

ASSIGNMENT - 2

AMOGH GARG

2020UCL01688

- a) P.T the o/p rates of T_3 and T_4 multiplexers are 44.736 and 274.76 Mbps.

$$\text{For } T_3 : 789 \times 7 + 69 = 5592 \text{ bits per frame}$$

$$\Rightarrow 5592 \times 8000 = 44.736 \text{ Mbps}$$

$$\text{For } T_4 : 5592 \times 6 + 793 = 34345 \text{ bits per frame}$$

$$\Rightarrow 34345 \times 8000 = 274.76 \text{ Mbps}$$

- b) Find output rate of E_2 multiplexer.

$$\text{Total Number of bits in } E_2 \text{ mul.} = 820 + 28$$

$$\text{Number of frames per second} = 9962 \text{ frames}$$

$$\therefore \text{output rate} = 9962 \times 848$$

$$\approx 8.448 \text{ Mbps}$$

* E_2 comprises 4 E_1 's at 2.048 Mbps each, plus 256 Kbps overhead.