**Binomial Theorem**

**MCQ-Single Correct**

1. The value of  +  +  +  + … +  is :

(1)  (2) 

(3)  (4)  **[2017]**

2. If the number of terms in the expansion of  x ≠ 0, is 28, then the sum of the coefficients of all the terms in this expansion, is :

(1) 2187 (2) 243

(3) 729 (4) 64 **[2016]**

3. The sum of coefficients of integral powers of x in the binomial expansion of  is :

(1)  (2) 

(3)  (4)  **[2015]**

4. If the coefficients of x3 and x4 in the expansion of ( 1 + ax + bx2)(1 – 2x)18 in powers of x are both zero, then (a,b) is equal to

(1)  (2) 

(3)  (4)  **[2014]**

5. The term independent of x in the expansion of  is

(1) 120 (2) 210

(3) 310 (4) 4 **[2013]**

6. If n is a positive integer, then  is

(1) an even positive integer.

(2) a rational number other than positive integers.

(3) an irrational number.

(4) an odd positive integer. **[2012]**

7. The remainder left out when  is divided by 9 is

(1) 0 (2) 2

(3) 7 (4) 8 **[2009]**

8. In a binomial distribution B, if the probability of at least one success is greater than or equal to , then n is greater than

(1)  (2) 

(3)  (4)  **[2009]**

9. The sum of the series  is

(1)  (2)  

(3) 0 (4)  **[2007]**

10. In the binomial expansion of  n ≥ 5 the sum of 5th and 6th terms is zero, then a/b equals

(1)  (2) 

(3)  (4)  **[2007]**

11. For natural numbers m, n if , and a1 = a2 = 10, then (m,n) is

(1) (20,45) (2) (35,20)

(3) (45,35) (4) (35,45) **[2006]**

12. The value of is

(1)  (2) 

(3)  (4)  **[2005]**

13. If the coefficient of x7 in  equals the coefficient of x-7 in , then a and b satisfy the relation

(1) a – b = 1 (2) a + b = 1

(3)  (4) ab = 1 **[2005]**

14. If x is so small that x3 and higher powers of x may be neglected, then  may be approximated as

(1)  (2) 

(3)  (4)  **[2005]**

15. The coefficient of the middle term in the binomial expansion in powers of x of and of  is the same if α equals

(1) -5/3 (2) 3/5

(3) -3/10 (4) 10/3 **[2004]**

16. The coefficient of xn in expansion of (1 + x)(1 – x)n is

(1) (n – 1) (2) (-1)n(1-n)

(3)  (4)  **[2004]**

17. If  and  then  is equal to

(1) n/2 (2) n/2 -1

(3) n -1 (4) n – ½ **[2004]**

18. The number of integral terms in the expansion of  is

(1) 32 (2) 33

(3) 34 (4) 35 **[2003]**

19. If x is positive, the first negative term in the expansion of (1 + x)27/5 is

(1) 7th term (2) 5th term

(3) 8th term (4) 6th term **[2003]**

20. The positive integer just greater than (1 + .0001)1000 is

(1) 4 (2) 5

(3) 2 (4) 3 **[2002]**

21. r and n are positive integers r > 1, n > 2 and coeffient of (r + 2)th term and 3rth term in the expansion of (1 + x)2n are equal, then n equals

(1) 3r (2) 3r + 1

(3) 2r (4) 2r + 1 **[2002]**

22. The coefficients of xp and xq in the expansion of (1 + x)p+q are

(1) equal (2) equal with opposite signs

(3) reciprocals of each other (4) none of these **[2002]**

23. If the sum of the coefficients in the expansion of  is 4096, then the greatest coefficient in the expansion is

(1) 1594 (2) 792

(3) 924 (4) 2924 **[2002]**

**Assertion – Reason Type**

1. Let S1 = , S2 =  and S3 =  **[2010]**

**Statement – I** : S3 = 55 × 29

**Statement – II :**  S1 = 90×28  and S2 = 10×28

2. **Statement-I :** . **[2008]**

**Statement-II :** 



