$$\frac{HL}{D_1} = \left(B - \frac{HL^2}{4D_1}\right)\sqrt{\frac{R}{D_2}} \qquad (11)$$

$$H\left(\frac{L}{D_1} + \frac{L^2}{4D_1}\sqrt{\frac{R}{D_2}}\right) = B\sqrt{\frac{R}{D_2}}$$

$$B = H\left(\frac{L}{D_1}\sqrt{\frac{D_2}{R}} + \frac{L^2}{4D_1}\right)$$

$$\therefore C_1 = -H\left(\frac{z^2}{D_1} + \frac{L}{D_1}\sqrt{\frac{D_2}{R}} + \frac{L^2}{4D_1}\right)$$

$$|z| < L/2$$

FROM (1)

$$E = \left(-\frac{HL^2}{4D_1} + B\right)e^{\sqrt{R/D_2}\,L/2}$$

$$= \left(-\frac{HL^2}{4D_1} + H\left(\frac{L}{D_1}\sqrt{\frac{D_2}{R}} + \frac{L^2}{4D_1}\right)\right)e^{\sqrt{R/D_2}\,L/2}$$

$$= \cancel{\frac{H}{D_1}\left(-\frac{L}{4} + \sqrt{\frac{D_2}{R}} + \right.}$$

$$= \frac{HL}{D_1}\sqrt{\frac{D_2}{R}}\, e^{\sqrt{R/D_2}\,L/2}$$

(3)