21. $y=x^2 \quad z=0 \quad y+z=1$

$z=1-y \qquad 1=x^2$

$y\in[x^2,1] \qquad z\in[0,1-y] \qquad x=\pm 1$

$x\in[-1,1]$

$$D=\{(x,y,z)\mid x\in[-1,1] \wedge y\in[x^2,1] \wedge z\in[0,1-y]\}$$

$$V=\int_{-1}^{1}\int_{x^2}^{1}\int_{0}^{1-y} dz\,dy\,dx = \int_{-1}^{1}\int_{x^2}^{1} 1-y\,dy\,dx = \int_{-1}^{1}\left[y-\tfrac{1}{2}y^2\right]_{x^2}^{1} dx$$

$$= \int_{-1}^{1} 1-\frac{1}{2}-x^2+\frac{1}{2}x^4\,dx = \int_{-1}^{1}\frac{1}{2}-x^2+\frac{1}{2}x^4\,dx = 2\left[\frac{x}{2}-\frac{1}{3}x^3+\frac{x^5}{10}\right]_0^1$$

$$= 2\left[\frac{1}{2}-\frac{1}{3}+\frac{1}{10}\right] = 2\left[\frac{1}{6}+\frac{1}{10}\right] = 2\left[\frac{16}{60}\right] = \frac{16}{30} = \boxed{\frac{8}{15}}$$

25. $\iiint_B \cos(xyz)\,dV \qquad B=\{(x,y,z)\mid x\in[0,1] \wedge y\in[0,1] \wedge z\in[0,1]\}$

$$\Delta V = \frac{1}{2}\cdot\frac{1}{2}\cdot\frac{1}{2} = \frac{1}{8} \qquad \frac{1}{4},\frac{3}{4}$$

$$V=\frac{1}{8}\Big[f\left(\tfrac{1}{4},\tfrac{1}{4},\tfrac{1}{4}\right)+f\left(\tfrac{1}{4},\tfrac{1}{4},\tfrac{3}{4}\right)+f\left(\tfrac{1}{4},\tfrac{3}{4},\tfrac{1}{4}\right)+f\left(\tfrac{1}{4},\tfrac{3}{4},\tfrac{3}{4}\right)+$$
$$f\left(\tfrac{3}{4},\tfrac{1}{4},\tfrac{1}{4}\right)+f\left(\tfrac{3}{4},\tfrac{1}{4},\tfrac{3}{4}\right)+f\left(\tfrac{3}{4},\tfrac{3}{4},\tfrac{1}{4}\right)+f\left(\tfrac{3}{4},\tfrac{3}{4},\tfrac{3}{4}\right)\Big]$$

$$=\frac{1}{8}\left[f\left(\tfrac{1}{4},\tfrac{1}{4},\tfrac{1}{4}\right)+3f\left(\tfrac{1}{4},\tfrac{1}{4},\tfrac{3}{4}\right)+3f\left(\tfrac{3}{4},\tfrac{3}{4},\tfrac{1}{4}\right)+f\left(\tfrac{3}{4},\tfrac{3}{4},\tfrac{3}{4}\right)\right]$$

$$=\frac{1}{8}\left[\cos\left(\tfrac{1}{64}\right)+3\cos\left(\tfrac{3}{64}\right)+3\cos\left(\tfrac{9}{64}\right)+\cos\left(\tfrac{27}{64}\right)\right]$$

$$\approx \boxed{0.985}$$