#7 (Total 17 Points)

[1]

$$\lambda = 40 \ \mu = 30$$

i	$(\boldsymbol{\lambda/\mu})^{\boldsymbol{i}}/\boldsymbol{i}!$
0	1,0000
1	1,3333
2	0,8888
Total	**3,2221**

$$P_0 = \frac{1{,}0000}{3{,}2221} = 0{,}3104 \ (31{,}04\%)$$

[2]

$$P_2 = \frac{0{,}8888}{3{,}2221} = 0.2758 \ (27{,}58\%)$$

[3]

i	$(\boldsymbol{\lambda/\mu})^{\boldsymbol{i}}/\boldsymbol{i}!$
3	0,3951
4	0,1317

$$P_2 = 0{,}2758$$

$$P_3 = 0{,}3951/(3{,}2221 + 0{,}3951) = 0{,}1092$$

$$P_4 = 0{,}1317/(3{,}2221 + 0{,}3951 + 0{,}1317) = 0{,}0351$$

[4]

k=3 with 10,92% of calls receiving a busy signal.