Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	Question Image	
2	A fraction in which the degree of the numerator is greater than or equal to the degree of the denominator is called	A. A proper fraction B. An improper fraction C. An equation D. An identity
3	The multiplicative inverse ofx^(-1) is	A. x B. a-2 C. 0 D. 1
4	Every real number is	A. A complex number B. A rational number C. A natural number D. A prime number
5	Question Image	
6	Consider the equation px2 + qx + r = 0 where p,q,r are real The roots are equal in magnitude but opposite in sign when	A. q = 0, r = 0,p ≠ 0 B. p = 0,qr≠ 0 C. r = 0,pq≠ 0 D. q = 0, pq≠ 0
7	If a,β are the roots of ax2+bx+c=0,the equation whose roots are doubled is	A. ay2 +2by+c=0 B. ay2+2by+4c=0 C. ay2+2by+c=0 D. ay2+by+4c=0
8	If x,y are two positive distinct numbers then	A. A>G>H B. A<G<H C. A=G=H D. None of these
9	If sin$\alpha$and cos$\alpha$are the roots of the equation px^2+ qx + r =0, then	A. p²- q²+ 2pr = 0 B. (p + r)²= q²- r² C. p²+ q²- 2pr = 0 D. (p - r)²= q²+ r²
10	If sin$\theta$and cos$\theta$are the roots of the equation ax^2- bx + c = 0, then a, b, c satisfy the relation	A. b²- a²= 2ac B. A²- b²= 2ac C. A²+ b²= c² D. B²+ a²= 2ac
11	In the expansion of (x+y)n the coefficient of 5th and 12th terms are equal then n=	A. 12 B. n=14 C. 17 D. n=15
12	If a,βare the roots of the equation x2 - 8x + p = 0 and a2 + β2= 40,then value of p is	A. 8 B. 12 C. 10 D. 14
13	If P, Q, R be the A.M., G.M., H.M. respectively between any two rational numbers a and b, then P - Q is	
14	The roots of px2 - (p-q)x-q=0 are	A. equal B. Irrational C. Rational D. Imaginary
15	The extraction of cube root of a given number is a	A. Unary Operation B. Binary Operation C. Relation D. None of these

16	Question Image	
17	Question Image	A. 1/3 B. 1 C. 3 D. None of these
18	If $ax^2 + bx + x = 0$ is satisfied by every value of x, then	A. b = 0, c = 0 B. c = 0 C. b = 0 D. a = b = c = 0
19	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 D. none of these
20	A = [3] is a/an	A. Square matrix B. Scalar matrix C. Diagonal matrix D. Identity matrix