Past Year JEE Questions

Questions

Quetion: 01

In the binomial expansion of $(a - b)^n, \quad n \geq 5$, the sum of 5th and 6th terms is zero, then a/b equals

A. $\frac{n-5}{6}$

B. $\frac{n-4}{5}$

C. $\frac{5}{n-4}$

D. $\frac{6}{n-5}$

Solutions

Solution: 01

Explanation

According to the question,

$t_5 + t_6 = 0$

$\therefore {}^nC_4.\, a^{n-4}b^4 + \left(-{}^nC_5.\, a^{n-5}b^5\right) = 0$

By solving we get,

$\frac{a}{b} = \frac{n-4}{5}$