

Chapter-10: Binomial Expansion

1. What is the co-efficient of x in the expansion of $(3+x)(1-x)^8$? [C.B.17]
 (a) -2 (b) -7 (c) -23 (d) -25 **(c)**
2. Which is the co-efficient of ' x ' in expansion of $(1+3x)^5$? [Ctg.B.17]
 (a) 1 (b) 5 (c) 10 (d) 15 **(d)**
3. What is the coefficient of x^3 in the expansions of $(1-3x)^5$? [S.B.17]
 (a) -270 (b) 270 (c) 405 (d) 450 **(a)**
4. Which is the general term of expansion $(a+b)^n$? [B.B.17]
 (a) $\binom{n}{r} a^n b^r$ (b) $\binom{n}{r} a^r b^n$
 (c) $\binom{n}{r} a^r b^{n-r}$ (d) $\binom{n}{r} a^{n-r} b^r$ **(d)**
5. In the expansion of $(1+3x)^5$, which is the co-efficient of x^2 ? [R.B.16]
 (a) 10 (b) 80 (c) 90 (d) 270 **(c)**
6. Which one is the co-efficient of x^3 in expansion $(1-\frac{x}{4})^8$? [C.B.16]
 (a) $-\frac{1}{64}$ (b) $-\frac{1}{4}$ (c) $-\frac{7}{8}$ (d) $-\frac{8}{7}$ **(c)**
7. What is the number of term in the expansion of $(1+x)^{n-1}$? [J.B.16]
 (a) $\frac{n-1}{2}$ (b) $n-1$ (c) n (d) $n+1$ **(c)**
8. What is the value of x free term in the expansion of $(x+\frac{1}{x^2})^6$? [Dj.B.17]
 (a) 1 (b) 6 (c) 15 (d) 20 **(c)**
9. What is the coefficient of x^{-2} in the expansion $(1+\frac{a}{x})^7$? [S.B.17]
 (a) $\binom{7}{0} a^2$ (b) $\binom{7}{2} a^2$ (c) $\binom{7}{3} a^3$ (d) $\binom{7}{2}$ **(b)**
10. x free term of the expansion of $(2x^2-\frac{1}{x})^8$ is—[J.B.17]
 (a) ${}^8C_4 \cdot 2^4$ (b) ${}^8C_5 \cdot 2^5$ (c) ${}^8C_3 \cdot 2^3$ (d) ${}^8C_6 \cdot 2^6$ **(a)**
11. Which one is the fifth term by the expansion of $(1+\frac{2}{x})^8$ [J.B.17]
 (a) $\frac{448}{x^4}$ (b) $\frac{112}{x^4}$ (c) $\frac{1120}{x^4}$ (d) $\frac{560}{x^4}$ **(c)**
12. How many terms in the expansion of $(a+x)^4$? [C.B.16]
 (a) 2 (b) 3 (c) 4 (d) 5 **(d)**
13. In the expansion of $(x^2+\frac{1}{x^2})^4$, what is the value of the term independent of x ? [Dj.B.16]
 (a) 4 (b) 6 (c) 8 (d) 10 **(b)**
14. Which of the following is the value of nC_0 ? [R.B.16]
 (a) 0 (b) 1 (c) n (d) $\lfloor n$ **(b)**
15. What is the value of $\frac{n \lfloor n-1}{\lfloor n-2}$ [J.B.16]
 (a) n (b) $n-1$ (c) $n(n-1)$ (d) $n-2$ **(c)**
16. What is the value of ${}^{10}C_3$? [S.B.16]
 (a) 7 (b) 30 (c) 120 (d) 240 **(c)**
17. In the expansion of $(2x+\frac{1}{x})^6$ — [R.B.17]
 i. number of term is 7
 ii. 4th term is x free
 iii. the value of x free term is 160
 Which one is correct?
 (a) i and ii (b) i and iii
 (c) ii and iii (d) i, ii and iii **(d)**
18. In the expansion of $(x^3+\frac{1}{x})^{12}$ — [C.B.17]
 i. number of middle term is 2
 ii. 7th term is the x free term
 iii. the coefficient of 5th term is ${}^{12}C_4$.
 Which one is correct?
 (a) i and ii (b) i and iii
 (c) ii and iii (d) i, ii and iii **(c)**