SYMBOLS

S.No.	Symbol	Meanings
	ARITHMETIC & ALGEBRA	
1	=	Equal to
2	≠	Not Equal to
3	<	Less Than
4	>	Greater Than
5	≤	Less Than (or) Equal to
6	≥	Greater Than (or) Equal to
7	≯	Not greater Than
8	≮	Not Less Than
9	+	Addition / Plus
10	−	Subtraction /difference / Minus
11	X , ·	Multiplication / Cross, Dot
12	÷ , / , —	Division.
13	±	Plus or Minus.
14	∓	Minus or plus
15	:	Ratio
16.	: :	Proportion
17	%	Percentage
18	>>	Much greater than
19	∝	Proportional to
20	$\bar{x}$	Average (Mean) value of x
21.	$\sqrt{x}$	Square root of x
22.	$\sqrt[3]{x}$	Cube root of x

S.No.	Symbol	Meanings
23	$\sqrt[n]{x}$	nth root of x
24	$\|x\|$	Modulus of x (or) Absolute value of x
25	n!	Factorial of n
26	Σ	Summation
27	∞	Infinity, Undefined
28	$x < y$	x is less than y
29	$x \leq y$	x is less than (or) equal to y
30	$\log_{10} x$ or $\log x$	Common (briggsian) logarithm of x
31	$\log_e x$ or $\ln x$	Natural (Napierian) logarithm of x
32	~	Similar to
33	$\approx$	Approximately Equal to
34	$\cong$	Congruent to
35	$\equiv$	Identical to/Identical with
36	$\Rightarrow$	Implies that
37	$\Leftarrow$	is Implies by
38	$\Leftrightarrow$	Implies and is implied by or if and only if (iff)
39	$\longrightarrow$	Approaches or Tends to
40	$\log^{-1}$	Antilogarithm
42	[ ]	Matrix
42	| |	Determinant
	SETS	
43	: , |	Such that
44	{ }	Set

S.No.	Symbol	Meanings
45	$\forall$	for all values of (extential quantifier)
46	$\in$	Belong to/is a member of
47	$\notin$	Does not belong to/Not a Member of
48	$\exists$	There is
49	$\therefore$	Therefore
50	$\because$	Because (or) Since
51	$\subseteq$	Subset
52	$\not\subseteq$	Not a Subset
53	$\cup$	Union
54	$\cap$	Intersection
55	U	Universal Set / Replacement Set
56	$\subset$	Proper Subset
57	(x, y)	Order pair
58	R	Binary Relation
59	A′ / A^c	Complement of A
60	$\supseteq$	is a super set of
61.	$\exists$	Universal quantifier (Used as "there exists")
62.	$\wedge$	Conjunction (used as "And" or "But")
63	$\vee$	Disjunction (used as "OR")
64	ϕ	Null (empty) Set.
65	$A \Delta B$	Symmetric difference of A, B
66	A – B, A / B	difference of A, B
67	n (A) / O (A)	Number of elements in Set A

S.No.	Symbol	Meanings
68	$A \subseteq B$	A is a Subset of B.
69	$A \longrightarrow B$	A tends to B / A is Mapped onto B.
70	$\mathbb{W}$	Set of Whole Numbers
71	$\mathbb{N}$	Set of Natural Numbers
72	$\mathbb{C}$	Set of Complex Numbers
73	$\mathbb{Z}$	Set of integers
74	$\mathbb{R}$	Set of Real Numbers
75	$\mathbb{Q}$	Set of Rational Number
76	$\mathbb{I}$	Set of Irrational Number
77	a^{-1}	Inverse of element a
78	a * b	binary operation b/w elements a & b
79	e	Identity element of a/A.
	GEOMETRY & TRIGONOMETRY	
80	m	measure
81	$\angle$, m$\angle$	(measure of an) angle
82	Δ	Triangle (or) Delta
83	$\parallel$	parallel to
84	$\perp$	perpendicular to
85	$\parallel^m$	parallelogram
86	$\longleftrightarrow$	one – one corresponding b/w
86	$\bullet\!\!-\!\!-\!\!\bullet$	Line segment
88	$\longleftrightarrow$	Straight line (or) line
89	$\bullet\!\!-\!\!-\!\!\rightarrow$	Ray
90	$^\circ$	degree (used for plane angle)

S.No.	Symbol	Meanings
91	rad	Radians (used for plane angle)
92	Sr	Steradian (used for solid angle)
93	rev	revolution
94	Sin	Sine
95	Cos	Cosine
96	tan	tangent
97	Cot, ctn	Cotangent
98	Sec	Secant
99	Cosec, Csc	Cosecant
100	Sin^{-1}, arc Sin	Inverse of Sine
101	Cos^{-1}, arc Cos	Inverse of Cosine
102	tan^{-1}, arc tan	Inverse of tangent
103	Cot^{-1}, arcCot	Inverse of Cotangent
104	Sec^{-1}, arc Sec	Inverse of Secant
105	$Cosec^{-1}$. arc Cosec	Inverse of Cosecant
	CALCULUS	
106	Δx	An increment of x
107	dx	differential of x (or) infinitesimal increment of x
108	$\frac{d}{dx}$	differential operator
109	f (x)	function of independent variable x
110	f (x), g (x), h (x)	Functional Notation
111	f^{-1}, g^{-1}, h^{-1}	Inverse – functional Notation
112	$f : A \to B$	function from A to B

S.No.	Symbol	Meanings
113	$\{a_n\}, < a_n >$	Sequence of $a_1, a_2, \ldots\ldots\ldots, a_n$
114	$\exists\, x \in A$	there exists atleast one member x in A.
115	$\forall\, x \in A$	for all members of A.
116	$\{x \in A \mid f(x)\}$	the set of members of A Satisfying f (x)
117	$f : x \mapsto f(x)$	function sends a typical element x to f (x)
118	D (f), dom f	domain of function : the Set $\{ x \mid \exists\, f(x) \}$
119	R (f), im f	Range (image) of function: the Set $\{ f(x) \mid x \in D(f) \}$
120	fog	Composite function of f and g
121	I_A	identity map (function) on A : $I_A(x) = x\ \forall\, x \in A$
122	$f(x)\|_a$, $(f(x))_a$	value of function of x at a
123	$f'(x)$	Derivative of f (x) w.r to independent variable x
124	$f''(x)$	2^{nd} derivative of f (x) w.r to independent variable x
125	$f^{(n)}(x)$	nth derivative of f (x) w.r to independent variable x
126	[a, b]	Closed interval
127	(a, b)	Open interval
128	(a. b] , [a, b)	Semi – Open interval
129	$\lim_{x \to a} f(x)$	limit of function of x as $x \longrightarrow a$
130	$\int f(x)\, dx$	Indefinite integral of f (x)
131	$\int_a^b f(x)\, dx$	definite integral of f (x) with limits a, b

GREEK LETTERS		
132	α	Alpha
133	β	Beta
134	γ	Gamma
135	θ	Theta
136	δ	Sigma
137	π	Pie
138	ψ	Psi
139	μ	Mu
140	ω	Omega
141	λ	Lamda
142	ι	iota
143	η	Eta
144	ζ	Zeta
145	ϕ	Phi
146	ν	Nu
147	ρ	rho
148	ξ	Xi
149	ϵ	Epsilon
150	τ	Tau