mathcity.org
Merging man and maths

MCQs – Ch # 8: F.Sc Part 1

TEXT BOOK OF ALGEBRA AND TRIGONOMETRY CLASS XI

Available online at http://www.mathcity.org, Version: 1.0.0

Choose the correct answer.

1. If n is any positive integer then $n^2 > n+3$ for
   (a) $n \geq 2$ (b) $n \geq 3$ (c) $n \leq 2$ (d) none of these
2. $a+x$ is
   (a) a trinomial (b) a binomial (c) a monomial (d) none of these
3. In the expansion of $(a+x)^n$ the general term T_{r+1} is
   (a) $\binom{n}{r} a^{n-r}\ x^r$ (b) $\binom{n}{r} a^r x^{n-r}$ (c) $\binom{n}{r-1} a^r x^r$ (d) none of these
4. The number of the terms in the expansion of $\left(x^2 - \frac{1}{x^2}\right)^7$ is
   (a) 2 (b) 7 (c) 8 (d) 12
5. If the middle term in the expansion of $(a+x)^n$ is $\left(\frac{n}{2}+1\right)$ then n is
   (a) even (b) odd (c) prime (d) none of these
6. The first three terms in the expansion of $(1+x)^{-1}$ are
   (a) $1+x+x^2$ (b) $1-x-x^2$ (c) $-1-x+x^2$ (d) $1-x+x^2$
7. The first three terms in the expansion of $(1-x)^{-3}$ are
   (a) $1+3x+6x^2$ (b) $1-3x+6x^2$ (c) $-3-3x-6x^2$ (d) $1-3x-6x^2$
8. The sum of the odd coefficients in the $(a+x)^4$ is
   (a) 14 (b) 12 (c) 8 (d) 4
9. If n is any positive integer then 3+6+9+…+3n=
   (a) $\frac{3n(n+1)}{2}$ (b) $\frac{2n(n+1)}{3}$ (c) $\frac{n^2(n+1)^2}{4}$ (d) 3n(n+1)
10. If n is any positive integer then $2^n > 2(n+1)$ is true for all
    (a) $n \leq 3$ (b) $n < 3$ (c) $n \geq 3$ (d) $n > 3$
11. If the exponent in the binomial expansion is 6, then the middle term is
    (a) 2nd term (b) 3rd term (c) 4th term (d) 5th term
12. The expansion of $(1+2x)^{-2}$ is valid if
    (a) $|x| < \frac{1}{2}$ (b) $|x| < 1$ (c) $|x| < 2$ (d) $|x| < 3$
13. $\binom{n}{0}, \binom{n}{1}, \binom{n}{2}, ..., \binom{n}{n}$ are called
    (a)trinomial coefficients (b)binomial coefficients (c)monomial coefficients (d) none of these
14. The coefficients of the equidistance from beginning and end of the binomial expansion are
    (a) equal (b) unique (c) zero (d) none of these
15. The sum of the exponents of a and x in every term of the expansion of $(a+x)^n$ is
    (a) n+r (b) r (c) n (d) none of these
16. When n is a negative integer then $\binom{n}{0}, \binom{n}{1}, \binom{n}{2}, ..., \binom{n}{n}$ are
    (a) negative (b) positive (c) zero (d) meaningless

17. The middle term of the expansion of $\left(\frac{x}{2}+\frac{2}{x^2}\right)^{12}$ is

(a) $\frac{924}{x^6}$ (b) $-\frac{924}{x^6}$ (c) $\frac{624}{x^5}$ (d) none of these

18. $\binom{5}{0}+\binom{5}{1}+\binom{5}{2}+\binom{5}{3}+\binom{5}{4}+\binom{5}{5}=$

(a) 16 (b) 32 (c) 64 (d) none of these

19. If x is so small that its square and higher powers can be neglected then $\frac{\sqrt{4+x}}{(1-x)^3}=$

(a) $2-\frac{25x}{4}$ (b) $6-\frac{24x}{7}$ (c) $6+\frac{24x}{7}$ (d) $2+\frac{25x}{4}$

20. By means of binomial theorem $(0.97)^3=$

(a) 0.6543 (b) 0.9127 (c) -0.9127 (d) none of these

21. which term of the expansion of $\left(\frac{3}{2}x-\frac{1}{3x}\right)^{11}$ involving x^5

(a) T_2 (b) T_3 (c) T_4 (d) T_5

22. Identify the series $1+\frac{1}{3}+\frac{1.3}{3.6}+\frac{1.3.5}{3.6.9}+\ldots$ as a binomial expansion and show that its sum is

(a) $\sqrt{2}$ (b) $\sqrt{3}$ (c) $\sqrt{5}$ (d) none of these

23. The exponential of $(1-3x)^{-1}$ is valid if

(a) $|x|<1$ (b) $|x|<3$ (c) $|x|<\frac{1}{3}$ (d) all of above

24. The sum of the coefficients in the expansion of $(a+x)^5$ is

(a) 32 (b) 16 (c) 8 (d) 4

25. If n is any positive integer then $n!>n^2$ for

(a) $n>4$ (b) $n\geq 4$ (c) $n\geq 3$ (d) none of these

****

For updates visit http://www.mathcity.org

****

Made by MUHAMMAD IMRAN QURESHI

(http://www.mathcity.org/imran)