Answer on Question 37838, Math, Statistics and Probability   20 requests per hour in average is the same that there are 15 request in 45 min or 1 every 3 minutes. so, probability, that there will be no request in any three minutes is

$$e^{-1}$$

Hence, if have 15 times of 3 minutes, the probability of have no request is

$$e^{-15}$$

answer is a) e^{-15}.