[x - \frac{x^2}{2}\right]_0^1 = 1 - \frac{1}{2} = \boxed{\frac{1}{2}}$$ Ans