Qu.

$$F(x|\alpha,\beta) = Pr(X \le x) = \int_{-\infty}^{x} f(u|\alpha,\beta) du$$

$$f(u \mid \alpha, \beta) = \frac{\alpha \beta^{\alpha}}{u^{\alpha+1}}$$

$$F = \int_{-\infty}^{\infty} \frac{\alpha \beta^{\alpha}}{u^{\alpha+1}} du$$

$$= q \beta^{q} \int_{-\infty}^{\alpha} \frac{1}{u^{q+1}} du$$

$$= \alpha \beta^{\alpha} \int_{-\infty}^{\infty} u^{-C\alpha+1} du$$

$$\int_{-\infty}^{B} \int_{-\infty}^{\infty} U = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} U = \int_{-\infty}^{\infty} \int$$

$$= \alpha \beta^{\alpha} \int_{-\infty}^{\pi} \left[\frac{U^{-(\alpha+1)}}{-\alpha} \right]_{-\infty}^{\pi}$$

$$\beta^{\alpha} \int_{-\infty}^{\chi} \left[\frac{U}{-\alpha} \right]^{-\alpha}$$

$$|\beta|_{-\infty} \left[\frac{\alpha}{-\alpha} \right]$$

$$|\beta|^{\alpha} \left[\frac{\pi^{-(\alpha+1)+1}}{-\alpha} \right]$$

 $=\beta^{\alpha}\left[\begin{array}{c} x^{-\alpha} \\ -1 \end{array}\right]$

 $= -\beta^{\alpha} \left(\frac{1}{\chi^{\alpha}} \right)$

$$= \alpha \beta \int_{-\infty}^{\infty} \left[\frac{x}{-\alpha} \right]_{-\alpha}^{-\alpha}$$

$$= \alpha \beta \int_{-\infty}^{\alpha} \left[\frac{x}{-\alpha} \right]_{-\alpha}^{-(\alpha+1)+1} = 0$$

$$\begin{bmatrix} -\alpha \\ -\alpha \end{bmatrix}.$$

 $= -\left(\frac{\beta}{\chi}\right)^{d} \implies :: CDF = \left(-\left(\frac{\beta}{\chi}\right)^{q}\right)$

