

ECAT Mathematics Online Test

| Sr | Questions | Answers Choice |
|----|--|---|
| 1 | Question Image | |
| 2 | If z ₁ = (a,b), z ₂ =(c,d), then z ₁ z ₂ = | A. (ac,bd) B. (ac+bd, ad-bc) C. (ac-bd, ad+bc) D. (ac-bd, ad-bc) |
| 3 | If A=B, then | A. A⊂B and B⊂A B. A⊆B and B⊈A C. A⊆B and B⊆A D. None of these |
| 4 | The measure of the acute angle between the lines represented by x2 -xy -6y2 =0 is | A. 120° B. 30° C. 130° D. 45° |
| 5 | The sum of first n even number is | A. n2 B. n(n+1) C. n+1 D. n+2 |
| 6 | The sum of the roots of the equation $x^2 - 6x + 2 = 0$ is | A6 B. 2 C2 D. 6 |
| 7 | The set {0,-1} hold closure property under | A. Addition B. Both a & D. C. Multiplication D. None of these |
| 8 | Question Image | |
| 9 | If ax + bx + c =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 |
| 10 | Question Image | |
| 11 | Question Image | |
| 12 | π is the ration of | A. Area of a circle to its diameter B. Area of a circle to its radius C. Circumference of a circle to its diameter D. Circumference of circle to its radius |
| 13 | Question Image | |
| 14 | Find the geometric mean between 4 and 16 | |
| 15 | Question Image | |
| 16 | An A.P. consists of n(odd terms) and its middle term is m. then the sum of the A.P. is | A. 2 mn B. 1/2 mn C. mn D. mn ² |
| 17 | sin h x = | |
| 18 | The multiplicative inverse of -1 in the set {1-,1} is | A. 1 B1 C. ±1 D. 0 E. Does not exist |
| 19 | The solution of differential equation: | A. dy/dx+y/x = x ² is : B. 4xy = x ⁴ + c C. 4x = x ⁴ = c D. 4 y = x ⁴ + c |

The longer side of a parallelogram is 10 cm and the shorter is 6 cm. If the longer diagonal makes an angles 30° with the longer side, the length of the longer diagonal is