**Problem Statement 17.1**

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

**Solution:**

n = 20

n-k = 5

k = 20 -5 = 15

Probability of success = Probability of finding the correct answer= s = 1/4

Probability of failure = Probability of finding the incorrect answer = 1-s = 1-1/4=3/4

So, P (exactly 5 out of 20 answers incorrect) = C(20,5)\*(1/4)^15\*(3/4)^5

=  0.0000034 (approximately)

Thus the required probability is 0.0000034 approximately.