

Q.17.1

A test is conducted which is consisting of 20 MCQ with every MCQ having its 4 options out of which only one is correct. Determine the probability that a person undertaking that test has answered exactly 5 questions wrong.

Sol:

Probability of right answer =  $\frac{1}{4}$   
Probability of wrong answer =  $\frac{3}{4}$

$$\begin{aligned} \text{Probability of getting 5 wrong answer in 20 MCQ} \\ &= \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \left(\frac{1}{4}\right)^{15} \\ &= \frac{3^5}{(4)^{20}} \end{aligned}$$