

Previous Year Question with Solution :

Q) In a box of 10 electric bulbs, two are defective. Two bulbs are selected at random one after the other from the box. The first bulb after selection is being put back in the box before making the second selection. The probability that both the bulbs are without defect is _____.

Soln:

Here P (without defect) = $8 / 10 = 4 / 5 = p$

P (defected) = $2 / 10$

= $1 / 5 = q$ and $n = 2, r = 2$

Hence required probability = $({}^n C_r) (p^r) (q^{n-r})$

= ${}^2 C_2 * (4/5)^2 * (1/5)^0$

= $16 / 25$