**CBSE Class 11 Mathematics**

**Important Questions**

**Chapter 8**

**Binomial Theorem**

**1 Marks Questions**

1. What is the middle term in the expansion of
2. When n is a positive integer, the no. of terms in the expansion of is?
3. Write the general term .
4. In the expression of find the 3rd term from the end.
5. Expand
6. The middle term in the expansion of is?
7. Find the number of terms in the expansions of **[15]**
8. Find the coefficient of in
9. Find the term independent of
10. Expand

**4 Marks Questions**

1. Which is larger ?
2. Prove that
3. Using binomial theorem, prove that always leaves remainder 1 when divided by 25.
4. Find the 13th term in the expansion of **[18564]**
5. Find the term independent of x in the expansion of .
6. Find the coefficient of x5 in the expansion of the product **[171]**
7. Compute **[9039207968]**
8. Expand
9. Find the fourth term from the end I he expansion of
10. Find the middle term of
11. Find the coefficient of in
12. Find a positive value of m for which the coefficient of in the expansion is 6.
13. Show that the coefficient of the middle term in the expansion of is equal to the sum of the coefficients of two middle terms in the expansion of .
14. Find a if the coefficient of in the expansion of are equal.
15. Find . Hence evaluate .
16. Show that is divisible by 64, whenever m is positive integer.
17. Find the general term in the expansion of
18. In the expansion of prove that coefficients of are equal.
19. Expand .
20. Find the sixth term of the expansion if the binomial coefficient of the third term from the end is 45.
21. Find a if the 17th and 18th terms of the expansion are equal.
22. Find the term independent of x in the expansion of .
23. If the coefficient of terms in the expansion of are equal. Find r.
24. Show that the coefficient of the middle term in the expansion of is equal to the sum of the coefficient of two middle terms in the expansion of
25. Find the value of r, if the coefficient of and terms in the expansion of are equal.
26. Find the 13th term in the expansion of

**6 Marks Questions**

1. Find n, if the ratio of the fifth term from the beginning to the fifth term from the end in the expansion of .
2. The coefficients of here consecutive terms in the expansion of are in the ratio 1 : 7 : 42. Find n.
3. The second, third and fourth terms in the binomial expansion are 240, 720 and 1080 respectively. Find x, a and n.
4. If a and b are distinct integers, prove that a – b is a factor of whenever n is positive.
5. The sum of the coefficient of the first three terms in the expansion of being natural number is 559. Find the term of expansion containing
6. Show that the middle term in the expansion of is
7. In the expansion of the ratio of 7th term from the beginning to the 7th term the end is 1 : 6. Find n.
8. If the coefficient of 5th, 6th and 7th terms of the expansion of are in A.P, then find the value of n.
9. If P be the sum of odd terms and Q that of even terms in the expansion of prove that
10. If three successive coefficient n the expansion of are 220, 495 and 792 then find n.