

5B(1-7)

EE24BTECH11055 - Sai Akhila Reddy Turpu

- 1) The coefficients of x^p and x^q in the expansion of $(1+x)^{p+q}$ are: (2002)
 - a) equal
 - b) equal with opposite signs
 - c) reciprocals of each other
 - d) none of these
- 2) If the sum of coefficients in the expansion of $(a+b)^n$ is 4096, then the greatest coefficient in the expansion is: (2002)
 - a) 1594
 - b) 792
 - c) 924
 - d) 2924
- 3) The positive integer just greater than $(1+0.0001)^{10000}$ is: (2002)
 - a) 4
 - b) 5
 - c) 2
 - d) 3
- 4) r and n are positive integers, $r > 1, n > 2$ and coefficient of $(r+2)^{th}$ term and $(3r)^{th}$ term in the expansion of $(1+x)^{2n}$ are equal, then n equals: (2002)
 - a) $3r$
 - b) $3r+1$
 - c) $2r$
 - d) $2r+1$
- 5) If $a_n = \sqrt{7 + \sqrt{7 + \sqrt{7 + \dots}}}$ having n radical signs, then by methods of mathematical induction, which is true? (2002)
 - a) $a_n > 7 \forall n \geq 1$
 - b) $a_n < 7 \forall n \geq 1$
 - c) $a_n < 4 \forall n \geq 1$
 - d) $a_n < 3 \forall n \geq 1$
- 6) If x is positive, the first negative term in the expansion of $(1+x)^{27/5}$ is: (2003)
 - a) 6th term
 - b) 7th term
 - c) 5th term
 - d) 8th term
- 7) The number of integral terms in the expansion of $(\sqrt{3} + \sqrt[8]{5})^{256}$ is: (2003)
 - a) 35
 - b) 32
 - c) 33
 - d) 34