

$$M_d^u(t) = \frac{f_{t,d} + u \cdot M_c(t)}{l_d + u}$$

Given:-

$$l_d = 250 \quad f_{t,d} = 2$$

$$l_t = 73695$$

$$l_c = 450000000$$

$$M_c(t) = \frac{l_t}{l_c}$$

$$\therefore M_c(t) = \frac{73695}{450000000} \\ = 0.00016376666$$

(a) $u = 100$

~~M_d^u(t) =~~

$$M_d^u(t) = \frac{2 + 100 \times 0.00016377}{250 + 100}$$

$$= 0.005761$$

(b) $u = 1000$

$$= \frac{2 + 1000 \times 0.00016377}{250 + 1000}$$

$$= 0.001731016$$

(c)

$u = 10000$

$$= \frac{2 + 10000 \times 0.00016377}{250 + 10000}$$

$$= 0.0003548$$

STAR did not appear.

$$M_d^u(t) =$$

$$\frac{0 + 10000 \times 0.00016377}{250 + 10000}$$

$$= 0.000131$$