

Mathematics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	$f(x) = 3x^4 - 2x^2 + 7$ is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
2	f(x) = x3-x/x2+1 is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
3	$\cos h^2 x + \sin h^2 x$	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
4	$f(x) = x^3 is:$	A. an odd function B. an even function C. an implicit function D. a quadratic funtion
5	$f(x) = \sin x is$:	A. an odd function B. an even function C. an implicit function D. an exponential function
6	A function f is said to be an even if f(-x) =	A. 0 B. 1 C. f(x) Df(x)
7	xy= 2 is:	A. a constant function B. an identity function C. an improper function D. implicit function
8	A function of the form $p(x)/Q(x)$ is called:	A. Rational function B. Logarithmic function C. Exponential function D. Hyperbolic function
9	A function in which the variable appears as exponent is called:	A. An identity function B. A logarithmic function C. an exponential function D. A rational function
10	Express the perimeter P of square as a function of its area A?	A. $P = 4\sqrt{A}$ B. $P = \sqrt{A}$ C. $P = 2A$ D. $P = \pi \sqrt{A}$
11	if $f(x) = x^3 - 3x^2 + 5x - 1$, then $f(-\sqrt{2}) =$	A. 7+7√2 B. 3+3√2 C7-7√2 D3-3√2
12	If the function y=2x-3, what is the preimage of 11?	A. 11 B. 7 C. 5 D. 2
13	For $f(x) = x^2$, what is the value of $f(a) + f(-a)$ in terms of a?	A. 3a2 B. 2a2 C. 2a D7a
14	For $f(x) = x^2 + px + 1$, if $f(3) = 3$ then $P =$	A. 3/7 B2/5 C7/5 D7/3
15	The largest possible domain of the function: $y=\sqrt{(x\)}$ is:	A. (0,∞) B. 12 C. (3, 12) D. (3,∞)

17 If x is an image of y under the function f. This can be written as A y = f(y) co. X = f(y) co.	16	What is range of the function g (x) = $ x-3 $?	A. [0 ,∞) B. (0 ,∞) C. (-∞ ,3] D. [0,∞)
The value of x which is unchanged by the mapping in the function defined by f; x2 x² + 5x - 5	17	If x is an image of y under the function f. This can be written as	B. $f(x) = 0$ C. $x = f(y)$
Every relation, which can be represented by a linear equation in two variables, represents a C Function D. Graph 20	18		B. 5 C5
20	19	Every relation, which can be represented by a linear equation in two variables, represents a	B. Cartesian product C. Function
21 If the domain of the function f: x□ 2x³+ 1 is {-1,2,3}, the range of the function is B. {1,3,9} C. {-1,-2,-3} D. {3,9,19} 22 The domain of the function xx² - 4 is given by A R B. R + 2 C. R - (x□ + x□ + 2) D. R	20	invented a symbolic way to write the statement "y is a function of x" as y= $\overline{f(x)}$	B. Newton C. Euler
22 The domain of the function $x/x^2 - 4$ is given by 23 The domain the function: $f(x) = x^2$ is given by 24 In the function $f(x) = x^2$ is given by 25 The domain of $f(x) = x^2$ is given by 26 In the function $f(x) = x^2$ is given by 27 The domain of $f(x) = x^2$ is given by 28 In the function $f(x) = x^2$ is given by 29 If a variable $f(x) = x^2$ is given by 29 The domain of $f(x) = x^2$ is given by 29 The domain of $f(x) = x^2$ is given by 29 The domain of the function $f(x) = x^2$ is given by 29 The domain of the function $f(x) = x^2$ is given by 29 The domain of the function $f(x) = x^2$ is given by 29 The locus of the centre of a circle which touches two given circles externally is: 20 A a parabola 21 A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. B. Set of all non-negative Real numbers A. R. R. B. Set of all non-negative Real numbers A. R. R. B. Set of all non-negative Real numbers A. R. R. B. Set of all non-negative Real numbers A. R. R. Set of all non-negative Real numbers A. R. R. Set of all non-negative Real numbers A. R. R. Set of all non-negative Real numbers A. R. R. Set of all non-negative Real numbers A. R. R. Set of all non-negative Real numbers A. R. R. Set of all numbers A. R. R. Set of all numbers A. R. R. Set of all no	21	If the domain of the function f: $x = 2x^3 + 1$ is $\{-1,2,3\}$, the range of the function is	B. {1,3,9} C. {-1,-2,-3}
The domain the function: f(x) = x² is given by B. Set of all non-negative Real numbers C. R-sup>-1-t/sup> D. None of these 24 In the function f: A□B, the elements of a are called B. Pre-images B. Pre-images C. ranges D. Parameters 25 The domain of y = √(x²2-9) is B. (0, +∞) D. (0, ∞) 26 If a variable y dependents on a variable x in such a way that each value of x determines exactly one value of y, then we say that 27 A function from A to B is denoted by A function from A to B is denoted by B. f: A→ B B. f: A→ B B. f: A→ B D. f → A → B B. fi B→ A C. f. f. A→ B D. f. A→ B B. f. B→ A C. f. f. A→ B B. f. B→ A C. f. f. A→ B B. f. B→ A C. f. f. A→ B B. f. B→ A C. f. f. A→ B B. f. B→ A C. f. f. A→ B B. f. B→ B B. f. B→ A C. f. f. A→ B B. f. B→ B B. f. B→ A C. f. f. A→ B B. f. B→ B B. f.	22	The domain of the function x/x^2 -4 is given by	B. R + 2 C. [R - (<u>+</u> 2)
24 In the function f: A□B, the elements of a are called C. ranges C. ranges D. Parameters 25	23	The domain the function : $f(x) = x^2$ is given by	B. Set of all non-negative Real numbers C. R ⁻¹
The domain of y = √(x*2-9) is B. (0, +∞) C. (-∞, -3) U (3, +∞) D. (0, ∞) 26 If a variable y dependents on a variable x in such a way that each value of x determines exactly one value of y, then we say that 27 A function from A to B is denoted by A function from A to B is denoted by A function from A to B is denoted by A function from A to B is denoted by A r is the function of v B. v is the function of v B. v is the function of v B. v is the function of r C. π is independent variable D. None of these 29 The locus of the centre of a circle which touches two given circles externally is: A a hyperbola B. an ellipse C. a circle D. a parabola B. an ellipse C. a circle	24	In the function f: $A \square B$, the elements of a are called	B. Pre-images C. ranges
26 If a variable y dependents on a variable x in such a way that each value of x determines exactly one value of y, then we say that 27 A function from A to B is denoted by 28 If the value of the sphere, v =4/3πr², then the which of the following statement is true? 29 The locus of the centre of a circle which touches two given circles externally is: 20 An ellipse slides between two lines at right angles to one another. The locus of its centre is: 29 B. y is a function of x C. y is independent variable D. x is rel valued function A. f: A→ B B. f: B→ A C. f: → A ⋅ B D. f → A → B A. r is the function of v B. v is the function of π C. π is independent variable D. None of these A. a hyperbola B. an ellipse C. a circle D. a parabola B. an ellipse C. a circle C. a circle C. a circle	25	The domain of $y = \sqrt{(x^2-9)}$ is	B. $(0, +\infty)$ C. $(-\infty, -3) \cup (3, +\infty)$
27 A function from A to B is denoted by 28 if the value of the sphere, v =4/3πr², then the which of the following statement is true? 29 The locus of the centre of a circle which touches two given circles externally is: A. r is the function of v B. v is the function ofπ C. π is independent variable D. None of these A. a hyperbola B. an ellipse C. a circle D. a parabola An ellipse slides between two lines at right angles to one another. The locus of its centre is: A. a parabola B. an ellipse C. a circle C. a circle D. a parabola	26		B. y is a function of xC. y is independent variable
if the value of the sphere, v =4/3πr², then the which of the following statement is true? B. v is the function ofπ C. π is independent variable D. None of these A. a hyperbola B. an ellipse C. a circle D. a parabola A. a parabola A. a parabola B. an ellipse C. a circle D. a parabola A. a parabola C. a circle D. a parabola C. a circle D. a parabola C. a circle D. a parabola C. a circle	27	A function from A to B is denoted by	B. f: $B \rightarrow A$ C. f: $\rightarrow A$:B
The locus of the centre of a circle which touches two given circles externally is: B. an ellipse C. a circle D. a parabola An ellipse slides between two lines at right angles to one another. The locus of its centre is: A. a parabola B. an ellipse C. a circle C. a circle	28	if the value of the sphere, v =4/3 π r ² , then the which of the following statement is true?	B. v is the function of π C. π is independent variable
An ellipse slides between two lines at right angles to one another. The locus of its centre is: B. an ellipse C. a circle	29	The locus of the centre of a circle which touches two given circles externally is:	B. an ellipse C. a circle
	30	An ellipse slides between two lines at right angles to one another. The locus of its centre is :	B. an ellipse C. a circle