BINOMIAL THEOREM-MCQ

1. If in the expansion of $(1+x)^{20}$ the coefficients of rth and (r+ 4)th terms are equal, then r is equal to
(a) 7 (b) 8
(c) 9 (d) 10

2. The term without x in the expansion of $\left(2x - \frac{1}{2x^2}\right)^{12}$ *is*
(a) 495 (b) -495
(c)-7920 (d)7920

3. If rth term in the expansion of $\left(2x^2 - \frac{1}{x}\right)^{12}$ is without x, then r is equal to
(a) 8 (b) 7
(c) 9 (d) 10

4. If in the expansion of $(a+b)^n$ and $(a-b)^n$, the ratio of the coefficients of second and third terms, and third and fourth terms respectively are equal, then n is
(a) 3 (b) 4
(c) 5 (d) 6

5. If A and B are the sums of odd and even terms respectively in the expansion of $(x+a)^n$, then $(x+a)^{2n}$-$(x-a)^{2n}$ is equal to
(a) 4 (A+B) (b) 4 (A-B)
(c) AB (d) 4 AB

6. The number of irrational terms in the expansion of $\left(4^{1/5} + 7^{1/10}\right)^{45}$ is
(a) 40 (b) 5
(c) 41 (d) none of these

7. The coefficient of x^{-17} in the expansion of $\left(x^4 - \frac{1}{x^3}\right)^{15}$ is
(a) 1365 (b) - 1365
(c) 3003 (d)-3003

8. In the expansion $\left(x^2 - \frac{1}{3x}\right)^9$ of the term without x is equal to
(a) 28/81 (b) -28 /243
(c) 28/243 (d) none of these

9. If in the expansion of $(1+x)^{20}$, the coefficients of (2r+ 3)th and (r-1)" th terms are equal, then the value of r is
(a) 5 (b) 6
(c) 4 (d) 3,

10. The middle term in the expansion of $\left(\frac{2x^2}{3} - \frac{3}{2x^2}\right)^{10}$ is
(a) 251 (b) 252
(c) 250 (d) none of these

11. If in the expansion of $\left(x^4 - \frac{1}{x^3}\right)^{15}$, x^{-17} occurs in rth term, then
(a) r=10 (b) r=11
(c) r=12 (d) r=13

12. In the expansion of $\left(x - \frac{1}{3x^2}\right)^9$ the term independent of x is
(a) T_3 (b) T_4
(c) T_5 (d) none of these

13. If in the expansion of $(1+y)^n$, the coefficients of 5th, 6th and 7th terms are in AP, then is equal to
(a) 7,11 (b) 7,14
(c) (8, 16 (d) none of these

14. In the expansion of $\left(\frac{1}{2}x^{1/3} + x^{-1/5}\right)^8$) T the term independent of x is
(a) T_5 (b) T_6
(c) T_7 (d) T_8

15. If the sum of odd numbered terms and the sum of even numbered terms in the expansion of $(x+a)^n$ are A and B respectively, then the value of $\left(x^2 - a^2\right)^n$ is
(a) $A^2 - B^2$ (b) $A^2 + B^2$
(c) 4 AB (d) none of the

16. If the coefficient of x in $\left(x^2 + \frac{\alpha}{x}\right)^5$ is 270, then $\alpha =$

(a)3 (b) 4
(c)5 (d) none of these

EDUKABOOHUB
A MULTI COURSE EDUCATIONAL HUB
anansheel@abhivantra.in