ECAT Pre Engineering Entry Test

Sr	Questions	Answers Choice
1	If a is any real number and a = a is called	A. symmetric property B. Trichotomy Properties C. Transitive Property D. Reflexive Properties
2	The order axioms are satisfied by set of	A. C B. C and R C. R D. None of these
3	Any recurring decimal represents a	A. Irrational no B. Integer C. Rational no D. None of these
4	A prime number can be a factor of a square only if it occurs in the square at least	A. Once B. Thirce C. Twice D. None of these
5	√x = _____ if is a prime number	A. Rational no B. Natural no C. Irrational no D. Complex no
6	∀x, y ∈ R, either x = y or x > y or x < y is	A. Transitive property B. Reflexive property C. Trichotomy property D. None of these
7	∀a,b,c∈R and c>0,then	A. a>b ⇒ ac < bc B. a>b ⇒ ac > bc C. a<b ⇒ ac > bc D. None of these
8	∀x,y,z ∈ R and z 0,then	A. x > y ⇒ xz > yz B. x<y ⇒ xz < yz C. x < y ⇒ xz > yz D. None of these
9	∀x,y∈ R and x < 0, y < 0, which one is true	A. xy < o B. xy = o C. xy > o D. None of these
10	2.333....is a	A. Irrational no B. Complex no C. Rational no D. None of these
11	A non-terminating non_recurring decimal represents an	A. Irrational no B. Both a & c C. Rational no D. None of these
12	If in a set of real no a is multiplicative identity then	A. a,a = a² B. a,a = 1 C. a,a = 0 D. None of these
13	If in a set of real no a is additive identity then	A. a+a = 2a B. a+a = 1 C. a+a = 0 D. None of these
14	The set {0,-1} hold closure property under	A. Addition B. Both a & c C. Multiplication D. None of these
15	The square roots of negative numbers is called	A. Real no B. Complex no C. Positive no D. Negative no

16	A subset of set of complex number whose elements are of the form (a,0) is called	A. Real number B. Complex number C. Rational number D. Irrational number
17	$\forall$ z $\in$ C, multipliucative is	A. (1,1) B. (1,0) C. (0,1) D. None of these
18	If z_1 = 1 + 2i, z_2 = 3 + 4i then	A. z₁ > z₂ B. z₁ = z₂ C. z₁ < z₂ D. None of these
19	For any real numbers x,y,xy=o $\Rightarrow$	A. x $\neq$ 0 $\wedge$ y $\neq$ 0 B. x = 0 $\vee$ y = 0 C. x = 0 D. y = 0
20	$\forall$a,b,c$\in$R, a >b $\wedge$ b>c $\Rightarrow$ a >c is	A. Trichotomy property B. Transitive property C. Symmetric property D. Additive property
21	$\forall$x,y$\in$R and x> 0 , y>0, if x > y	D. None of these
22	If z=(x,y) then z has no multiplicative inverse when	A. x $\neq$ 0, y = 0 B. x = 0, y = 0 C. x = 0, y $\neq$ 0 D. None of these
23	If z = (x,y) , then $\bar{z}$ =	A. (-x,y) B. (x,-y) C. (-x, -y) D. None of these
24	Question Image	
25	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)
26	*i* is equal	A. (1 , 0) B. (0 , 1) C. (1 , 1) D. (0 , 0)
27	$i^{-(4n+2)}$ = ----------	A. 1 B. i C. -1 D. -i
28	Question Image	D. None of these
29	Question Image	
30	Question Image	
31	Question Image	
32	Question Image	
33	Question Image	
34	Question Image	
35	Question Image	
36	Question Image	
37	Question Image	
38	Question Image	
39	Question Image	
40	Question Image	
41	The set of natural no. is closed under	A. multiplication B. subtraction C. difference D. division

42	Question Image	
43	Question Image	
44	Question Image	
45	Question Image	
46	Question Image	
47	Question Image	A. 1 B. -i C. i D. 0
48	Question Image	
49	Question Image	
50	Question Image	
51	Question Image	A. -8 B. 8 C. 8i D. 32
52	Question Image	
53	Question Image	
54	Question Image	A. 1 B. 3 C. 2-i D. -1
55	Question Image	B. 1 D. -1
56	Question Image	
57	Question Image	A. are real no B. both are not real C. are imaginary no D. both are imaginary
58	Question Image	
59	Question Image	
60	If a 1-1 correspondence can be established b/w two sets A and B, then they are called	A. Equal sets B. Equivalent sets C. Over lapping sets D. None of these
61	The solution of equation x2 + 2 = 0 in the set of real number is	A. Infinite set B. Singleton set C. Null set D. None of these
62	For any two sets A and, A ⊆ B if	A. $x \in A \Rightarrow x \in B$ B. $x \notin A \Rightarrow x \notin B$ C. $x \in A \Rightarrow x \notin B$ D. None of these
63	If A is a subset of B and B contains at least one element which is not an element of A, then A is said to be	A. Improper subset of B B. Super set of B C. Proper subset of B D. None of these
64	The set of rationals numbers between 0 and I is	A. Finite B. Null set C. Infinite D. None of these
65	$\{x \mid x \in R \wedge x \neq x\}$ is a	A. Infinite set B. Null set C. Finite set D. None of these
66	The set $\{x \mid x \in N \wedge x-4=0\}$ in tabular form is	A. {-4} B. {0} C. {} D. None of these
		A. {0} B. {}

67	The set which has no proper subset is	B. {} C. {∅} D. None of these
68	If the intersection of two sets is non-empty, but either is a subset of other are called	A. Disjoint sets B. Over lapping C. Equal sets D. None of these
69	If A∩B=B, then n(A∩B) is equal to	A. n(a) B. n(a)+n(c) C. n(c) D. None of these
70	If B-A≠φ , then n(B-A) is equal to	A. n(a)+n(c) B. n(c)-n(a) C. n(a)-n(c) D. None of these
71	The logic in which every statement is regarded as true or false and no other possibility is called	A. Aristotelian login B. Inductive logic C. Non-Aristotelian logic D. None of these
72	The contra positive of p → q is	A. q → p B. ~q→~q C. ~p→~q D. None of these
73	Onto function is also called	A. Binjective function B. Injective function C. Surjechive function D. None of these
74	If f:A→B is an injective function and second elements of no two of its ordered pairs are equal, then f is called	A. 1-1 and onto B. Bijective C. 1-1 and into D. None of these
75	Question Image	D. None of these
76	Question Image	A. Addition B. Subtraction C. Multiplication D. None of these
77	The geometrical representation of a linear function is	A. Circle B. Parabola C. Straight lie D. None of these
78	A monoid (G, *) is said to be group if	A. have identity element B. is commutative C. have inverse of each element D. None of these
79	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
80	Question Image	D. None of these
81	The function whose range consists of just one element is called	A. One-One Function B. Identity Function C. Onto Function D. Constant Function
82	The set X is	A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these
83	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
84	If B⊆ A, then complement of B in A is = ----------	A. A-B B. A∩B C. B-A D. A∪B
85	(A∪B)∪C= ----------	A. A∩B(B∪C) B. A∪(B∪C) C. A∪(B∩C) D. None of these

86	A∪(A∪B)= ----------	A. B B. A C. A∪B D. None of these
87	For a set A, A∪Ac= ----------	A. A B. ⌀ C. Ac D. U
88	(A∩Bc)c= ----------	A. Ac∪Bc B. Ac∪B C. Ac∩B D. None of these
89	A conjunction of two statement p and q is true only if	A. p is true B. q is true C. Both p and q are true D. both p and q are false
90	A disjunction of two statement p and q is true	A. p is false B. q is false C. Both p and q are false D. One of p and q is true
91	A conditional is regarded as false only when the antecedent is true and consequent is	A. True B. False C. Known D. Unknown
92	The negation of given number is a	A. Binary operation B. Unary operation C. Relation D. None of these
93	The extraction of cube root of a given number is a	A. Unary Operation B. Binary Operation C. Relation D. None of these
94	The identity element of a set X with respect to intersection in P(x) is	A. X B. Does not exist C. ⌀ D. None of these
95	Z is a group under	A. Subtraction B. Multiplication C. Addition D. None of these
96	Group of none-singular matrices under multiplication is	A. None-Abelian group B. Semi group C. Abelian group D. None of these
97	Question Image	A. a-b=ab B. ab=a C. a+b=ab
98	Question Image	A. A onto B B. both a & c C. A into B D. none of these
99	Power set of difference set N-W is	A. Empty set B. Infinite set C. Singleton set D. {0,⌀}
100	Which conjunction is not true ?	
101	Which symbolic notation represent unary operation ?	A. - B. ∨ C. ∧ D. ⇔
102	Identity w.r.t intersection in a power set of any set is	A. ⌀ B. Set itself C. Singleton set D. {0}
103	Under multiplication, solution set of is	A. Groupoid B. Abelian group C. Semi group D. All of these
104	Question Image	

A. 3K

105	Question Image	B. K2 C. K3 D. K
106	Question Image	
107	Question Image	A. (2x4) B. (2x7) C. (2x3) D. (7x2)
108	Question Image	A. 5 B. 15 C. 10 D. 20
109	Question Image	A. I3 B. rI3 C. r D. none
110	Question Image	A. 16 B. 256 C. 64 D. 1024
111	Question Image	A. (2x+a+b+c) B. (a+b+c) C. (a+b+c+x) D. 0
112	Question Image	D. all
113	Question Image	
114	If A is skew Hermitian Matrix then which of the following is not skew Hermitian matrix	A. A2 B. A5 C. A3 D. A7
115	Which of the following is skew symmetric matrix	
116	Question Image	A. k3 B. 0 C. 3k D. k6
117	Question Image	A. 5 C. -5 D. none
118	Rank of matrix [1 3 5 0] is	A. 1 B. 3 C. 2 D. 4
119	Question Image	
120	Question Image	D. all are correct
121	Question Image	
122	Question Image	
123	Question Image	
124	Question Image	D. all are correct
125	A = [3] is a/an	A. Square matrix B. Scalar matrix C. Diagonal matrix D. Identity matrix
126	If A = [aij]mxpand B =[aij]pxnthen order of BA is	A. m x n B. p x n C. n x m D. None of these
127	Matrix multiplication is	A. Commutative B. Not commutative C. Not associative D. Not distributive
128	If A is a non-singular matrix then adj A is	A. Non-singular B. Symmetric C. Singular

		C. Singular D. Non defined
129	A non-homogeneous linear system AX = B has no solution if	A. |A| = 0 B. |A|≠ 0 C. Rank (a) = no of variables D. Rank > no of variables
130	Every identity matrix is	A. Row-vector B. Scalar C. Column-vector D. All
131	If A and B are skew-symmetric then (AB)t is	A. At Bt B. AB C. -AB D. BA
132	If the matrices A and B have the order 1 x 10 and 10 x 1 then order of AB is	A. 1 x 1 B. 1 x 10 C. 10 x 10 D. 10 x 1
133	The matrix A = [aij]mxn with m≠n is	A. Rectangular B. Symmetric C. Square D. None
134	The matrix A = [aij]1xn is a	A. Vector B. Rectangular matrix C. Column vector D. Square matrix
135	The matrix A = [aij]mxn with m ≠n is always	A. Symmetric B. Hermition C. Skew-symmetric D. None
136	A diagonal matrix is always	A. Identity B. Triangular C. Scalar D. Non-singular
137	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
138	If one root of 5x2 + 13x + k = 0 be the reciprocal of the other root the value of k is	A. 0 B. 2 C. 1 D. 5
139	The roots of the equation 4x - 3.2x+2 + 32 = 0 would include	A. 1 and 3 B. 1 and 4 C. 1 and 2 D. 2 and 3
140	The two parts into which 57 should be divided so that their product is 782 are	A. 43,14 B. 34,23 C. 33,24 D. 44,13
141	If x - 1 is a factor of x4 - 5x2 + 4 then other factor is	A. (x + 2)2(x - 1) B. (x + 2)(x - 1)2 C. (x+2)(x2- x- 2) D. (x + 2)2(x - 1)2
142	(1+w)(1+w2)(1+w4)(1+w8)....50 factors	A. 0 B. -1 C. 1 D. 2
143	A polynomial of arbitrary degree	A. f(x) = o B. f(x) = x C. f(x) = a D. f(x) = ax + b,a ≠ 0
144	The roots of ax2 + bx + c = 0 are always unequal if	A. b2 - 4ac = 0 B. b2- 4ac ≠ 0 C. b2- 4ac > 0 D. b2- 4ac ≥ 0
145	The sum of the roots of the equation x2 -6x +2 = 0 is	A. -6 B. 2 C. -2 D. 6
		A. 4

146	The positive value of k for which the equation x2 + kx + 64 = 0 has one of the roots 0	B. 64 C. 8 D. All values of k
147	If a,β are the roots of the equation x2 + kx +12 = 0 such that a - β = 1, the value of k is	A. 0 B. ±1 C. ±5 D. ±7
148	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
149	If the equation x2+2x-3=0 and x2+3x-k=0 have a common root then the non - zero value of k is	A. 1 B. 3 C. 2 D. 4
150	The condition for ax2 + bx c to be expressed as the product of linear polynomials is	A. b4 - 4ac =0 B. b4- 4ac ≥0 C. b4- 4ac <0 D. b4= 4ac
151	The expression x2 - x + 1 has	A. One proper linear factor B. No proper linear factor C. Two proper linear factors D. None of these
152	The value of x for which the polynomials x2 - 1 and x2 -2x + 1 vanish simultaneously is	A. 2 B. 1 C. -1 D. -2
153	(x +a)(x +b)(x +c)(x +) = k, k≠0 is reducible to quadratic form only if	A. a+b=c+d B. a+c=b+d C. a+d=b+c D. All are correct
154	If w+w2 is a root of (x+1)(x+2)(x+3)(x+4) = k, then	A. k=0 B. k=1 C. k=w D. k=w2
155	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
156	The roots of ax2+bx+c=0 are	A. Rational ⇔ b2 -4 ac ≥ 0 B. Irrational ⇔ b2-4 ac > 0 C. Real ⇔ b2-4 ac ≠ 0 D. Rational⇔ b2-4 ac = 0
157	The roots of (b-c)x2+(c-a) x+a-b=0 are equal if	A. 2b = a+c B. 2a = b+c C. 2c = a+b D. a + b + c =0
158	The roots of px2 - (p-q)x-q=0 are	A. equal B. Irrational C. Rational D. Imaginary
159	A sequence is a function whose domain is	A. N B. Subset of N C. R D. None of these
160	The domain of a finite sequence is a	A. Set of natural numbers B. R C. Subset of N D. Proper subset of N
161	The domain of an infinite sequence is a	A. Set of natural numbers B. R C. Subset of N D. None of the above
162	Which one represents a sequence	A. an B. Sn C. a(n) D. {an}
163	An indicated sum of terms of a sequence is represented by	A. Sn B. an C. S(n) D. {Sn}

164	An infinite sequence has no	A. nth term B. Last term C. Sum D. None of these
165	The formula an = a +(n-1)d for an A.P is called	A. nth term of an A.P B. Sum of first n terms C. A,M between a and b D. None of the above
166	The formula an = arn-1represents	A. nth term of G.P B. Sum of the first n terms C. G.M between a and b D. None of these
167	If G is a G.M between a and b then a,G,b are in	A. A.P B. H.P C. G.P D. None of these
168	The three consecutive numbers a,√ab,b are in	A. G.P B. H.P C. G.M D. None of these
169	A Geometric Series is divergent only if	A. |r|>1 B. |r|≥1 C. |r|=1 D. None of these
170	A Series which does not coverage to a Unique sum is called	A. Harmonic Series B. Oscillatroy Series C. Arithmetic Series D. None of these
171	A sequence whose reciprocal is an A.P is called	A. Oscillator B. H.P C. G.P D. None of these
172	A,G,H are in	A. A.P B. G.P C. H.P D. None of these
173	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
174	If x,y are two -ve distinct numbers then	A. A>G>H B. A<G<H C. A=G=H D. None of these
175	If all members of a sequence are real numbers then it is called	A. A.P B. Real Sequence C. G.P D. None of these
176	an -an-1, ∀n∈N∧n>1 in an A.P is called	A. Common difference B. nth term C. Common ratio D. None of these
177	In an A.P,a +(n-a)d is	A. 1st term B. General term C. Last term D. None of these
178	If A is such that a,A,B are in A.P then A is called	A. A.M B. Common ratio C. Common difference D. None of these
179	For three consecutive terms in A.P middle term is called	A. A.M B. nth term C. Central term D. None of these
180	an - an-1 will be common difference in an A.P if	A. n = 1∀n∈ N B. n>1∧n∈N C. n∈Z D. None of the above
181	The sum of indicated terms of a sequence is called	A. Arithmetic series B. Series C. Harmonic series D. None of these

		D. None of these
182	The sum of infinite numbers of terms of an arithmetic series is	A. Finite B. Infinite C. May or may not finite D. None of these
183	If Sn is a definite number as n → ∞,then the geometric series is	A. Convergent B. Divergent C. Oscillatroy D. None of these
184	An infinite arithmetic series is always	A. Convergent B. Oscillatory C. Divergent D. None of these
185	For an arithmetic series to be convergent it is necessary that the series has	A. Finite terms B. d<0 C. Infinite terms D. None of these
186	For an A.P common difference d	A. Can be zero B. May or may not zero C. Cannot be zero D. None of these
187	How many numbers are there between 103 and 750 which are divisible by 6	A. 125 B. 107 C. 108 D. 113
188	The sum of first 60 natural numbers is	A. 1830 B. 3660 C. 1640 D. 1770
189	The sum of all 2 digit number is	A. 4750 B. 3776 C. 4895 D. 4905
190	Which term of the A.P 5,8,11,24.....is 320	A. 104th B. 106th C. 105th D. 64th
191	The5thand 13th terms of an A.P are 5 and-3 respectively The first term of the A.P is	A. 1 B. -15 C. 9 D. 2
192	The nth term of an A.P is (3n+5) Its 75th term is	A. 26 B. 7 C. 21 D. Cannot be determined
193	The sides of a right angled triangle are in A.P The ratio of sides is	A. 1:2:3 B. 3:4:5 C. 2:3:4 D. 5:8:3
194	The sum if 1,3,5,7,9..... up to 20 terms is	A. 400 B. 472 C. 563 D. 264
195	The sum of all odd numbers between 100 and 200 is	A. 6200 B. 7500 C. 6500 D. 3750
196	The sum of all positive integral multiple of 5 less than 100 is	A. 950 B. 760 C. 1230 D. 875
197	The sum of all even numbers less than 100 is	A. 2450 B. 2352 C. 2272 D. 2468
198	Arithmetic mean between 14 and 18 is	A. 16 B. 17 C. 15 D. 32
199	How many terms of the A.P 3,6,9,12,15.....must be taken to make the	A. 8 B. 6

	sum 108	C. 7 D. 36
200	An event having more than one sample point is called	A. Certain event B. Compound event C. Simple event D. None
201	If A and B are two disjoint events then	A. P(A∪B)=P(A)+P(B) B. P(A∪B)=P(A)-P(A∪B) C. P(A∪B)=P(A)or P(B) D. None
202	nCn-r is equal to	A. n! B. n-1Cr C. nCr D. None of these
203	The number of combinations of 10 different objects taken 8 objects at a time is	A. 90 B. 45 C. 55 D. 50
204	If S is a sample space and event set E = S then P(E) is	A. >0 B. 1 C. <1 D. 0
205	If S is a sample space and event set E =Φ then P(E) is	A. >0 B. 1 C. <1 D. 0
206	The probability that a slip of numbers divisible by 4 is picked from the slips of number 1,2,3,4,.....10 is	A. 1/5 B. 2/5 C. 1/10 D. 3/10
207	Product of any n consecutive positive integers is divisible by	A. n B. √n C. n! D. None
208	probability of a certain event is	A. 0 B. -1 C. 1 D. ∞
209	If A is an event then which of the following is true	A. P(A)<0 B. 0≥P(A)≤1 C. P(A)>0 D. None
210	The number of permutation that can be formed from the letters of the word OBJECT is	A. 700 B. 600 C. 720 D. 620
211	A box contains 10 red 30 white and 20 black marbles When a marble is drawn at random the probability that it is either red or white is	A. 1/6 B. 1/3 C. 1/2 D. 2/3
212	The number of 5-digit number that can be formed from the digits 1,2,4,6,8, when 2 and 8 are never together is	A. 72 B. 48 C. 144 D. 20
213	Number of selections of n different things out of n	A. 1 B. nPr C. n! D. nPr
214	If for two events A and B , P(A∪B)=1,then events A and B are	A. Certain events B. Mutually exclusive C. Complementary events D. Independent
215	How many different 5-digit even numbers are possible form digit 1,2,4,6,8	A. 4 : 4! B. 4! C. 5! D. 4!+4!
216	The factorial of a positive integers is a (an)	A. Rational number B. Positive integer C. Real number D. None
		A. Permutation

217	A key ring is an example of	B. Circular permutation C. Combination D. None
218	Probability of an impossible event is	A. 0 B. -1 C. 1 D. ∞
219	How many 6-Digit number can be formed without repairing any digit from the digits 0,1,2,3,4,5	A. 720 B. 600 C. 120 D. 6-5!
220	How many comittees of 5 numbers can be chosen from a group of 8 players person when each committee must include 2 particular persons	A. 8! B. 5!3! C. 5! D. 20
221	Number of combination of zero or more things out of n different things	A. nPn B. nPr C. nCr D. 2n
222	Which one is not defined ∀ n∈Z+	A. -n! B. n! C. (-n)! D. n!+0!=n!+1
223	The sum even binomial coefficient of (3+2x)5 is _____term	A. 16 B. 30 C. 8 D. 32
224	There is no integer n for which 3n is	A. Even B. Prime C. Odd D. Real
225	The proposition S(n) is true ∀ n∈N,S(k+1) true when _____is true	A. S(1) B. Both a & c C. S(k) D. None
226	The coefficient of xn in the expansion of (1-2x)-1 is	A. (-1)n2n B. 2n C. (-1)(n+1)xr D. (n+1)2n
227	For any positive integer n	A. ABn = Bn A ⇔ AB = BA B. ABn = Bn A⇔ A,B are square matrices and AB = BA C. ABn = BnA⇔ A + B D. ABn = BnA ⇔ A and B are square matries
228	The proposition S(n) for any n∈ N is only true if k∈ N and	A. S(k +1) is true B. S(1) is true and S(k+1) is true whenever S (k) is true C. S(k+1) is true whenever S (k) is true D. S(k) is true
229	The middle term(s) of (a+x)11 is	A. 6th term B. 6thor 7th C. 7th term D. 6thand7th
230	The coefficient of xn in the expansion of (1-x)-1 is	A. (-1)n2n B. 1 C. (-1)n(n+1) D. (n+1)
231	There are two middle terms in the expansion of (a+x)n if n is	A. Even +ve integer B. +ve integer C. Odd +ve integer D. All
232	The no of term is the expansion of (a+x)n-1 is	A. n+1 B. n-1 C. n D. n-2
233	The last term of (1+2x)-2	A. (-1)-2 (2x)-2 B. (-1)-4(-2x)-2 C. (-1)-3(2x)-3 D. Does not exist
234	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

235	The exponent of x in 10th term in the expansion of (a+x)n	A. 10 B. 12 C. 11 D. 9
236	If x+y+z+.....+2n = 2n+1-1 ∀ n∈W,then cube root of xyz is equal to	A. 1 B. 4 C. 2 D. 8
237	The proposition S(k+1) is true when _____ is true ∀ K∈N	A. S(n) B. S(k) C. S(1) D. S(k-1)
238	If n∈Z+ then(a+x)n is a/an	A. Finite series B. Convergent series C. Infinite series D. Divergent series
239	The third term in the expansion of (1+2x) is	A. -2x2 B. -4x2 C. 2x2 D. 4x2
240	The sum of first n even number is	A. n2 B. n(n+1) C. n+1 D. n+2
241	If the sum of even coefficients in the expansion of (1+x)n is 128 then	A. n=7 B. n=9 C. n=8 D. None
242	The general term in the expansion of (a+x)n is	A. (r-1)th term B. (r+1)th term C. rth term D. none
243	1+3x+6x2 +10x3 +....=	A. (1+x)-3 B. (1-x)-2 C. (1-x)-3 D. (1+x)-2
244	If circumference of circle is divided into 360 congruent parts the angle subtended by one part at the centre of circle is	A. 1 degree B. 1 second C. 1 minute D. 1 radian
245	1 degree = _____	A. 0.00175 rad B. 0.175 rad C. 0.0175 rad D. 1.75 rad
246	1 radian = _____	A. 60° B. 57.296° C. 57.2° D. 180°
247	The central angle of an arc of a circle whose length is equal to the radius of the circle is called one	A. Degree B. Second C. Minute D. Radian
248	What is the circular measure of the angles between the hands of which at 4 o clock	A. π/6 B. 3π/2 C. π/4 D. 2π/3
249	The area of sector with central angle of 1 radian in a circular region whose radius is 2m is	A. 0.5m2 B. 2m2 C. 1m2 D. 4m2
250	Which of the following is a quadrantal angle	A. 100° B. 200° C. 170° D. 270°
251	tan270° =_____;	A. 0 B. 1 C. -1 D. Undefined
252	csc(-π/2) = _____;	A. 0 B. 1 C. -1

		D. Undefined
253	Domain of 1+cot2θ=csc2θ is	A. [0,π] B. R-{x/x=nπ,n∈ z} C. (-∞,+∞) D. [-1,1]
254	If the radius of a circle is increased by 1 then area of circle will be	A. π r2 B. π(r+1)2 C. π r2 +1 D. 2π (r+1)
255	If the terminal rays of an angle falls on any axis then the angle is called	A. Allied angle B. Acute angle C. Standard position D. Quadrantal angle
256	The point lying on the terminal rat of -270° is	A. (1,0) B. (0,-1) C. (0,1) D. (-1,0)
257	The angles with some initial and terminal sides are called	A. Quadrantal angles B. Coterminal angles C. Allied angles D. None
258	θ and 2kπ+θ are the _____ angles	A. Quadrantal angles B. Coterminal C. Allied D. None
259	The vertex of the standard position angles lies on	A. (0,0) B. (0,1) C. (1,0) D. (1,1)
260	Which one is quadrantal angle	A. 8181710° B. 2345° C. -8181180° D. -2344°
261	The perimeter of a sector of a central angle of measure 1 radian out off an are of length 35cm is	A. 35 cm B. 70 cm C. 140 cm D. 105 cm
262	The equation of vertical asymptotes of y = cos ecx is	A. x = 0 B. y = 0 C. x =∞ D. y =∞
263	The period of the trigonometric function y = sin x cos x is	A. 2π B. π C. 4π D. π / 2
264	The number of x-intercepts of y= sin x in his period	A. 0 B. 1 C. 2 D. 3
265	The behavior of trigonometric function is called	A. Continuity B. Discontinuity C. Periodicity D. Smoothness
266	The trigonometric function are continuous whenever	A. They are defined B. their limit exist C. Their period is given D. All are incorrect
267	The domain and range of a trigonometric function can be allocate by their	A. graph B. Continuity C. Discontinuity D. Periods
268	If f (x) is defined and continuous then f (x) is always	A. Rational function B. Trigonometric function C. Logarithmic function D. All are correct
269	cos(a-β) = _____;	A. sin a cosβ + cos a sinβ B. sin a cos β - cos a sinβ C. cos a cos β + sin a sinβ D. cos a cosβ - sin a sinβ
		A. cosθ B. sinθ

270	cos(π/2-θ) = _____;	C. -cosθ D. -sinθ
271	sin(π/2+θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
272	tan(2π+θ) = _____;	A. tanθ B. -tanθ C. cotθ D. -cotθ
273	sin(π+θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
274	tan(π-θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
275	sin(3π/2 -θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
276	cos(3π/2 +θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
277	cot(3π/2 -θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
278	tan(3π/2 +θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
279	sin(a-90°)=_____;	A. sina B. cosa C. -sinθ D. -cosa
280	cos2a=_____;	A. cos2 a-sin2 a B. 2cos2 a-1 C. 1-2 sin2 a D. All of these
281	2cos2 a/2 =_____;	A. 1+sina B. 1-sina C. 1+cosa D. 1-cosa
282	sin 3a = _____;	A. 3sin a - 4sin3a B. 4sin a -3 sin3 a C. 3 cos3 a -cosa D. 4cos3 a - 3cos a
283	cos 3a =_____;	A. 3sin a - 4sin3 a B. 4sin a - 3sin3 a C. 3cos3 a - 4cos a D. 4cos3a - 3cos a
284	sin(a + β)+sin(a -β) =_____;	A. 2cosa cosβ B. 2sina cosβ C. 2cosa sinβ D. -2sina sinβ
285	cos(a +β)-cos(a-β) = _____;	A. 2cosa cosβ B. 2sina cosβ C. -25 in a cosβ D. -2sin a sinβ
286	sin5θ+sin3θ = _____;	A. 2sin 4θ cosθ B. 2cos 4θ sinθ C. 2cos 4θ cosθ D. -2sin 4θ sinθ
287	cos 6θ + cos 2 θ =_____;	A. -2sin 4θ sin 2θ B. 2cos4θ cos2θ C. 2sin4θ cos2θ D. 2cos4θ sin2θ
		A. tan 24°

288	tan 294° =_____;	B. -tan 24° C. cot 24° D. -cot 24°
289	sin2 π/6 + sin2 π/3 + tan2 π/4 =_____;	A. 1 B. 2 C. 3 D. 4
290	Range if y = cos x is	A. -1≤ y≤ 1 B. -1 < y < 1 C. -∞ < x < +∞ D. None of these
291	Range of y = sec x is	A. -1≤ y≤ 1 B. y≥ 1 or y≤ -1 C. y≤ 1or y≥ -1 D. -∞ < y < +∞
292	graph of sine function is bounded between lines	A. y± 1 = 0 B. x± 1 = 0 C. x± y - 0 D. None of these
293	graph of trigonometric function y = sec x does not meet	A. x - axis B. y -axis C. both axis D. None of these
294	A triangle which is not right angle is called _____ triangle	A. acute B. Obtuse C. Right D. Oblique
295	A triangle has ____ elements	A. 3 B. 4 C. 5 D. 6
296	In a triangle if a > 45°,β > 30° then y cannot be	A. 90° B. 100° C. 10° D. 120°
297	With usual notations b2 = a2 + c2 -2ac cos is called_____;	A. None of these B. Law of sines C. Law of consines D. Law of tangents
298	If ΔABC is right triangle then the law of Cosines reduces to	A. The Pythagoras Theorem B. The law of Sines C. The law of cosines D. The law of tangents
299	InΔABC if y = 90° then the Pythagoras theorem is	A. b2 + c2 =a2 B. a2 + b2 = c2 C. a2 +c2 = b2 D. None of these
300	If you are looking a bird in the tree from the ground then the angle formed is called angle of_____;	A. Elevation B. Depression C. Right angle D. None of these
301	If you are looking someone on the ground from the top of a hill the angle formed is called angle of _____;	A. Elevation B. Depression C. Right angle D. None off these
302	A circle passing through the vertices of any triangle is called	A. Circumcirle B. Incircle C. Escribed circle D. Unit circle
303	A circle drawn inside a triangle and touching its sides is called _____;	A. Circumcirle B. Incircle C. Escribed circle D. unit circle
304	A circle which touches one side of a triangle extermally and the other two sides produced is called	A. In-circle B. Circumcircle C. e-circle D. Point circle
305	In-radius is denoted by	A. r B. η C. r2 D. R

306	e-radii are denoted by	A. η B. r2 C. r3 D. All of these
307	The law of cosines reduces to a2 +c2 =b2 for	A. α = 90° B. β = 90° C. γ = 90° D. α +β +γ =180°
308	In any triangle ABC,with usual notationαsinβ =____;	A. b sinα B. bsinβ C. αsinα D. None of these
309	Area of inscribed circle is	A. π R2 B. π η2 C. π r22 D. π r2
310	For any equilateral r :R :η :r1 :r2 :r3 =	A. 1:2:3:4:5 B. 1:2:3:3:3 C. 1:2:4:4:4 D. 2:1 :2 :2 :2
311	The domain of y = cos-1 x is	A. -∞ < x < ∞ B. -1≤ x≤ 1 C. x≤ -1 or x ≥ 1 D. None of these
312	Point (2,0) lies on trigonometric function f(x)=_____;	A. sinx B. cosx C. tanx D. secx
313	f (x) = | x | is a/an	A. Injective function B. Bijective function C. Surjective function D. Implicit function
314	The function f : x→ y defined as f (x) =α∀x∈ X,α∈ y is called	A. Constant function B. Polynomial function C. Identity function D. Linear function
315	The range of y=x2 + 1 is the set of non-negative real numbers except	A. 0≤ y < 1 B. 0 < y < 1 C. 0≤ y≤ 1 D. 0 < y≤1
316	x = secθ,y = tanθ are the parametric equations of	A. Circle B. Hyperbola C. Ellipse D. parabola
317	Composition of functions is	A. Non-commutative (fg ≠ gf) B. non-associative [8(fh) ≠(8f)h] C. Commutative (fg = gf) D. f of-1≠ 1
318	If a tangent line touches the function y = f (x) in more than one point then y = f (x) is	A. Periodic B. Surjective C. Bijective D. Injective
319	An even function is symmetric about the line	A. y = x B. x = 0 C. y = -x D. y = 0
320	The range of the function f : x→ y is defined by	A. {x| y = f (x) ∀x∈ X ∧y∈y} B. {(x,y) |y = f (x)∀x∈ X} C. {y|y = f (x) ∀x∈ X ∧y∈y} D. Y
321	The only function which is both even and odd is	A. f(x) =α B. f(x) = x C. f(x) =0 D. Both A & B
322	The curve f(x,y) = 0 has a central symmetry if	A. f(-x,-y)=f(x,y) B. f(x,-y)=f(x,y) C. f(-x,y)=f(x,y) D. f(-x,-y)≠f(x,y)
323	The function discontinuous at x = 0 is (1) tan x (II) cot x (III) sec x (iv)cosec x)	A. I & III B. I & IV C. II & IV D. II & III

		D. II & III
324	Domain of cosh x is	A. R B. R -{0} C. [1,∞) D. [0,∞)
325	The function f(x) =|x| is a/an_____function	A. Even B. Odd C. Both even as well as odd D. Neither even nor odd
326	If f (x) = 2x+1 then fof (x) = _____;	A. 4x+3 B. 2x +3 C. 4x +1 D. None of these
327	The set of points {(x,y)|y = f(x), ∀ x∈} is called	A. Relation B. Graph of f C. Function D. All are correct
328	x = r2, y = 1 are the parametric equation of	A. Circle B. Hyperbola C. Ellipse D. Parabola
329	If f(α) = b2 and g (c) =d where c=b2 then (gof) (a) is	A. α B. c C. b D. d
330	Inverse of the function y-10x is	A. y=logx B. y=lnx C. x=10y D. x=10y
331	The range of function f(x)=-x2+2x-1 is	A. R B. (-∞,0] C. (-∞,1] D. [0,∞)
332	(fog)′(x) =f′(g(x))g′(x) is derivative by	A. Chain rule B. Reciprocal rule C. Power rule D. Product rule
333	∀ x∈(a,b),f(x) is increasing if	A. f′(x) >0 B. f′(x) <0 C. f′′(x) >0 D. f′′(x) =0
334	The interval in which f(x)=x3-6x2+9x is increasing	A. 1<x<3 B. x<1 and x>3 C. X ≥1 and x ≤ 3 D. -∞ < x < ∞
335	A stationary point x is a relative exterma of y= f(x) is	A. f′′ (x) > 0 B. f′′ (x) < 0 C. f′′ (x) ≠ 0 D. f′′(x) = 0
336	If y = eax sin bx and y2 - 2ay1 + (a2+b2) y=0 the for what values of a and b we have y2+10y1+34y =0	A. a = -10,b=34 B. a=-5,b=3 C. a=5,b=3 D. a=10,b=34
337	If f (x)=a0 +a1x+a2x2+a3x3-----+0n-1xn-1+anxn then f(n) (x) is equal to	A. n! B. ann! C. 0 D. an
338	If f (x) = |x|, then (0,0) is the	A. Critical point B. Inflection point C. Stationary point D. None of these
339	If f(√x)=sin x , then f′(x) =_____;	A. 2xcosx2 B. cosx2 C. cos√x D. None of these
340	If y=sin(ax+b) then y4=_____:	A. sin4(ax+b) B. a4sin(ax+b) C. a4cos(ax+b) D. None of these
341	The distance of a moving particle at any instant t is x = 3t2 +1 then velocity of particle at t = 10	A. 50 cm/sec B. 60 cm/sec

	is	C. 61 cm/sec D. None of these
342	The velocity and acceleration at any point t of a particle which moves along straight line x = 5r-3	A. 5,3 B. 5,-3 C. 5,0 D. 10,0
343	Two positive integers whose sum is 30 and their product will be maximum are	A. 12,18 B. 10,20 C. 15,15 D. 14,16
344	If y = 2x , then	A. y1 -ln2y = 0 B. y2-(ln2)2 y = 0 C. y2-(ln2)y1 = 0 D. All are correct
345	Archimedes approximate the function by horizontal function and the area under f by the sum of small	A. Parallelograms B. Squares C. Retangles D. Polygons
346	The area bounded by y = x (x2 - 4) and below x - axis is	A. 4 B. 0 C. -4 D. 8
347	f(x)g(x)- ∫g(x) f′(x) dx is equal to	A. ∫f(x)g′(x)dx B. ∫f′(x)g(x)dx C. ∫f′(x)g(x)′dx D. ∫f(x)g(x)dx
348	The approximate increase in the area of a circular disc if its diameter increased form 44cm to 44.4cm is	A. 0.4cm B. 8.8πcm C. 17.6 πcm D. 35.2πcm
349	∛8.6 is approximately equal to	A. 2.488 B. 2.48 C. 2.0488 D. 2.05
350	The approximate percentage increase in the volume of a cube if the length of its each edge changes from 5 to 5.02 is	A. 1.2% B. 1.5% C. 0.16% D. 100.16%
351	The different of tan x is	A. sec2 x B. ln |sec x| C. sec2 xdx D. -cos ec2 x
352	The number of arbitrary constants in the general solution of a differential equation is equal to the different equation	A. Order B. Degree C. Variables D. All are correct
353	The function ø(x) is ananti derivativeof function f (x),x∈Df if	A. ø′(x) =∫f(x)dx B. ø(x) =∫f(x)dx C. ø′(x) =f(x) D. ø(x) =∫′(x)dx
354	The set of all antiderivaties of f(= ∫f(x)dx) is the	A. Definite integral B. Indefinite integral C. Integral D. Area
355	The process of finding a function whose derivative is given is called a	A. Differentiation B. Integration C. Differential D. None
356	An equation containing at least one derivative of a depends variable with respect to independent variable is a (an)	A. Implicit equation B. Differential equation C. General equation D. None of these
357	The degree of differential equation is the power of the	A. Lowest order derivative B. Highest order derivative C. Integral D. All are correct
358	Area bounded between the curve xy=2 and the lines x=1 and x=2	A. ln2 square units B. ln√2 square units C. ln4 square units D. Square units

359	If the points (a,2b):(c,a+b):(2c-a,h) lie on the same line then	A. h=2a B. h=a+b C. h=ab D. h=ac
360	If the lines 2x-3y-1=0,3x-y-5=0 and 3x+py+8=0 meet at a unique point then	A. p = -14 B. p = -1 C. p =0 D. p=12
361	The point of concurrency of the medians of the ΔABC is called its	A. Orthocenter B. Centriod C. Circumcentre D. Incentre
362	The coordinates of a point P(x,y) referred to XY-system are	A. (x+y,y+k) B. (x-h,y-k) C. (x,y) D. (x-h,y-k)
363	The line l is horizontal if	A. m is undefined B. m=0 C. m=1 D. m=0-1
364	The straight lines represented by the equation ax2+ 2hxy +by2 =0 intersects at	A. (1,1) B. (0,1) C. (1,0) D. (0,0)
365	The line through the intersection of the lines x+ 2y+ 3= 0 : 3x +4y +7 =0 and making equal intercepts on the axes is	A. x+ y+ 1= 0 B. x+ y- 2= 0 C. x+ y+ 2= 0 D. 2x +y +2 =0
366	The points A(3,1),B(-2,-3),C(2,2) are vertices of an (an)	A. Right triangle B. Equilateral triangle C. Isosceles triangle D. Scalene triangle
367	The point P (5,8) and the origin lie on the side of the line 3x+ 7y+ 15 =0	A. Same side B. P above and origin below C. Opposite side D. P below and origin above
368	The equation of the line perpendicular to x-axis and passing through (-5,3) is	A. y -3 =0 B. x+ 3 =0 C. y- 3 =∞ D. x +5 =0
369	Area of the triangle whose vertices are (2,3), (0,1),(0,0) is	A. 6 B. 2 C. 4 D. 1
370	The points A(+1,-1),B(3,0),C(3,7),D(1,8) are vertices of	A. Square B. Parallelogram C. Rectangle D. Trapezium
371	The exterior angle of the interior angle C of he quadrilateral whose vertices are A(5,2),B(-2,3),C(-3,-4),D(4,-5) is	A. 30° B. 60° C. 45° D. 90°
372	The measure of the acute angle between the lines represented by x2 -xy -6y2 =0 is	A. 120° B. 30° C. 130° D. 45°
373	If k2x2 +2hxy- 4y2 =0 represents two perpendicular lines then	A. k = 2 B. k = ±2 C. k = -2 D. k ≠0
374	If line through (4,3) and (2,k) is perpendicular to y =2x +3, then k =_____	A. -1 B. 1 C. -4 D. 4
375	If A(a,b) lies on 3x +2y =13 and point B(b,a) lies on x-y =5 then equation of AB is	A. x- y= 5 B. x+ y+ =5 C. x+ y= -5 D. 5x +5y =21
376	The length of perpendicular from (3,1) to 4x +3y +20 =0 is	A. 6 B. 7 C. 3 D. 8

377	The obtuse angle between lines = -2 and y = x +2 is	A. 120° B. 135° C. 150° D. 140°
378	The equation of line passing through intersection of line x = 0 and y = 0 and the point (2,2) is	A. y = x B. y = x - 1 C. y = x + 1 D. y = x + 1
379	The two lines y = 2x and x =2y are	A. Parallel B. Perpendicular C. Equally inclined with axes D. Congruent
380	The ortho center of triangle whose vertices are (0,0)(3,0)(0,4) is	A. (0,0) B. (1,1) C. (2,2) D. (3,3)
381	The angle between lines xy =0 is	A. 45° B. 60° C. 90° D. 180°
382	A joint equation of the lines through the origin and perpendicular to the lines ax2 +2hxy +by2 =0 is indentical is ax2 +2hxy +by2 =0 if	A. h2 = ab B. a + b =0 C. a = b D. a≠ b E. a = b = 0
383	The area of the rhombus whose vertices are A(0,0),B(2,1),C(3,3),D(1,2) is	A. 36 square units B. 3 square units C. 6 square units D. 18 square units
384	(-28,12) divides the join of A(-6,3) and B(5,-2) in ratio	A. 1:2 B. 3:2 C. 2:3 D. 2:1
385	Number of lines passing through three non-collinear points is	A. 2 B. 3 C. 1 D. 0 E. ∞
386	A quadrilateral whose diagonals are perpendicular bisector of each other is	A. Square B. Rectangle C. Rhombus D. Parallelogram E. Trapezium
387	The ratio in which the line y- x+ 2 =0 divides the line joining (3,-1) and (8,9) is	A. 2:3 B. -2:3 C. 3:2 D. -3:2
388	The graph of y < 2 is the	A. Left half plane B. upper half plane C. Right half plane D. Lower half plane
389	Any horizontal line divided the plane into	A. Left half plane B. Upper and lower half planes C. Infinite number of horizontal liens D. None of these
390	For different values of k equation 4x+5y =k represents	A. Parallel lines B. Lines parallel to x -axis C. Perpendicular lines D. Lines parallel to y -axis
391	The feasible region which can be enclosed within a circle is called	A. Bounded region B. Convex region C. Unbounded region D. None
392	If Projvu = Projuv, then	A. Uand vare parallel B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
393	If uv= Projuv then	A. Uandvare parallel B. vis a unit vector C. Uis a unit vector D. Both b and c

394	u,v,wand u x (v.w) are	A. Equal B. Parallel C. Additive immense of each other D. Meaningless
395	If a force F = 2i + j +3k acts at point (1,-2,2) of a body then the moment of F about a pint lying on the line of action of the force is	A. 5 B. Equal to the moment of the force about origin C. 0 D. Cannot be found
396	The maximum value of Z = 3x+ 4y subjected to the constrains x+ y≤ 40,x+ 2y≤ 60, x≥ 0 and y≥ 0 is	A. 120 B. 100 C. 140 D. 160
397	Maximum value of z =15x +20y subject to 3x+ 4y≤ 12,x,y≥ 0 is given by	A. 46 B. 60 C. 50 D. 70
398	Sum of two quantities is at least 20 is denoted by	A. x +y =20 B. x +y≥ 20 C. x +y≠ 20 D. x +y≤20
399	Which of the following is not a solution of system of inequalities 2x- 3y ≤6,2x +y≥ 2,x +2y≤ 8, x≥ 0,y ≥ 0	A. (1,0) B. (0,4) C. (3,0) D. (8,0)
400	Corner point of the system x - y≤ 2,x + y≤ 4,2x - y≤ 6,x≥ 0,y≥ 0	A. (1,4) B. (4,2) C. (3,1) D. (4,1)
401	A point where two of its boundary lines intersect is called	A. Corner point B. Feasible point C. Vertex D. Feasible solution
402	If a,b,c are unit vectors then |a + b|2 +|a - b|2	A. 4 B. 8ab C. 9cos D. 4(a,b)
403	If θ be angle between u,v and u,v determine the sides of a triangle then the third side opposite to angle θ has length	A. |u+v| B. |u|+|v| C. |u-v| D. |u|-|v|
404	The number z so that the triangle with vertices A(1,-1,0),B(-2,2,1)and C(0,2,z) is a right triangle with right angle at vertex C	A. 1,2 B. -1,-2 C. 2,-1 D. -2,1
405	If a,b c are sides of a triangle taken in order then a x b =	A. b x c B. b x a C. cxa D. Both a & b
406	[i,j,k]	A. 0 B. 2 C. 1 D. -2
407	If |αi + (α+1)j +2k| =3 then value of α is	A. 1,2 B. -1,-2 C. 1,-2 D. -1,2
408	A point (x,y) which satisfy a linear inequality in two variables form its	A. Solution B. Domain C. Range D. None
409	Each point of the feasible region is called	A. Solution B. feasible solution C. Both a & b D. None
410	A function which is to be maximized or minimized is called an	A. Explicit function B. Implicit function C. Objective function D. None
411	Optimal solution is found by evaluation the	A. All point of feasible region B. Corner point

. . .	objective function at	C. Origin D. None
412	The point (1,3) is one solution of	A. 3x + 5y > 29 B. 3x + 5y < 7 C. x + 2y < 4 D. x + 4y > 3
413	For two vector a and b, a+b = _____	A. a b B. b+a C. b-a D. None
414	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
415	Projection of vector u along v is	A. |v| cosθ B. |u| cosθ C. |v| sinθ D. |u| sinθ
416	The zero vector is regarded to be parallel to	A. Every vector B. Is some cases C. Both a,b D. None
417	If a2 = b2 then	A. a = b B. a+b= 1 C. |a+b| =0 D. None
418	Three points whose position vector a,b,c are collinear	A. axb +b x c+ c x a = 0 B. a,b +b,c +c,a =0 C. a,|a xc| =0 D. a+b+c =0
419	If |a x b|2 + (a,b)2 = _____	A. |a|2 + |b|2 B. |a|2- |b|2 C. |a|2|b|2 D. None
420	If a +b +c =0 then which of the following is true	A. a =b =c =0 B. a,b =b,c =c,a C. a xb=b xc =c xa D. None
421	If a,b,c are three non-coplanar vector then [a +b,b +c,c +a] = _____	A. [a.b.c] B. 2[a,b,c] C. [abc]-2 D. 2[abc]2
422	If a,b = 0 then	A. a |b B. a||b C. a = b D. None
423	The straight line passing through the focus and perpendicular to the directrix of the conic is known as its	A. Tangent B. axis C. Focal chord D. major or manor axis
424	The equation of the tangent at vertex to the parabola is y2 = -8(x -3)	A. y=0 B. x=3 C. x=1 D. x=5
425	The conic ax2+2hxy+by2+2gx+2fy+c= 0 never represent a circle if	A. a≠ b,h≠0 B. a=b C. h≠0 D. h=0
426	If a > 0 they parabola y2 =-4ax lies in	A. I and iv quadrant B. I quadrant C. II and III quadrant D. All are incorrect
427	The span of a standard parabola depends upon	A. x B. a C. y D. y2
428	Equation of parabola with focus F(-3,1) directrix x=3 is	A. (y -1)2 =-12x B. (y-1)2 =4x C. (x+3)2 =4a(y-1) D. y2 =-12(x-1)
		A. Focus

429	The common point to four standard parabolas	A. Focus B. Centre C. Vertex D. P(x,y)
430	x =r cosθ,y= sinθ are the parametric equations of	A. Circle B. Ellipse C. Parabola D. Hyoerbola
431	The centre of the circle x2+y2 -2fx-2gy+x=0 is	A. (-g,-f) B. (g,f) C. (f,g) D. (-f,-g)
432	Two tangents drawn from (2,3) to the circle x2+y2 =9 are	A. Real and distinct B. Imaginary C. Real and coincident D. None of these
433	Area of the circle with ends of a diameter at (-3,2) and (5,-6)	A. 128π sq. units B. 64π sq. units C. 32π sq.units D. None of these
434	Equation of the chord of contact to the tangents drawn from (-3,4) to the circle x2 + y2 = 21	A. -3x + 4y =21 B. 4x - 3x = 0 C. -3x + 4y = 25 D. None of these
435	The line joining the center of a circle to the midpoint of the chord is	A. Perpendicular to the tnagent B. Perpendicular to the normal C. Perpendicular to the chord D. Perpendicular to the chord
436	Two circles x2 +y2 +8x -9= 0 and x2+y2+6y +k =0 touchinternallyif the value of k is	A. k = 9 B. k = ±9 C. k=-9 D. k=11
437	For what value of k, 3x -2y+ k= 0 is tangent to the circle x2 +y2 +6x -4y =0	A. k=0 B. k=0 or 26 C. k = 26 D. k=-13
438	Equation of normal to the circle x2 + y2 =25 at (5cosθ,5sinθ)	A. xcosθ+ysinθ =5 B. xcosθ -ysinθ =0 C. xsinθ -ycosθ =0 D. None of these
439	y=-a is the equation of the directrix of	A. y2 =4ax B. x2=-4ay C. x2=4ay D. y2=-4ax
440	The parabolay2=4ax open up if	A. a<0 B. a≠0 C. a>0 D. All are incorrect
441	The number of standard parabolic functions are is	A. 4 B. 2 C. 3 D. 1
442	The vertex of the parabola (xsin a -ycos a)2 =4a(xcos a +ysin a) lies at	A. (acos a,asin a) B. (a,0) C. (cos a,sin a) D. (0,0)
443	Number of conics is	A. 1 B. 3 C. 2 D. 4
444	If (2,0) is the vertex and y-axis is directrix of parabola then focus is	A. (2,0) B. (-2,0) C. (4,0) D. (-4,0)
445	The line y =mx +1 is tangent to the parabola y2 =4x if	A. m=1 B. m=2 C. m=3 D. m=4
446	If 2x +y + λ =0 is normal to parabola y2 =-8x,λ= _____	A. 12 B. 8 C. 24 D. -24

447	The tangent to the parabola y2 =4ax and perpendicular line from the focus on it meet	A. x =0 B. y =0 C. x =-9 D. y = -a
448	Two circle s1: x2+ y2 +2x- 2y- 7= 0: s2: x2+ y2- 6x+ 4y+ 9= 0	A. Touch externally B. Touch internally C. Intersects each other D. Do not intersects
449	The equation x2+ y2- 8x+ 6y+ 25= 0 represents	A. A circle B. A pair of straight lines C. A point D. None of these
450	The slope of the tangent at the point (h,h) of the circle x2 +y2 =a2 is	A. 0 B. 1 C. -1 D. h
451	The number of tangents to the circle x2+ y2 -8x -6y +9 =0 which pass through the point (3,-2) is	A. 2 B. 1 C. 0 D. None of these
452	The area of the circle centred at (1,2) and passing through (4,6) is	A. 30 πsq.units B. 5π sq.units C. 15π sq.units D. 25π sq.units
453	If the line 2x -y +k =0 is a diameter of the circle x2 +y2 +6x -6y +5 =0 then k is equal to	A. 12 B. 9 C. 6 D. 3
454	The second degree equation 2x2 -xy+ 5x -2y +2 =0 represents	A. Circle B. Hyperbola C. Ellipse D. Pair of straight lines
455	The remove the term involving xy, from 7x2 - 6√3xy+ 13y2 -16 =0 the angel of rotation is	A. θ = 30° B. θ = 45° C. θ = 60° D. θ = 75°
456	ax2 +2hxy +by2 +2gx +2fy +c =0 may represent an ellipse if	A. h2 -ab <0 B. h2 -ab≠ 0 C. h2 -ab =0 D. h2 -ab >0
457	If either A = 0 or B =0,then Ax2 +By2 +2Gx +2Fy +c =0 represents a	A. Circle B. Hyperbola C. Ellipse D. Parabola
458	Intersection of two parabolas	A. parabola B. Two points C. Four points D. Hyperobla
459	The centre of the conic x2 +16x +4y2 -16y +76 =0 is	A. (0,10) B. (-8,4) C. (-8,-2) D. (1,1)
460	The sum of the focal distance from any point on the ellipse 9x2 +16y2 =144 is	A. 32 B. 16 C. 18 D. 8
461	If eccentricity of ellipse becomes zero then it takes the form of	A. A parabola B. A circle C. A straight line D. None of these
462	The line 2x +√6y =2 is a tangent to the curve x2 -2y2 =4 The point of contact is	A. (√6,1) B. (2,3) C. (7,-2√6) D. (4,-√6)
463	If e,e′ be the eccentricities of two conics S=0 and S′ =0 and if e2 +e′2 =3 then both S and S′ can be	A. Hyperbola B. Parabolas C. Ellipses D. None of these
464	The line y= 4x +c touches the hyperbola x2- y2 =1 if and only if	A. c =±√2 B. c =0 C. c=±√17

		D. c=±√15
465	The eccentricity e of an ellipse is always	A. Rational B. Real C. Irrational D. Integer
466	For the parabola the line through focus and perpendicular to the directrix is called	A. Tangent B. Vertex C. Axis D. None
467	A line joining two distinct points on a parabola is called	A. Axis B. Directrix C. Chord D. Tangent
468	The directrix of y2 =-4ax is	A. y =-a B. y = a C. x = a D. x = -a
469	The ellipse and hyperbola are called	A. Concentric conics B. Central conics C. Both a b D. None
470	If the distance of any point on the curve from any of the two lines approaches zero then it is called	A. Axis B. Directrices C. Asymptotes D. None
471	The second degree equation of the form Ax2 +By2 +Gx +Fy +C =0 represent hyperbola if	A. A = B≠ 0 B. A≠ B and both are of same sign C. A≠ B both are of opposite sign D. Either A = 0 or B =0
472	0 (zero) is	A. An irrational number B. A rational number C. A negative integer D. A positive number
473	6 is	A. A prime integar B. An irrational number C. A rational number D. An odd integer
474	√23 is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
475	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
476	The value of x and y when (x + iy)2 = 5 - 4i	A. x = 2, y = -1 B. x = -2, y = 1 C. x = 2, y = -i D. x = 2, y = 2
477	If Z = (1,2), then Z^{-1} =?	A. (0.2, 0.4) B. (-0.2 ,0.4) C. (0.2,-0.4) D. (-0.2,-0.4)
478	if Z1 = 1+i, Z2= 2+3i, then |Z2 -Z1| =	A. √3 i B. √7 C. -2-i D. √5
479	If z_1 =√-36 ,z_2 =√-25,z3 =√-16 then	A. 15 B. 15i C. -15i D. -15
480	The equation |x +4| = x has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
481	What is the conjugate of -7 -2i ?	A. -7 + 2i B. 7 +2i C. 7 -2i D. √53
482	The value of i^{4n+1}	A. 1 B. -1

	The value of i	C. i D. i²
483	The square root of 2i - 20i is	A. ±(5 - 2i) B. ±(5+ 2i) C. (5 - 2i) D. None of these
484	Geometrically the modulus of a complex number represents its distance from the	A. Point (1,0) B. Point (0,1) C. Point (1,1) D. Point (0,0)
485	The set {1,2,3,4.....} is called	A. Set of natural numbers B. Set of whole numbers C. Set of rational number D. Set of irrational numbers
486	QUQ, =	A. N B. R C. W D. Z
487	The symbol of irrational is	A. W B. N C. Q D. Q'
488	√25 is a number	A. Rational B. Irrational C. Natural D. Odd
489	√2 is a number	A. Rational B. Irrational C. Even D. Odd
490	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of these
491	If ∀a,b ε R,then a +b ε R is a property	A. Closure law of addition B. Associative law of addition C. Additive inverse D. Additive identity
492	∀ a ε R ∃ o ε R such that a + v = 0 + a = a is property of	A. Commutative law of addition B. Associative law of addition C. Additive identity D. Additive inverse
493	Associative law of multiplication	A. ab - ba B. a(bc) = (ab) c C. a(b + c) = ab +ac D. (a +b)c = ac + bc
494	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplicative identity C. Associative law of multiplication D. Multiplicative inverse
495	∀a,b ε R, ab = be is a	A. Commutative law of multiplication B. Closure law of multiplication C. Associative law of multiplication D. Multiplicative identity
496	∀a,b, c ε R,a +c = b + c = > a = b	A. Reflexive property B. Symmetric property C. Cancellations property w.r.t. addition D. Transitive property
497	∀a,b, c ε R ac = bc ⇒ a = b, c ≠ 0 is a	A. Symmetric property B. Cancellation property w.r.t multiplication C. Reflexive property D. Transitive property
498	If a > b or a < b than a = b is a	A. Additive property B. Transitive property C. Trichotomy property of inequality
499	a >b, b >c ⇒a >c is a	A. Multiplicative property B. Additive property C. Trichotomy property D. Transitive property of inequality
		A. Trichotomy property B. Additive property of inequality

500	a >b ⇒a +c >b +c is known as	B. Additive property of inequality C. Transitive property D. Multiplicative property
501	(a-1)-1 =	A. a-1 B. a C. -a D. None of above
502	(√3+√5)+√7 = √3 +(√5 +√7) property used in above is	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t to adition
503	The property used in -3 <-2 ⇒0 <1	A. Commutative property B. Additive property of inequality C. Additive inverse D. Additive identity
504	*i* =	A. √1 B. √2 C. √-2 D. √-1
505	In (x + iy) x is the known as	A. Imaginary part of complex number B. Real part of complex number C. Complex number D. None of above
506	In (x +iy) y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
507	¡^{3} =	A. -1 B. i C. -i D. 1
508	(a +b*i*) -c (c +d*i*) =	A. (a +b) = (c +d) B. (a +c) + i(b +d) C. (a -c) + (c -d)i D. (a -c) +(b -d) i
509	The conjugate of √5 *i* is	A. √5 B. -√5 i C. i D. 5i
510	(a,b) +(-a,-b) =	A. (0,0) B. (a,b) C. (-a,-b) D. (1,1)
511	(a,0) x (c,0) =	A. (0,ac) B. (ac,0) C. (0,0) D. (a,c)
512	*i*^{2} =	A. 1 B. 2 C. -1 D. 0
513	¡^{9} =	A. i² B. -1 C. 1 D. i
514	√-1 b=	A. b B. 2 C. 2b D. None of these
515	(7,9) +(3,-5) =	A. (4,4) B. (10,4) C. (9,-5) D. (7,3)
516	The polar form of complex number x ≠ I y =	A. r cos θ+ r sin θ B. r cos θ+ is sin θ C. cos θ+ r sin θ D. i cos θ+ i sin θ
517	¡^{101} =	A. i B. i² C. -i D. -1

518	If $Z_1 = 1+ i$, $Z_2 = 2+3i$, then $\|Z_1 - Z_2\|$ =?	A. √5 B. √7 C. -1-2i D. √3
519	If z1 = 2 + 6i and z2 = 3 + 7i then which expression defines the product of z1 and z2	A. 36 +(-32)i B. -36+32i C. 6+(-11)i D. 0, +(-12)i
520	Which element is the additive inverse of (a,b) in Complex numbers	A. (a,0) B. (0,b) C. (a,b) D. (-a,-b)
521	What is the conjugate of -6 -i	A. -6 +i B. 6 + i C. -6 -i D. 6 -i
522	Which of the following has the same value as i113	A. i B. -1 C. -i D. 1
523	√(-1b) =?	A. b i B. -i b C. b2 D. i√b
524	Z is the set of integers (Z.*) is a group with a * b = a +b +1, a,b ∈ G.then inverse of a is	A. -a B. a +1 C. -1-a D. None of these
525	G = {e, a, b, c} is an Abelian group with e as identity element The order of the other elements are	A. 2,2,2 B. 3,3,3 C. 2,2,4 D. 2,3,4
526	For any set X, X∪X is	A. X B. X' C. Φ D. Universal Set
527	Given X,Y are any two sets such that number of elements in set X = 28, number of elements in set Y = 28, and number of elements in set X∪Y = 54, then number of elements in set X ∩ Y =	A. 4 B. 3 C. 2 D. 1
528	Let A,B, and C be any sets such that A∪B = A∪C and A∩B = A∩C then	A. A≠ C B. B = C C. A = B D. A≠ B
529	The complement of set A relative to universal set U is the set	A. {x / x∈ A∧ x∈ U} B. {x / x∉ A∧ x ∈ U} C. {x / x∈ A and x ∉ U} D. A-U
530	The multiplicative inverse of x such that x = 0 is	A. -x B. Does not exist C. 1/x D. ±1
531	Multiplicative inverse of "1" is	A. 0 B. ±1 C. 1 D. {0,1}
532	In school there are 150 students Out of these 80 students enrolled for mathematics class 50 enrolled for English class and 60 enrolled for Physics class The student enrolled for English cannot attend any other class but the students of mathematics and Physics can take two courses at a time Find the number of students who have taken both physics and mathematics.	A. 40 B. 30 C. 50 D. 20
533	Which of the following is the subset of all sets	A. Φ B. {1,2,3} C. {Φ} D. {0}
534	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None

535	The set of the first elements of the ordered pairs forming a relation is called its	A. Function on B B. Range C. Domain D. A into B
536	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
537	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
538	The multiplicative inverse of -1 in the set {1-,1} is	A. 1 B. -1 C. ±1 D. 0 E. Does not exist
539	The set {1,-1, i, -i} form a group under	A. Addition B. Multiplication C. Subtraction D. None
540	The set of all positive even integers is	A. Not a group B. A group w.r.t subtraction C. A group w.r.t division D. A group w.r.t multiplication
541	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
542	The set Q	A. Forms a group under addition B. Does not form a group C. Contains no additive indentity D. Contains no additive inverse
543	The set (Z,+) forms a group	A. Forms a group w.r.t addition B. Non commutative group w.r.t multiplication C. Forms a group w.r.t multiplication D. Doesn't form a group
544	For any set B,B∪B' is	A. Is set B B. Set B' C. Universal set
545	If A ⊆ B then A ∪ B is	A. A B. B C. A' D. A ∩B
546	In set builder notation the set {0,1,2,.....100} can be written as	A. {x / xε B ∧ x ≤ 100} B. {x / x ∈ W ∧ x < 101} C. {x / x ∈ Z ∧ x < 101} D. The set of first 100 whole numbers
547	Given X.Y are any two sets such that number of elements in X = 18, number of elements in set Y = 24,and number of elements in set X∪ Y =40,then number of elements in set x∩ Y =	A. 3 B. 1 C. 2 D. 4
548	If n(X) = 18, n(X∩Y) = 7, n(X∪ Y) = 40 then n(Y) =	A. 1 B. 12 C. 5 D. 29
549	Let A,B and C be any sets such that A∪B = A∪C and A∩ B = A∩ C then	A. A = B B. B = C C. A≠ C D. A ≠ B
550	Total number of subsets that can be formed out of the set {a,b,c} is	A. 1 B. 4 C. 8 D. 12
551	If x = 1/x for x ∈ R then the value of x is	A. ±1 B. 0 C. 2 D. 4
552	The set {-1,1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division

553	If a set S contains n elements then P (S) has ..... number of elements	A. 2ⁿ B. 2ⁿ² C. 2.n D. n²
554	Additive inverse of - a - b is	A. a B. -a + b C. a - b D. a + b
555	If A = {x / x ∈ R ∧ x^2 - 16 = 0} then A =	A. - x B. Infinite set C. Φ D. {-4,4}
556	The identity element with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
557	Multiplicative inverse of 0 is	A. 0 B. 1 C. ±1 D. Does not exist
558	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
559	In a school there are 150 students Out of these 80 students enrolled for mathematics class.50 enrolled for English class and 60 enrolled for Physics class The student enrolled for English cannot attend any other class but the students of mathematics and Physics can take two courses at a time find the number of students who have taken both physics and mathematics.	A. 40 B. 30 C. 50 D. 60
560	In a country 55% of the male population has houses in cities while 30% have houses both in cities and in villages find the percentage of the population that has houses only in villages	A. 45 B. 30 C. 25 D. 50
561	Φ set is the _____ of all sets	A. Subset B. Union C. Universal D. Intersection
562	{x : xε Z and x < 1} is	A. Singleton set B. A set with two points C. Empty set D. None of these
563	The set { {a,b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set
564	(A ∩ B)c =	A. A∩ B B. (A ∪ B)c C. Ac∪Bc D. Φ
565	If #n = (n-5)2 + 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
566	The set of the first elements of the orders pairs forming a relation is called its	A. Relation in B B. Range C. Domain D. Relation In A
567	A function in which the second elements of the order pairs are distinct is called	A. Onto function B. One-one function C. Identity function D. Inverse function
568	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
569	The function {f(x,y)|y = ax2 +bx +c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function

		D. Quadratic function
570	To each element of a group there corresponds ..... inverse element	A. Two B. One C. No D. Three
571	The set of integer is	A. Finite group B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group
572	The set {x +iy / x, y ∈ Q} forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Both addition and multiplication
573	The set {-1,1} is	A. Group under the multiplication B. Group under addition C. Does not form a group D. Contains no identity element
574	The set of complex numbers forms	A. Commutative group w.r.t addition B. Commutative group w.r.t multiplication C. Commutative group w.r.t division D. Non commutative group w.r.t addition
575	The set {1,-1,i,-i}	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
576	The set R is .....w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
577	The set {Z\ {0} } is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
578	Power set of X i.e P(X).....under the binary operation of union U	A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
579	The set (Z, +) forms a group	A. Forms a group w.r.t addition B. Forms a group w.r.t multiplication C. Non commutative group w.r.t multiplication D. Doesn't form a group
580	(ABC)' =	A. CBA' B. CBA C. C'B'A D. C'B'A'
581	If A is a skew-symmetric matrix of order n and P, any square matrix of order n.prove that P' AP is	A. Skew-symmetric B. Symmetric C. Null D. Diagonal
582	If A and B are two matrices such that AB = B and BA = A then A2 + B2 =	A. 2 AB B. 2 BA C. A + B D. AB
583	A and B be two square matrices and if their inverse exist the (AB)-1 =	A. A-1 B-1 B. AB-1 C. A-1B D. B-1A-1
584	Matrices A = [aij] 2 x 3 and B = [bij] 3 x 2 are suitable for	A. BA B. A2 C. AB D. B2
585	Cofactor of an element aij denoted by Aij is	A. (-2)i+j B. Mij C. (-1)i+j Mij D. None of above
586	A square matrix A = [aij] is lower triangular matrix when	A. aij = 0 for all i<j B. bij = 0 C. cij = 0 D. dij = 0
587	A square matrix A = [aij] is upper triangular	A. cij = 0 B. bij = 0

587	when	C. aij = 0 for all i > j D. dij = 0
588	The square matrix A is skew-symmetric when At =	A. -B B. -C C. -A D. -D
589	The square matrix A is skew Hermitian when (A)'=	A. A B. A' C. -A D. A
590	The matrix A is Hermitian when (A)' =	A. A B. -A C. A D. A'
591	An equation of the form ax + by = k is homogeneous linear equation when	A. b = 0, a = 0 B. a = 0,b ≠ 0 C. b = -0,a≠ 0 D. a≠ 0,b≠ 0, k = 0
592	System of linear equation is inconsistent if	A. System has no solution B. System has one solution C. System has two solution D. None of above
593	For trival solution |A| is	A. A B. |A| = 0 C. A = 0 D. |A|≠ 0
594	For non-trival solution |A| is	A. non zero B. A = 0 C. |A| = 0 D. At = 0
595	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a.b and c
596	We solve the system of non-homogeneous linear equations by	A. a and b B. b and c C. c and a D. a,b and c
597	If A = |aij| is (m x n) matrix then transpose of A is of the order	A. m x m B. m x n C. n x n D. n x m
598	For a square matrix A, if A = At, then A is called	A. Matrix B. Transpose C. Symmetric D. Non-symmetric
599	If for the matrix A,A5 = 1,then A-1=	A. A2 B. A3 C. A D. None of above
600	The order of the matrix A is 3 x 5 and that of B is 2 x 3.The order of the matrix BA is	A. 2 x 3 B. 3 x 2 C. 2 x 5 D. 5 x 2
601	The condition for polynomial equation ax2 + bx + c = 0 to be quadratic is	A. a > 0 B. a < 0 C. a≠ 0 D. a≠ 0,b ≠ 0
602	Only one of the root of ax2 + bx + c =0, a≠ 0 is zero if	A. c = 0 B. c = 0,b≠ 0 C. b = 0,c = 0 D. b = 0,c≠ 0
603	Ifα,β are non-real roots of ax2 + bx +c =0 (a,b,c∈ Q),then	A. α = β B. αβ = 1 C. α = β D. α = 1
604	The roots of (x - a)(x - b) = ab x2 are always	A. Real B. Depends upon a C. Depends upon b D. Depends upon a and b

605	Both the roots of the equation (x -b) (x - c) + (x -c) (x-a) +(x-a) (x-b) = 0 are always	A. Positive B. Negative C. Real D. None of these
606	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
607	If the roots of ax2 + b =0 are real and distinct then	A. ab > 0 B. a = 0 C. ab < 0 D. a > 0,b > 0
608	if one root of the equation ix2 - 2(i + 1) x +(2 - i)= 0 is 2 - i then the other root is	A. -i B. 2 + i C. i D. 2 - i
609	If a > 0,b > 0, c > 0 then the roots of the equation ax2+ bx + c =0 are	A. Real and negative B. Non-real with negative real parts C. Real and positive D. Nothing can be said
610	The quadratic equation 8 sec2θ - 6 secθ +1 =0 has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
611	Question Image	A. A complex number B. A rational number C. A natural number D. An irrational number
612	π is _____	A. A complex number B. A rational number C. A natural number D. An irrational number
613	3/4 is _____	A. An odd number B. An even number C. A natural number D. A rational number
614	Question Image	A. A rational number B. An irrational number C. An odd number D. A prime number
615	Question Image	A. A rational number B. A natural number C. An irrational number D. An integer
616	O is _____	A. A positive integer B. A negative integer C. A natural number D. An integer
617	1/3 is _____	A. A prime number B. An integer C. A rational number D. An irrational number
618	Question Image	A. A prime number B. An integer C. A whole number D. An irrational number
619	Question Image	A. A natural number B. A rational number C. An irrational number D. A whole number
620	Every recurring decimal represents	A. A natural number B. A rational number C. An irrational number D. A whole number
621	Every irrational number is	A. A real number B. A prime number C. A natural number D. An integer
622	A non-terminating, non-recurring decimal represent	A. A natural number B. A rational number C. An irrational number D. A prime number

623	Every whole number is	A. A real number B. An irrational number C. A prime number D. A negative integer
624	Every natural number is	A. A prime number B. An irrational number C. An integer D. An even number
625	Every real number is	A. A complex number B. A rational number C. A natural number D. A prime number
626	0.25 is _____	A. An irrational number B. A natural number C. A prime number D. A rational number
627	1.4142135... is _____	A. A natural number B. A rational number C. A prime number D. An irrational number
628	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
629	Question Image	A. Associative law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
630	Question Image	A. Associative law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
631	Question Image	A. Associate law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
632	Question Image	A. Closure law of addition B. Closure law of multiplication C. Commutative law of addition D. Commutative law of multiplication
633	Question Image	A. Closure law of addition B. Associative law of addition C. Commutative law of multiplication D. Associative law of multiplication
634	Question Image	A. Associative law of multiplication B. Commutative law of addition C. Commutative law of multiplication D. Associative law of addition
635	Question Image	A. Reflexive property B. Symmetric property C. Transitive property D. Additive property
636	Question Image	A. Reflexive property B. Symmetric property C. Transitive property D. Additive property
637	In R, the additive identity is	A. 0 B. 1 C. -1 D. None
638	In R, the multiplicative identity is	A. 0 B. 1 C. -1 D. None
639	In R, the additive inverse of a is	A. 0 B. 1 C. -a D. 1/a
640	In R, the multiplicative inverse of a is	A. 0 B. 1 C. -a

		D. 1/a
641	In R the number of identity element w.r.t '+' is	A. One B. Two C. Three D. Four
642	In R the number of identity elements w.r.t.'.' is	A. One B. Two C. Three D. Four
643	The additive inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 0
644	The multiplicative inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 1
645	The multiplicative inverse of 4 is	A. -4 B. -1/4 C. 1/4 D. 1
646	The multiplicative inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
647	The multiplicative inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
648	The additive inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
649	The additive inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
650	Question Image	A. a = a B. a < a C. a > a D. a²= a
651	Question Image	
652	Question Image	
653	Question Image	
654	In R the left cancellation property w.r.t addition is	
655	In R the right cancellation property w.r.t. addition is	
656	Question Image	A. (a + b)c = a . c + bc B. a + b = b + a C. (a + b) + c = a + (b + c) D. a(b+ c) = ab + ac
657	Question Image	A. (a + b)c = ac + bc B. a + b = b + a C. (a + b) + c = a + (b + c) D. a(b +c) = ab + ac
658	Question Image	A. Principle of equality of fractions B. Rule for product of fraction C. Rule for quotient of fraction
659	Question Image	A. Principle of equality of fractions B. Rule for product of fraction C. Rule for quotient of fraction D. Golden rule of fractions
660	Question Image	A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule of fractions D. Rule for quotient of fractions

661	Question Image	A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule for fractions D. Rule for quotient of fractions
662	Question Image	A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule for fractions D. Rule for quotient of fractions
663	The set { 1 , -1} is closed w.r.t.	A. Addition B. Multiplications C. Subtraction D. None of these
664	Question Image	A. Additive property in R B. Multiplication property in R C. Cancellation property in R D. Distribution property in R
665	Which of the following sets has closure property w.r.t. addition	A. { 0 } B. { 1 } C. { 0, -1} D. { 1, -1}
666	Name the property used in 4 + 9 = 9 + 4	A. Associative property of addition B. Commutative property of addition C. Distributive property D. Additive identity
667	Question Image	A. Associative property of addition B. Commutative property of addition C. Distributive property D. Additive identity
668	Question Image	A. Associative property of addition B. Associative property of multiplication C. Commutative property of addition D. Commutative property of multiplication
669	Name the property used in 4 x (5 x 8) = (4 x 5) x 8	A. Associative property of addition B. Associative property of multiplication C. Additive identity D. Multiplicative identity
670	Name the property used in 100 + 0 = 100	A. Additive inverse B. Multiplicative inverse C. Additive identity D. Multiplicative identity
671	Name the property used in 4.1 + (-4.1) = 0	A. Additive inverse B. Multiplication inverse C. Additive identity D. Multiplication identity
672	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
673	{1, 2, 3, 4,.....} is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
674	Question Image	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
675	Question Image	A. Evert element of A is in B B. Every element of B is in A C. Every element of A is in B' D. Every element of A is in A
676	Let A and B be two sets. If every element of A is also an element of B then	
677	The set of natural numbers is a subset of	A. {1, 2, 3, ... 100} B. The set of whole numbers C. {2, 4, 6, 8, ...} D. None of these
678	The set of whole numbers is subset of	A. The set on integers B. The set of natural numbers C. {1, 3, 5, 7, ...} D. The set of prime numbers
		A. The set of natural numbers

679	The set of integers is a subset of	A. The set of natural numbers B. The set of whole numbers C. The set of prime numbers D. The set of rational numbers
680	The set of real numbers is a subset of	A. The set of natural numbers B. The set of rational numbers C. The set of integers D. The set of complex numbers
681	The set of rational numbers is subset of	A. The set of natural numbers B. The set of real numbers C. The set of integers D. The set of whole numbers
682	{1, 2, 3} is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
683	A = B if	D. A is equivalent to B
684	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
685	Question Image	A. A is proper subset of B B. A is an improper subset of B C. A is equivalent to B D. B is subset of A
686	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
687	Question Image	A. A finite set B. An infinite set C. An empty set D. None of these
688	The sets {1, 2, 4} and {4, 6, 8, 10} are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Over lapping sets
689	A - B = _____	
690	Which of the following sets in infinite	A. The set of students of your class B. The set of all schools in Pakistan C. The set of natural numbers between 3 and 10 D. The set of rational numbers between 3 and 10
691	Which of the following sets is finite	A. The set of natural numbers between 3 and 10 B. The set of rational numbers between 3 and 10 C. The set of real numbers between 0 and 1 D. The set of rational numbers between 0 and 1
692	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
693	Question Image	
694	If n(A) = n then n(P(A)) is	A. 2n B. n² C. n/2 D. 2ⁿ
695	What is the number of elements of the power set of {0, 1}	A. 1 B. 2 C. 3 D. 4
696	What is the number of elements of the power set of { }	A. 0 B. 1 C. 2 D. 3
697	Write down the power set of {9, 11}	
698	If A and B are two sets then intersection of A and B is denoted by	
699	Two sets A and B are said to be disjoint if	

700	Question Image	
701	Question Image	
702	Question Image	
703	Question Image	
704	Question Image	
705	Question Image	
706	Question Image	
707	Question Image	
708	Question Image	
709	Question Image	A. A B. B C. A'B' D. B'A
710	Question Image	
711	Question Image	
712	Question Image	A. A B. A' C. U D. A A'
713	Question Image	B. A C. A' D. U
714	Question Image	A. A B. A' C. U D. U'
715	Question Image	A. A B. A' C. U D. None of these
716	Question Image	A. n(A) B. n(B) C. 0 D. 1
717	Question Image	A. A B. B C. U D. None of these
718	Question Image	A. A B. B C. U D. None of these
719	Question Image	A. A B. A' C. U D. None of these
720	A statement which is either true or false is called	A. Induction B. Deduction C. Propositicon D. Logic
721	If P is a proposition then its negative is denoted by	
722	If p and q are two statements then their conjunction is denoted by	
723	A conditional "if p then q" is denoted by	
724	If p and q are two statements then their biconditional 'p if q' is denoted by	
725	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis

726	Question Image	A. Conclusion B. Implication C. Antecedent D. Hypothesis
727	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
728	Question Image	
729	If there are m rows and n columns in a matrix then its order is	A. m x n B. m x m C. n x n D. n x m
730	The order of the matrix [1 2 3] is	A. 1 x 1 B. 3 x 3 C. 3 x 1 D. 1 x 3
731	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
732	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
733	A matrix in which the number of rows is not equal to the number of columns is called a	A. Diagonal matrix B. Rectangular matrix C. Square matrix D. Scalar matrix
734	A matrix in which the number of rows is equal to the number of columns is called a	A. Diagonal matrix B. Rectangular matrix C. Square matrix D. Scalar matrix
735	A matrix with a single row is called a	A. Column matrix B. Row matrix C. Null matrix D. Identity matrix
736	A matrix with a single column is called	A. Column matrix B. Row matrix C. Identity matrix D. Null matrix
737	A square matrix all of whose elements except the main diagonal are zeros is called a	A. Null matrix B. Singular matrix C. Symmetric matrix D. Diagonal matrix
738	A diagonal matrix in which the diagonal elements are equal is called a	A. Null matrix B. Identity matrix C. Scalar matrix D. Row matrix
739	Question Image	A. Scalar matrix B. Identity matrix C. Null matrix D. Symmetric matrix
740	A square matrix A for which $A^t = A$ is called a	A. Column matrix B. Symmetric matrix C. Skew-symmetric matrix D. Row matrix
741	A square matrix A for which $A^t = -A$ is called a	A. Column matrix B. Symmetric matrix C. Skew-symmetric matrix D. Row matrix
742	Question Image	A. Identity matrix B. Diagonal matrix C. Null matrix D. Hermitian matrix
743	Question Image	A. Hermitian matrix B. Skew-hermitian matrix C. Symmetric matrix D. Identity matrix
		A. Square matrix

744	Question Image	A. Square matrix B. Row matrix C. Symmetric matrix D. Null matrix
745	In order of A is m x n and order of B is n x p then order of AB is	A. m x m B. n x n C. m x p D. p x m
746	Question Image	A. 3 x 1 B. 1 x 3 C. 3 x 3 D. 1 x 1
747	Two matrices A and B are conformable for the product AB if	A. Both A and B are square B. Both A and B are symmetric C. Number of rows of A = number of columns of B D. Number of columns of A = number of rows of B
748	Question Image	
749	The transport of a null matrix is	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
750	The transport of a square matrix is a	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
751	The transport of a rectangular matrix is a	A. Square matrix B. Rectangular matrix C. Row matrix D. Column matrix
752	Question Image	
753	If A is any matrix then its additive inverse is	A. A B. A⁻¹ C. A^t D. -A
754	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
755	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
756	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
757	Question Image	A. Null matrix B. Triangular matrix C. Unit matrix D. Rectangular matrix
758	Question Image	A. 1, 2, 3 B. 1, 5, 9 C. 2, 5, 8 D. 3, 6, 9
759	Question Image	A. 0 B. 1 C. -2 D. 10
760	If A is singular then |A| = _____	A. 1 B. 0 C. 2 D. None of these
761	Question Image	C. 16 D. None of these
762	If A is a non singular matrix then A^{-1}= _____	
763	The number of non zero rows in echelon form of a matrix is called	A. Order of matrix B. Rank of matrix C. Row operation D. None of these

764	Question Image	A. At B. -A C. A D. A-1
765	Matrices are represented by	A. Natural numbers B. Real numbers C. Small letters D. Capital letters
766	If order of A is m x n, then order of A^t is	A. m x m B. n x n C. m x n D. n x m
767	Question Image	
768	Question Image	A. An upper triangular matrix B. A lower triangular matrix C. A diagonal matrix D. A null matrix
769	If the matrices A and B are conformable for multiplication then $(AB)^t$= _____	A. AB B. A^tB^t C. B^tA^t D. A^tB
770	Question Image	
771	Question Image	A. 3 x 2 B. 2 x 3 C. 3 x 3 D. 2 x 2
772	Question Image	A. Zero matrix B. Diagonal matrix C. Column matrix D. Scalar matrix
773	The transpose of a column matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
774	The transpose of a row matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
775	The transpose of a zero matrix is a _____	A. Column matrix B. Zero matrix C. Row matrix D. Scalar matrix
776	The additive inverse of a matrix A is	D. None of these
777	Question Image	A. 2 B. 4 C. 6 D. 8
778	Question Image	A. 0 B. 1 C. 2 D. 3
779	Minor of an element a_{ij} is denoted by	A. M_{ij} B. A_{ij} C. |A| D. None of these
780	Cofactor of an element a_{ij} is defined by	A. (-1)^{i+j}|A| B. (-1)^{i+j}M_{ij} C. (-1)^{i+j}M⁻¹ D. None of these
781	Question Image	
782	Roots of the equation $x^2 - 7x + 10 = 0$ are	A. {2, 5} B. {-2, 5} C. {2,5} D. {-2,-5}
783	Roots of the equation $x^2 + 7x + 12 = 0$ are	A. {3, -4} B. {-3, 4} C. {3, 4} D. {-3, -4}

784	Roots of the equation $x^2 - x = 2$ are	A. {2, -1} B. {1, 0} C. {2, 1} D. {-2, 1}
785	$4^{1+x} + 4^{1-x} = 10$ is called	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
786	Question Image	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
787	$x^4 - 3x^3 + 3x + 1 = 0$ is called _____	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
788	$w^{15} =$ _____	A. 0 B. 1 C. w D. w²
789	$w^{-1} =$ _____	A. 0 B. 1 C. w D. w²
790	$w^4 =$ _____	A. 0 B. 1 C. w D. w²
791	$w^{-12} =$ _____	A. 0 B. 1 C. w D. w²
792	$w^{11} =$ _____	A. 0 B. 1 C. w D. w²
793	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 1 C. Polynomial of degree 2 D. Polynomial of degree n
794	Question Image	A. Linear equation B. Quadratic equation C. Cubic equation D. None of these
795	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 2 C. Quadratic equation D. None of these
796	$5x^3 + 3x -$ is a _____	A. Polynomial of degree 3 B. Polynomial of degree 2 C. Polynomial of degree 1 D. Polynomial of degree 0
797	The solution set of $x^2 - 5x + 6 = 0$ is	A. {1, 3} B. {2, 3} C. {1, 2} D. None of these
798	The quadratic formula is	
799	If a polynomial P(x) is divided by x - a, then the remainder is	A. P(o) B. P(-a) C. P(a) D. None of these
800	If $x^3 + ax^2 - a^2x - a^3$ is divided by x + a, then the remainder is	A. 0 B. a³ C. 2a³ D. -2a³
801	$2x^3 + 3x + 9$ is a _____	A. Polynomial of degree 3 B. Quadratic equation C. Cubic equation D. Polynomial of degree 2
		A. P(a)

802	If a polynomial P(x) is divided by x + a, then the remiander is	B. P(-a) C. P(0) D. None of these
803	If $x^3 + 4x^3 - 2x + 5$ is divided by x - 1, then the reminder is	A. 8 B. 6 C. 4 D. None of these
804	If $x^4 - 10x^2 - 2x + 4$ is divided by x + 3, then the reminder is	A. 1 B. 0 C. 4 D. None of these
805	If $x^3 - x^2 + 5x + 4$ is divided by x - 2, then the reminder is	A. 0 B. 2 C. 18 D. 14
806	If $3x^4 + 4x^3 + x - 5$ is divided by x + 1, then the reminder is	A. 0 B. 7 C. -7 D. 5
807	Question Image	A. c/a B. -c/a C. b/a D. -b/a
808	If S and P are the sum and the product of roots of a quadratic equation, then the quadratic equation is	A. x² + Sx - P = 0 B. x² - Sx + P = 0 C. x² - Sx - P = 0 D. X² + Sx + P = 0
809	The roots of the equation $ax^2 + bx + c = 0$ are real and equal if	A. b² - 4ac < 0 B. b² - 4ac = 0 C. b² - 4ac > 0 D. None of these
810	The roots of the equation $ax^2 + bx + c = 0$ are complex/imaginary if	A. b² - 4ac < 0 B. b² - 4ac = 0 C. b² - 4ac > 0 D. None of these
811	The roots of the equation $ax^2 + bx + x = 0$ are real and distinct if	A. b² - 4ac <0 B. b² - 4ac = 0 C. b² - 4ac > 0 D. None of these
812	Roots of the equation $x^2 + 2x + 3 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these
813	Roots of the equation $x^2 + 5x - 1 = 0$ are	A. Rational B. Irrational C. Complex D. None of these
814	Roots of the equation $2x^2 - 7x + 3 = 0$ are	A. Rational B. Irrational C. Complex D. None of these
815	Roots of the equation $9x^2 - 12x + 4 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these
816	If one root of the equation $x^2 - 3x + a = 0$ is 2 then a = _____	A. 0 B. 1 C. 2 D. 3
817	The discriminant of the quadratic equation $ax^2 + bx + c = 0$ is	A. b² + 4ac B. b² - 4ac C. 4ac - b² D. a² - 4ac
818	A rule that assigns to each elements x in X a unique element y in Y is called a _____	A. domain B. range C. function D. none of these
819	A rule or correspondence that assigns to each element x in X a unique element y in Y is called a function from	A. X to X B. X to Y C. Y to X D. none of these

820	If the roots of 3x2+kx + 12 = 0 are equal then k = _____	
821	If w is a cube root of unity then 1 + w + w^2= _____	A. 1 B. 2 C. 0 D. -1
822	A function from X to Y is written as	B. f : X to Y D. f : Y to Y
823	The roots of the equations will be equal if b^2- 4ac is	A. Positive B. Negative C. 1 D. Zero
824	The roots of the equation will be irrational if b^2- 4ac is	A. Positive and perfect square B. Positive but not a perfect square C. Negative D. Zero
825	A function from X to X is denoted as	B. f : X to Y D. f : Y to Y
826	If b^2- 4ac is positive then the roots of the equation are	A. Real B. Imaginary C. Positive D. Negative
827	Question Image	A. x = f(y) B. y = f(x) C. x = f(x) D. y = f(y)
828	If b^2- 4ac = 0 then the roots of the equation are	A. Real and distinct B. Real and equal C. Imaginary D. None of these
829	The product of cube roots of unity is	A. Zero B. 1 C. -1 D. None of these
830	Question Image	A. range of f B. domain of f C. both (a) and (b) D. none of these
831	For any integer k, w^n= _____ when n = 3k	A. 1 B. 2 C. 0 D. -4
832	w^{29}= _____	A. 0 B. 1 C. w D. w²
833	w^{73}= _____	A. 0 B. 1 C. w D. w²
834	w^{28}+ w^{38}= _____	A. 0 B. 1 C. w D. -1
835	Question Image	A. images B. pre-images C. constants D. none of these
836	(2 + w) (2 + w^2) = _____	A. 1 B. 2 C. 3 D. 0
837	Question Image	A. image B. pre-image C. constant D. none of these
838	There are _____ basic techniques for solving a quadratic equation	A. Two B. Three C. Four

		D. None of these
839	If y is an image of x under the function f, then we write	A. y = f(x) B. x = f(y) C. y = x D. none of these
840	Question Image	A. f(x) = x² B. f(x²) = x C. f(x) = x D. none of these
841	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 D. none of these
842	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 D. none of these
843	Question Image	
844	If $f(x) = x^2$ then f(-2) is	A. -2 B. 2 C. 4 D. -4
845	If $f(x) = x^2$ then f(2) is	A. -2 B. 2 C. 4 D. -4
846	If $f(x) = (-x)^2$ then f(-2) is	A. 0 B. 2 C. -4 D. 4
847	The product of the four fourth roots of unity is	A. 0 B. 1 C. -1 D. None of these
848	If $f(x) = -x^2$ then f(-2) is	A. -2 B. 2 C. -4 D. 4
849	The polynomial x - a is a factor of the polynomial f(x) if and only if	A. f(a) is positive B. f(a) is negative C. f(a) = 0 D. None of these
850	If $f(x)= x^3$ then f(-2) is	A. -2 B. -4 C. -8 D. 8
851	If $f(x) = -x^3$ then f(-2) is	A. -2 B. -4 C. -8 D. 8
852	Two quadratic equation in which xy term is missing and the coefficients of x^2 and y^2 are equal, give a linear equation by _____	A. Addition B. Subtraction C. Multiplication D. Division
853	If $f(x) = x^2-x$ then f(0) is	A. 0 B. 1 C. 2 D. 3
854	If $f(x) = x^2-x$ then f(1) is	A. 0 B. 1 C. 2 D. 3
855	If $f(x) = x^2- x$ then f(2) is	A. 4 B. 6 C. 2 D. 0
856	If $f(x) = x^2- x$ then f(-2) is	A. 4 B. 6 C. 2 D. 0

857	If $x^2 - 7x + a$ has remainder 1 when divided by x + 1, then a = _____	A. -7 B. 7 C. 0 D. None of these
858	Question Image	A. 2 C. -2 D. none of these
859	If x - 2 is a factor of ax2- 12x + a = 2a, then a = _____	A. -5 B. 5 C. 0 D. 1
860	Find a if 1 is a root of the equation $x^2 + ax + 2 = 0$	A. 3 B. -3 C. 2 D. 0
861	Which of the following is a factor of $x^3 - 3x^2 + 2x - 6$	A. x + 2 B. x + 3 C. x - 3 D. x - 4
862	Question Image	A. 0 B. 1 C. 2 D. None of these
863	Question Image	A. 2 B. 6
864	Question Image	A. 2 D. 0
865	Question Image	A. 0 B. -4 D. none of these
866	Question Image	A. 2 B. -1 C. 8 D. not defined
867	Question Image	A. 0 B. 3 C. 9 D. -3
868	If $f(x) = x^3 - 2x^2 + 4x - 1$ then f(0) is	A. 0 B. 1 C. -1 D. none of these
869	Question Image	A. -1 B. 1 C. 2 D. -2
870	If $f(x) = x^3 - 2x^2 + 4x - 1$ then f(2) is	A. 7 B. -16 C. 16 D. -9
871	If f(x) = cos x then f(0) is	A. 0 B. 1 C. 1/2
872	Question Image	A. 0 B. 1 C. 1/2
873	If f(x) = tan x then f(0) is	A. 0 B. 1 C. 1/2
874	Question Image	A. 0 B. 1 C. 1/2
875	Question Image	A. 0 B. 1 C. 2
876	Question Image	A. 0 B. 1 C. 2 D. 1/2

877	If f(x) = x + 1 then f(z^2-1) is	A. z² B. z²+ 2 C. z²- 2 D. none of these
878	If y=f(x) is a function then x is called	A. dependent variable B. independent variable C. constant D. none of these
879	If y=f(x) is a function then y is called	A. dependent variable B. independent variable C. constant D. none of these
880	f(x) = $2x^2$+ 3x + 5 is a	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
881	Question Image	A. Improper rational fraction B. Proper rational fraction C. Polynomial D. Equation
882	f(x) = sin x + $\cos^2 x$ is	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
883	f(x) = log x + 3 is a	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
884	f(x) = 2^x+ 3 . 2^{2x}+ 5 is	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
885	f(x) = C is	A. identity function B. constant function C. linear function D. quadratic function
886	Question Image	A. quadratic function B. constant function C. linear function D. exponential function
887	Question Image	A. quadratic function B. constant function C. trigonometric function D. linear function
888	f(x) = x is	A. trigonometric function B. exponential function C. quadratic function D. identify function
889	f(x) = 1 is	A. identity function B. constant function C. linear function D. quadratic function
890	Question Image	A. Polynomial B. Equation C. Improper rational fraction D. Proper rational fraction
891	In common logarithm the base is	A. 1 B. 0 C. 10 D. e
892	In natural logarithm the base is	A. 1 B. 0 C. 10 D. e
893	x^3+ $2x^2$- 3x + 5 is _____	A. An equation B. A polynomial C. Proper rational fractions D. Improper rational fractions
894	x^2+ x - 6 = 0 is	A. An equation B. An identity C. A polynomial

		D. None of these
895	f(x) = ax + b will be a constant function if	A. a = 1 , b = 1 B. a = 1 , b = 0
896	An open sentences formed by using the sign of equality '=' is called _____	A. An identity B. An equation C. A polynomial D. None of these
897	f(x) = ax + b will be an identity function if	A. a = 1 , b = 1 B. a = 1 , b = 0
898	sin h x = _____	
899	Question Image	
900	tan h x = _____	
901	sec h x = _____	
902	Question Image	A. sin h x B. cos h x C. tan h x D. cot h x
903	Question Image	A. sin h x B. cos h x C. tan h x D. cot h x
904	Question Image	A. sin h x B. cos h x C. sec h x D. cosec h x
905	Question Image	
906	Sin $h^{-1}x$ = _____	
907	Question Image	
908	Question Image	
909	A fraction in which the degree of the numerator is less than the degree of the denominator is called	A. Polynomial B. Equation C. Proper fraction D. Improper fraction
910	Question Image	A. An expression B. Rational fraction C. Equation D. Identity
911	$(x + 3)(x + 4) = x^2 + 7x + 12$ is _____	A. Quadratic equation B. Linear equation C. Cubic equation D. Identity
912	Question Image	D. none of these
913	Question Image	
914	Question Image	D. none of these
915	Question Image	
916	Question Image	
917	Question Image	
918	Question Image	
919	Question Image	A. 2x B. 3x² C. 1 D. 0
920	Question Image	
921	Question Image	A. 2C B. C³ C. 1 D. 0

922	Question Image	
923	Question Image	
924	Question Image	D. none of these
925	Question Image	A. -2x³ B. 2x⁻³ C. -2x⁻³ D. 2x³
926	Question Image	A. 3x²+ 2 B. 3x²+ 2x + 3 C. x³+ x² D. none of these
927	Question Image	
928	A relation in which the equality is true only for some values of the known is called _____	A. An identity B. An equation C. A polynomial D. None of these
929	Question Image	A. 3 B. 2 C. 8 D. 0
930	A relation in which the equality is true for all values of the unknown is called _____	A. An identity B. An equation C. A polynomial D. None of these
931	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
932	Question Image	A. 4x + 1 B. 4x C. 2x³ D. none of these
933	Question Image	
934	Question Image	A. x³⁹ B. 40x³⁹ C. 40x⁴¹ D. none of these
935	Question Image	
936	Question Image	D. none of these
937	Question Image	A. 100x ⁹⁹ B. 100x ¹⁰¹ C. -99x ⁹⁹ D. -100x ¹⁰¹
938	Question Image	
939	Question Image	A. cos x B. - sin x C. - cos x D. tan x
940	Question Image	A. - cos x B. sin x C. - sin x D. sec x
941	Question Image	
942	Question Image	A. sec x tan x B. cos²x C. sin²x D. sec²x
943	Question Image	A. -cosec²x B. -sec²x C. - cosec x cot x D. cosec x
944	Question Image	A. sec x tan x B. -cosec x cot x C. sec²x

		D. -sin x
945	Question Image	A. cos x B. sec x tan x C. sec²x D. -cosec²x
946	Question Image	A. 0 B. -1 C. 1 D. 1/2
947	Question Image	
948	Question Image	A. 0 B. -1 C. 1
949	Question Image	A. 0 B. -1 C. 1 D. 2
950	Question Image	A. 0 B. -1 C. 1 D. -2
951	Question Image	
952	Question Image	
953	Question Image	A. 0 B. -1 C. 1 D. not defined
954	Question Image	A. 0 B. -1 C. 1 D. not defined
955	Question Image	A. x³ B. 3x² C. 3x D. 3
956	Question Image	A. 100 B. 99 C. 0 D. none of these
957	Question Image	
958	Question Image	
959	Question Image	D. none of these
960	Question Image	D. none of these
961	Question Image	D. none of these
962	Question Image	A. cos 2x B. 2 cos 2x C. 2 sin2x D. -2 cos2x
963	Question Image	A. 3 sec²x B. 3 sec²3x C. sec²3x D. sec²x
964	Question Image	
965	How many types of an equation	A. 1 B. 3 C. 2 D. None
966	An equation which holds good for all values of variables is called	A. Equation B. Conditional equation C. Constant D. None
967	Question Image	
		A. Identity function

968	A function whose domain is a subset of natural numbers is called _____	A. Identity function B. Sequence C. Onto function D. Series
969	If a_n= 2n -3, write the first four terms	A. -3, -1, 1, 3 B. 1, 3, 5, 7 C. -1, 1, 3, 5 D. None of these
970	Question Image	
971	Question Image	
972	Question Image	
973	Question Image	
974	Find the next two terms of 7, 9, 12, 16,...	A. 18, 20 B. 19, 22 C. 20, 25 D. 21, 27
975	Question Image	
976	The general term of a sequence is denoted by	A. a₁ B. a_n C. n D. s_n
977	Question Image	
978	The general term of the A.P. is	A. a₁+ (n - 1) d B. n + (a₁- 1) d C. d + (n - 1) a₁ D. None of these
979	Question Image	
980	The difference of two consecutive terms of an A.P. is called _____	A. General term B. Common ratio C. Common difference D. None of these
981	-2, 1, 4, 7,.... is _____	A. Harmonic sequence B. Arithmetic sequence C. Geometric sequence D. Arithmetic series
982	Question Image	A. 3/4 B. -3/4 C. 4/3 D. -4/3
983	Question Image	A. 2x cos x2 B. -2xcosxsinx C. 2x Sin x2 D. -Sin x2
984	Arithmetic mean between a and b is	
985	Question Image	A. 2x cos x2 B. 2sinxcosx C. - sin x2 D. 2x sin x2
986	Question Image	
987	Question Image	
988	The n numbers $A_1,A_2,A_3,.....A_n$are called an arithmetic means between a and b if $a.A_1,A_2,A_3.....A_n$, b is _____	A. An arithmetic series B. An arithmetic sequence C. A geometric sequence D. A harmonic sequence
989	Sum of first n terms of an arithmetic series is	
990	Question Image	
991	Question Image	
992	Question Image	
993	Question Image	
		A. x + 1 B. x + 2

994	Arithmetic mean between x - 3 and x + 5 is	C. x + 3 D. x + 4
995	Write the first four terms of the arithmetic sequence 5, 2, -1, ... is	A. 3 B. -4 C. 7 D. 1
996	Question Image	
997	Derivative of sin x w.r.t. sin x is	A. 0 B. 1 C. sin x D. cos x
998	Write the first four terms of the sequence if $a_n = (-1)^n n^2$	A. -1, 4, -9, 16 B. 1, -4, 9, 16 C. 1, 4, 9, 16 D. None of these
999	Derivative of a w.r.t x is	A. 0 B. 1 C. x D. x
1000	Derivative of x^3 w.r.t x is	A. 0 B. 1 C. 3x² D. x³
1001	A number A is called the arithmetic mean between a and b if a, A, b is _____	A. Arithmetic sequence B. Geometric sequence C. Harmonic sequence D. Arithmetic sequence
1002	Question Image	
1003	The series obtained by adding the terms of an arithmetic sequence is called the	A. Infinite series B. Harmonic series C. Geometric series D. Arithmetic series
1004	Question Image	
1005	The sum of n terms of a series is denoted by	A. d B. n C. S_n D. a_n
1006	The nth term of a G.P. is	A. a₁rⁿ B. a₁rⁿ⁺¹ C. a₁rⁿ⁻¹ D. a₁r⁻ⁿ
1007	3, 6, 12,.... is	A. A.P B. G.P. C. H.P. D. None of these
1008	Question Image	A. a^x B. a^xln a
1009	Geometric mean between a and b is	
1010	Question Image	A. 2^x B. 2^xln x C. 2^xln 2
1011	G is geometric mean between a and b if a, G, b is	A. A.P. B. G.P. C. H.P. D. None of these
1012	The numbers of $G_1, G_2, G_3 \ldots\ldots G_n$ are called n geometric means between a and b is a, $G_1, G_2, G_3, \ldots G_n$, b are in	A. H.P. B. A.P. C. G.P. D. None of these
1013	Find the geometric mean between 4 and 16	
1014	Question Image	
1015	Question Image	D. none of these
1016	Question Image	

1017	Question Image	A. 2x + 3 B. x²+ 3 + c
1018	Sum of n terms of a geometric series if | r | < 1 is	
1019	No term of a geometric sequence can be	A. 0 B. 1 C. 2 D. 3
1020	Question Image	B. 6x + 2 + c C. 6x + x²+ c D. 6x³+ x²+ x
1021	The common ration of a geometric sequence cannot be	A. 0 B. 1 C. 2 D. 3
1022	If $a_1$and r are the first term and the common ratio respectively then (n + 1)th term of the G.P. is	A. 0 B. a₁rⁿ⁻¹ C. a₁rⁿ⁺¹ D. a₁rⁿ
1023	Question Image	A. 6x - 2 + c B. x³- x²+ x + c C. 6x - x²+ c D. 6x³- x²+ c
1024	If a_1, r are first term and the common ratio respectively then the sum of an infinite geometric series is	
1025	The sum of an infinite geometric series exist if	A. | r | < 1 B. | r | > 1 C. r = 1 D. r = -1
1026	The series obtained by adding the terms of a geometric sequence is called	A. Infinite series B. Arithmetic series C. Geometric series D. Harmonic series
1027	Question Image	A. 0 B. 1 C. 2 D. 3
1028	Question Image	
1029	Question Image	
1030	Find the sum of the infinite geometric series 2 + 1 + 0.5 + ...	A. 3.5 B. 3 C. 4 D. None of these
1031	Question Image	
1032	A sequence of number whose reciprocals form an arithmetic sequence is called	A. Geometric sequence B. Arithmetic series C. Harmonic sequence D. Harmonic series
1033	No term of a harmonic sequence can be	A. 0 B. 1 C. 2 D. 3
1034	Question Image	A. cos x + c B. -sin x + c C. -cos x + c D. sin x + c
1035	Question Image	A. sin x + c B. -sin x + c C. cos x + c D. -cos x + c
1036	Question Image	A. an A.P. B. a G.P. C. a H.P. D. None of these
1037	Question Image	A. 1 + tan²x + c B. tan x + c C. -tan x + c

		D. cot x + c
1038	Question Image	A. cot x + c B. tan x + c C. -cot x + c D. -tan x + c
1039	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
1040	The harmonic mean between a and b is	
1041	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
1042	H.M. between 3 and 7 is	
1043	Question Image	A. e^x+ c B. e^{-x}+ c C. x e^x+ c D. not possible
1044	A number H is said to be the H.M. between a and b if a, H, b are in	A. A.P. B. G. P. C. H. P. D. None of these
1045	H_1, H_2, H_3, ... $H_n$are called n harmonic means between a and b if a, H_1, H_2, H_3, ... H_nb are in	A. H.P. B. G.P. C. A.P. D. None of these
1046	Question Image	B. a^xln a + c C. a^x+ c D. x a^x+ c
1047	Question Image	B. x⁻²+ c D. not possible
1048	Question Image	
1049	If A, G, H are the arithmetic, geometric and harmonic means between a and b respectively then A, G, H are in	A. A. P. B. G. P. C. H. P. D. None of these
1050	Question Image	
1051	Question Image	
1052	Question Image	
1053	Question Image	
1054	Question Image	
1055	The 6th term of an arithmetic sequence whose first term is 3 and common difference in zero is	A. 18 B. 6 C. 3 D. 0
1056	Question Image	A. 1, 1/2, 0 B. 1, 2, 1 C. 1, 2, 3 D. 1, 2, 0
1057	Question Image	A. 2 B. -3/2 C. 1 D. 0
1058	If a_1, r and $a_n$are the first term, common ratio and the nth term respectively of a G. P. then a_n=	A. a₁rⁿ B. a₁rⁿ⁻¹ C. a₁rⁿ⁺¹ D. a₁r
1059	If a_1= 3, r = 2, then the nth term of the G.P. is	A. 2.3ⁿ⁻¹ B. 3.2ⁿ C. 3.2ⁿ⁺¹ D. 3.2ⁿ⁻¹
1060	The fifth term of the sequence a_n= 2n + 3 is	A. 13 B. -13

	_____	C. 8 D. 3
1061	The third term of the sequence $a_n = (-1)^{n-1}(n-7)$ is _____	A. 8 B. 4 C. -4 D. 8
1062	1 + 2 + 3 + ... + n = _____	
1063	If n is a positive integer then n! is	A. (n - 1) (n - 2) .....3,.2.1 B. n(n - 1) (n - 2) ...3.2.1 C. n(n - 1) (n -2) ... 3 D. None of these
1064	For a positive integer n	A. n! = n(n + 1) B. n! = n(n+1)! C. n! = n(n - 1) D. n! = n(n - 1)!
1065	0! = _____	A. 0 B. 1 C. 2 D. Not defined
1066	Question Image	A. 8 B. 1/56 C. 56 D. None of these
1067	8 . 7 . 6. 5 in factorial form is	
1068	Question Image	
1069	6! = _____	A. 360 B. 720 C. 6.5.4 D. None of these
1070	Question Image	A. 5x^{4 + c} B. 1/6 x⁶+ c C. 5x²+ c D. 1/5 x⁶+ c
1071	Question Image	
1072	Question Image	A. 56 B. 7 C. 8 D. 8/7
1073	n(n - 1) (n - 2) in factorial form is	
1074	(n + 2) (n + 1)n in factorial form is	
1075	Question Image	A. 3 B. 6 C. 0 D. None of these
1076	Question Image	
1077	Question Image	
1078	Question Image	
1079	Question Image	A. a cos(ax + b) + c B. - a cos(ax + b) + c
1080	Question Image	A. a sin(ax + b) + c B. - a sin(ax + b) + c
1081	Question Image	A. n! B. 0! C. 1 D. None of these
1082	Question Image	A. a tan(ax + b) + c B. - a tan(ax + b) + c
1083	Question Image	A. a cot(ax + b) + c B. - a cot(ax + b) + c
1084	Question Image	A. a sec(ax + b) + c B. - a sec(ax + b) + c
	Question Image	A. 0 B. 20

1085	Question Image	C. 90 D. 80
1086	Question Image	A. a cosec(ax + b) + c B. - a cosec(ax + b) + c
1087	Question Image	A. 6 B. 360 C. 120 D. 24
1088	n different objects can be arranged taken all at a time in _____	A. (n + 1)! ways B. (n - 1)! ways C. n! ways D. n ways
1089	Question Image	A. 120 B. 5 C. 4 D. 6
1090	Number of ways of writing the letters of WORD taken all at a time is	A. 24 B. 4 C. 12 D. 6
1091	How many arrangements of the letters of the word MI SSI PPI, taken all together can be made?	
1092	In how many ways can 5 persons be seated at a round table	A. 5! B. 4! C. 3! D. 120
1093	How many signals can be given by 5 flags of different colours, using 3 flags at a time	A. 120 B. 60 C. 24 D. 15
1094	How many 3 digit numbers can be formed by using each one of the digit 2, 3, 5, 7, 9 only once?	A. 15 B. 24 C. 60 D. 120
1095	How many necklaces can be made from 6 beads of different colours?	A. 120 B. 60 C. 24 D. 15
1096	Question Image	
1097	When a selection of object is made without paying regard to the order of selection, it is called	A. Sequence B. Series C. Combination D. Permutation
1098	Question Image	
1099	Question Image	
1100	Question Image	
1101	Question Image	
1102	Question Image	
1103	Question Image	
1104	Question Image	
1105	Question Image	
1106	Question Image	
1107	Question Image	
1108	Question Image	B. sin 2x + c C. -sin 2x + c
1109	Question Image	A. cos 3x + c B. - cos 3x + c
1110	Question Image	A. sec 5x + c B. - sec 5x + c

1111	Question Image	
1112	The number of permutations of n objects of which there are $n_1$like of one kind, $n_2$like of the second kind and $n_3$like objects of third kind are	
1113	Question Image	
1114	Question Image	B. a f(x) + c C. f(x) + a
1115	Question Image	A. 2x - 3x + c C. x²- 3x + c
1116	The number of the diagonals of a 6 sided figure is	A. 15 B. 21 C. 9 D. 6
1117	Question Image	A. x³- x²+ x + c B. 6x - 2 + c C. x³- 2x + c
1118	Question Image	A. cos 2x + c B. - cos 2x + c C. tan 2x + c D. cot 2x + c
1119	Question Image	
1120	Question Image	A. - cot 4x + c B. cot 4x + c C. tan 4x + c D. - tan 4x + c
1121	Question Image	A. 110 B. 220 C. 1320 D. None of these
1122	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
1123	Question Image	A. 5 B. 20 C. 9 D. 4
1124	Question Image	A. sec 3x + c B. - cosec 3x + c
1125	Question Image	
1126	The sample space for tossing a coin once is	A. {T, T} B. {H, H} C. {H, T} D. None of these
1127	The probability to get an odd number in a dice thrown once is	A. 6 B. 1 C. 1/6 D. 1/2
1128	A dice is rolled. The probability that the dots on the top are greater than 4 is	A. 1/6 B. 1/3 C. 1/2 D. 1
1129	The probability that a slip of number divisible by 4 is picked from the slips bearing numbers 1, 2, 3, ...10 is	A. 1/5 B. 1/4 C. 1/3 D. 1/2
1130	Question Image	A. P(A) + P(B) B. P(A) - P(B) C. P(A) . P(B) D. P(A) / P(B)
1131	Question Image	C. ln f(x) + c D. f(x) - c
1132	The sample space for tossing a coin twice is	A. {H, T} B. {HH, HT, TH, TT} C. {H, T, HH} D. {HH, HT, TT}

1133	Question Image	C. x²+ 2x + c D. (x²+ 2x -1)⁴+ c
1134	The probability that a person A will be alive 15 years hence is 5/7 and the probability that another person B will be alive 15 years hence is 7/9. Find the probability that both will be alive 15 years hence	A. 4/63 B. 5/9 C. 45/49 D. None of these
1135	Question Image	A. 4(x³- 3x²)³+ c B. 3x²- 6x + c
1136	Question Image	A. 0 B. -1 C. 1 D. 2
1137	Question Image	A. (x³- 3x²)⁸+ c D. 3x²- 6x + c
1138	If n is a negative integer n! is	A. 1 B. 0 C. Unique D. Not defined
1139	Question Image	B. ln(x²- x + 1) + c D. ln(2x - 1) + c
1140	Question Image	B. ln(x²- x + 1)⁴+ c
1141	9. 8. 7. 6= _____	
1142	(n + 2) (n + 1) n= _____	
1143	Question Image	
1144	Question Image	
1145	For all points (x,y) in first quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
1146	For all points (x,y) in second quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
1147	n(n - 1) (n - 2) .... (n - r + 1) = _____	
1148	For all points (x,y) in third quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
1149	Question Image	
1150	For all points (x,y) in fourth quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
1151	For all points (x,y) on x-axis	A. x is positive B. x is negative C. y = 0 D. y is negative
1152	20. 19. 18. 17= _____	
1153	For all points (x,y) on y-axis	A. x is positive B. x = 0 C. x is negative D. y = 0
1154	Question Image	A. 36 B. 360 C. 24 D. 6
1155	The distance between two points P(x_1, y_1) and Q (x_2, y_2) is	
1156	The number of words that can be formed out of the letters of the word ASSASSINATION is	
1157	How many arrangements of the letters of the word MATHEMATICS can be made	

	word MATHEMATICS can be made	
1158	The square of the distance between two points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
1159	The distance between the points (0,0) and (x,y) is	A. x²+ y² B. x C. y
1160	How many arrangements of the letters of the word PAKISTAN cab be made	
1161	The distance between the points (0 , 0) and (1, 2) is	A. 5 C. 0 D. 3
1162	The distance between the points (0 , 0) and (2, 1) is	A. 5 C. 0 D. 3
1163	How many arrangements of the letter of the word PAKPATTAN can be made	
1164	The distance between the points (1, 2) and (2, 1) is	A. 3 B. 6
1165	The distance between the points (2, 2) and (3, 3) is	A. 10 C. 5 D. 2
1166	How many arrangements of the letters of the word ADDING can be made	
1167	The distance of the point (a, b) from x-axis is	A. a B. b C. a + b
1168	The probability to get an odd number in a dice thrown once is	A. 1/2 B. 1/6 C. 1/3 D. 2
1169	The distance of the point (a,b) from y-axis is	A. a B. b C. a + b
1170	The distance of the point (2.3) from x-axis is	A. 2 B. 3 C. 5
1171	Question Image	
1172	The distance of the point (-2,3) from x-axis is	A. -2 B. 2 C. 3 D. 1
1173	The distance of the point (2, -3) from x-axis is	A. -2 B. -3 C. 2 D. 3
1174	The distance of the point (2,3) from y-axis is	A. 2 B. 3 C. 5
1175	The distance of the point (2,-3) from y-axis is	A. 2 B. -3 C. 1 D. 5
1176	Question Image	
1177	The distance of the point (-2 , 3) from y-axis is	A. 2 B. -2 C. 3 D. 1
1178	The distance of the point (-2 , -3) from x-axis is	A. 2 B. -3 C. 3 D. 5
1179	The distance of the point (-2 , -3) from y-axis is	A. 2 B. -2 C. 3 D. -3

1180	The distance of the point (2,3) from origin is	B. 5 C. 2 D. 3
1181	Question Image	A. 5 B. 10 C. 20 D. 30
1182	The distance of the point (-2, -3) from the origin is	A. 2 B. -5 C. -3
1183	Question Image	
1184	If $d_1$is the distance between (0,0) and (1,2) and $d_2$is the distance between (0,0) and (2,1) then	A. d₁= d₂ B. d₁<d₂ C. d_{1>}d₂ D. none of these
1185	Question Image	
1186	If $d_1$is the distance between (0,0) and (1,2) and $d_2$is the distance between (0,0) and (-1,-2) the	A. d₁< d₂ B. d₁> d₂ C. d₁= d₂ D. none of these
1187	The distance between the points (2,3) and (3,2) is	A. 5 C. 2 D. 10
1188	If distance of (a,b) from x-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. b = 4
1189	If distance of (a,b) from y-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. a = 4
1190	If distance of (a,b) from origin is 5 then	A. a²+ b²=5 B. a = 5 C. b = 5
1191	If distance between (a,2) and (0,0) is 2 then a = _____	A. 0 B. 2 C. 4
1192	If distance between (3,b) and (0,0) is 3 then b = _____	A. 3 C. 9 D. 0
1193	Question Image	A. 1 B. 2 C. 3
1194	If n is any positive integer then n! > $2^{n-1}$for	
1195	Question Image	A. 1 B. 2 C. 3
1196	If n is any positive integer then n^2> n + 3 for	
1197	Question Image	A. 3 B. 1 C. 4
1198	The distance of the point (1.1) from the origin is	A. 0 B. 2
1199	If a statement S(n) is true for n = 1 and the truth of S(n) for n = k implies the truth of S(n) for = k + 1, then S(n) is true for all	A. Real numbers n B. Integers n C. Positive integers n D. None of these
1200	If n is any positive integer then n! > $n^2$for	
1201	The point R dividing internally the line joining the points P(x_1, y_1) and Q(x_2, y_2) in the ratio K_1: K_2has the coordinates	
1202	a + x is _____	A. A trinomial B. A binomial C. A monomial

		D. None of these
1203	In the expansion of $(a + x)^n$ the general term T_{r+1} is	
1204	The point R dividing externally the line joining the points $P(x_1, y_1)$ and $Q(x_2, y_2)$ in the ratio $k_1 : k_2$ has the coordinates	
1205	Question Image	A. 2 B. 7 C. 8 D. 12
1206	The mid point of the line joining the points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
1207	Question Image	A. Even B. Odd C. Prime D. None of these
1208	The sum of coefficients in the binomial expansion equals to	A. 2 B. 2ⁿ⁺¹ C. 2ⁿ⁻¹ D. 2ⁿ
1209	The distance between the points A(3,1) and B(-2,-4) is	A. 5 C. 25 D. 10
1210	The first three terms in the expansion of $(1 + x)^{-1}$ are	A. 1 + x + x² B. 1 - x - x² C. -1 -x + x² D. 1 - x + x²
1211	The distance between the points A(-8,3) and B(2,-1) is	B. 116 D. none of these
1212	The first three terms in the expansion of $(1 + x)^{-2}$ are _____	A. 1 - 2x + 3x² B. 1 - 2x - 3x² C. 1 + 2x + 3x² D. -2 -2x + 3x²
1213	The first three terms in the expansion of $(1 + x)^3$ are	A. 1 + 3x +6x² B. 1- 3x + 6x²\ C. -3 -3x -6x² D. 1- 3x -6x²
1214	The first three terms in the expansion of $(1 - x)^{-1}$ are	A. 1 + x + x² B. 1 - x - x² C. -1 -x +x² D. 1 - x + x²
1215	The mid point of the line segment joining the points A(3,1) and B(-2,-4) is	A. (1, -3)
1216	The mid point of the line segment joining the points A(-8,3) and B(2,-1) is	A. (-3,1) B. (-6,2) C. (5,2) D. (-5,2)
1217	The first three terms in the expansion of $(1 - x)^{-2}$ are	A. 1 - 2x + 3x² B. 1 - 2x - 3x² C. 1 + 2x + 3x² D. -2 - 2x +3x²
1218	The mid point of the line segment joining the points (4,0) and (0,4) is	A. (4,4) B. (2,2) C. (-4,-4) D. (-2,-2)
1219	The first three terms in the expansion of $(1 - x)^{-3}$ are	A. 1 + 3x + 6x² B. 1 - 3x + 6x² C. -3 - 3x - 6x² D. 1 - 3x - 6x²
1220	The mid point of the line segment joining the points (3,-1) and (-3,1) is	A. (3,-1) B. (0,0) C. (2,2) D. (4,4)
1221	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd B. 3rd C. 4th D. 5th
		A. 10

1222	The number of terms in the expansion of $(a + b)^9$ is	A. 10 B. 11 C. 9 D. 12
1223	The mid point of the line segment joining the points (a,b) and (b,a) is	
1224	In the expansion of $(a + x)^n$ the sum of exponents of a and x in each term of the expansion is	A. n + 1 B. n - 1 C. n D. 2n
1225	Question Image	A. 1 B. 2 C. -1 D. 0
1226	Question Image	A. a B. 2a C. 3a D. 4a
1227	If n is odd then the middle terms in the expansion of $(a + x)^n$ are	
1228	The sum of even coefficient in the binomial expansion is	A. 2ⁿ⁺¹ B. 2ⁿ C. 2ⁿ⁻¹ D. 2n
1229	If origin is the mid point of (a,3) and (5,b) then	A. a = -5 , b = -3 B. a = 5 , b =3 C. a = -5 , b = 3 D. a = 5 , b = -3
1230	The sum of the odd coefficients in the expansion of $(a + x)^4$ is	A. 14 B. 12 C. 8 D. 4
1231	The sum of the coefficient in the expansion of $(a + x)^5$ is	A. 32 B. 16 C. 8 D. 5
1232	The middle term in the expansion of $(a +x)^{12}$ is	A. 7th B. 8th C. 9th D. 6th
1233	If origin is the mid point of (a, -3) and (-5, b) then	A. a = -5 , b = -3 B. a = 5 , b =3 C. a = -5 , b = 3 D. a = 5 , b = -3
1234	If (2, 3) is the mid point of (a, 3) and (5, b) then	A. a = 1 , b = -3 B. a = -1 , b = 3 C. a = 1 , b =3 D. a = -1 , b = -3
1235	If a statement S(n) is true for n = i where i is some natural number and the truth of S(n) for n = k > i implies the truth of S(n) for n = k +1 then S(n) is true for all positive integers	
1236	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 internally	
1237	If n is any positive integer then 3 + 6 + 9 + ...+ 3n = _____	
1238	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 externally are	
1239	If n is any positive integer then $4^n > 3^n + 4$ is true for all	
1240	The centroid of a triangle divides each median in the ratio	A. 2 : 1 B. 3 : 1 C. 3 : 2 D. 1 : 1
1241	The point which divides the line segment joining the points (a, b) and (c, d) in the ratio 2 : 3 internally is	D. none of these

1242	The point of concurrency of the medians of a triangle is called	A. incentre B. circumcentre C. e-centre D. centroid
1243	If n is any positive integer then $2^n > 2(n + 1)$ is true for all	
1244	The point of concurrency of the angle bisectors of a triangle is called	A. incentre B. circumcentre C. e-centre D. centroid
1245	$(1 + 2x)^4 =$ _____	A. 1 + 4x + 6x²+ 4x³+ x⁴ B. 1 - 4x + 6x²- 4x³+ x⁴ C. 1 - 8x + 24x²- 32x³+ 16x⁴ D. 1 + 8x+ 24x²+ 32x³+ 16x⁴
1246	The point of concurrency of the right bisectors of the sides of a triangle is called	A. incentre B. circum center C. e-center D. centroid
1247	$(1 - x)^3 =$ _____	A. 1 + 3x + 3x²+ x³ B. 1 + x + x²+ x³ C. 1 - x + x²- x³ D. 1 - 3x + 3x²- x³
1248	The number of terms in the expansion of $(a + x)^{12}$ is	A. 13 B. 12 C. 11 D. 10
1249	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
1250	If $A(x_1, y_1)$, $B(x_2, y_2)$ and $C(x_3, y_3)$ are the vertices of a triangle then its centroid is	
1251	The sum of the even coefficients in the expansion $(1 + x)^n$ is	A. n² B. 2ⁿ⁻² C. 2ⁿ⁻¹ D. 2ⁿ
1252	If n is not natural number, then the expansion $(1 + x)^n$ is valid for	
1253	Question Image	A. 8 B. 9 C. 10 D. 11
1254	If $\lvert x \rvert < 1$, then the first two terms of $(1 - x)^{1/2}$ are	
1255	The expansion of $(1 + 2x)^{-2}$ is valed if	A. | x | < 1/2 B. | x | < 1 C. | x | < 2 D. | x | < 3
1256	The expansion of $(1 - 3x)^{-1}$ is valid if	A. | x | < 1 B. | x | < 3 C. | x | < 1/3 D. None of these
1257	$3x + 4 > 0$ is	A. equation B. identity C. inequality D. none of these
1258	$3x + 4 \geq 0$ is	A. equation B. inequality C. identity D. none of these
1259	$3x + 4 < 0$ is	A. inequality B. equation C. identity D. not inequality
1260	$3x + 4 \leq 0$ is	A. not inequality B. equation C. identity D. inequality

1261	3x + 4 = 0 is	A. not inequality B. equation C. identity D. inequality
1262	Question Image	A. 360° B. 180° C. 90° D. None of these
1263	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity
1264	One degree is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
1265	2x + 3y > 4 is a linear inequality in	A. one variable B. two variables C. three variables D. none of these
1266	One minute is denoted by	A. 1⁰ B. 1' C. 1" D. None of these
1267	One second is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
1268	ax + by < c is linear inequality in	A. four variables B. three variables C. two variables D. one variable
1269	1^0= _____	A. 360' B. 60" C. 60' D. 3600'
1270	The real numbers which satisfy an inequality form its	A. solution B. coefficient C. domain D. range
1271	x = 0 is in the solution of the inequality	A. x > 0 B. 3x + 4 < 0 C. x + 3 < 0 D. x - 2 < 0
1272	1^0= _____	
1273	1^0= _____	A. 1.5 rad B. 0.5 rad C. 0.175 rad D. None of these
1274	Question Image	A. 360° B. 180° C. 90° D. None of these
1275	If the circumference of a circle is divided into 360 congruent parts, the angle subtended by one part at the centre of the circle is	A. 1⁰ B. 1' C. 1" D. 1 rad
1276	The measure of the angle subtended at the centre of the circle by an arc, whose length is equal to the radius of the circle is	A. 1⁰ B. 1' C. 1" D. 1 rad
1277	Three right angles is the angle of measure	A. 270° B. 180° C. 90° D. 270'
1278	The 60th part of one minute is called	A. Degree B. Second C. Radiam D. None of these
		A. x + 1 > 0

1279	x = 1 is in the solution of the inequality	B. x - 2 > 0 C. 3x - 1 < 0 D. x + 2 < 0
1280	A right angle is the angle of measure	A. 90' B. 60° C. 60" D. 90°
1281	x = -1 is in the solution of the inequality	A. x + 5 < 0 B. 2x + 3 <u><</u> 0 C. x > 0 D. 2x + 3 > 0
1282	x = _____ is in the solution of 2x + 3 < 0	A. 0 B. 2 C. -1 D. -2
1283	30° = _____	
1284	45° = _____	
1285	60° = _____	
1286	120°=_____	
1287	Question Image	A. 30° B. 45° C. 60° D. 120°
1288	22.5°=_____	
1289	x = _____ is in the solution of 2x + 3 ≥ 0	A. 1 B. -2 C. -3 D. -4
1290	x = _____ is in the solution of 2x - 3 < 0	A. 2 B. -2 C. 3 D. 4
1291	x = _____ is in the solution of 2x - 5 > 0	A. 0 B. 2 C. -2 D. 3
1292	150°= _____	
1293	1 radian = _____	A. 180° B. 90° C. 57.296° D. 60°
1294	The points (x, y) which satisfy a linear inequality in two variables x and y from its	A. domain B. range C. solution D. none of these
1295	The solution set of the inequality ax + by < c is	A. straight line B. half plane C. parabola D. none of these
1296	Question Image	
1297	Question Image	A. 30° B. 45° C. 60° D. 90°
1298	Which of the following is a quadrantal angle	A. 30° B. 45° C. 60° D. 90°
1299	(1, 1) is the in the solution of the inequality	A. 3x + 4y > 3 B. 2x + 3y < 2 C. 4x = 3y > 5 D. 2c - 3y > 2
1300	Which of the following is not a quadrantal angle	A. 90° B. 100° C. 180° D. 270°
		A. 3x + 2y > 8

1301	(1,0) is in the solution of the inequality	A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3 D. x - 2y < -5
1302	Question Image	
1303	(0,1) is in the solution of the inequality	A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 5 D. x -2y < -5
1304	Question Image	
1305	Question Image	
1306	(0,0) is in the solution of the inequality	A. x + y > 3 B. x - y > 2 C. 3x + 2y > 5 D. 3x - 2y < 2
1307	(1, 2) is in the solution of the inequality	A. 2x + y > 8 B. 2x + y <u><</u> 6 C. 2x - y > 1 D. 2x + 3y < 2
1308	Question Image	
1309	The point _____ is in the solution of the inequality 2x + 3y < 5	A. (1,1) B. (2,2) C. (0,1) D. (0,2)
1310	The point _____ is in the solution of the inequality 2x - 3y > 5	A. (1, -1) B. (2,2) C. (0,0) D. (3,0)
1311	The point _____ is in the solution of the inequality 4x - 3y < 2	A. (0,1) B. (2,1) C. (2,2) D. (3,3)
1312	Question Image	
1313	(2, 1) is in the solution of the inequality	A. 2x + y <u>></u> 7 B. x - y > 2 C. 3x + 5y < 6 D. 2x + y < 6
1314	Question Image	
1315	The point _____ is in the solution of the inequality 2x - 3y < 4	A. (0, -2) B. (1, -3) C. (2, 2) D. (3, 0)
1316	Question Image	
1317	Question Image	
1318	Conic sections or simply conics are the curves obtained by cutting a right circular cone by	A. a line B. two lines C. a plane D. two planes
1319	If a cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. parabola B. circle C. hyperbola D. ellipse
1320	Question Image	
1321	If a plane passes through the vertex of a cone then the intersection is	A. an ellipse B. a hyperbola C. a point circle D. a parabola
1322	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the intersection is	A. an ellipse B. a hyperbola C. a circle D. a parabola
1323	Question Image	A. I and III quadrants B. II and III quadrants C. I and II quadrants D. II and IV quadrants

		B. II and IV quadrants
1324	If the intersecting plane is parallel to a generator of the cone, but intersects its one nappe only, the curve obtained is	A. an ellipse B. a hyperbola C. a circle D. a parabola
1325	Question Image	A. I and II quadrants B. I and III quadrants C. II and III quadrants D. II and IV quadrants
1326	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is	A. an ellipse B. a hyperbola C. a circle D. a parabola
1327	Question Image	
1328	The fixed point from which all the points of a circle are equidistant is called the	A. chord of the circle B. centre of the circle C. diameter of the circle D. radius of the circle
1329	The constant distance of all points of the circle from its centre is called the	A. radius of the circle B. secant of the circle C. chord of the circle D. diameter of the circle
1330	The equation of the circle with centre (h, k) and radius r is	A. (x+ h)²+ (y+ k)²= r² B. (x+ h)²+ (y - k)²= r² C. (x - h)²+ (y+ k)²= r² D. (x - h)²+ (y - k)²= r²
1331	Question Image	
1332	Question Image	A. 0 B. 1 C. -1 D. 2
1333	Question Image	
1334	The equation of the circle with centre (-h, -k) and radius r is	A. (x +h)²+ (y+k)²= r² B. (x +h)²+ (y-k)²= r² C. (x -h)²+ (y+k)²= r² D. (x -h)²+ (y-k)²= r²
1335	The equation of the circle with centre origin and radius r is	A. x²+ y²= 1 B. x²+ y²= r² C. x²+ y²= 0 D. x²- y²= r²
1336	The equation of the circle witch centre (-3, 5) and radius 7 is	A. (x-3)²+ (y+5)²= 7² B. (x-3)²+ (y-5)²= 7² C. (x+3)²+ (y+5)²= 7² D. (x+3)²+ (y-5)²= 7²
1337	The equation of the circle with centre (5, -2) and radius 4 is	A. (x-5)²+ (y+2)²= 16 B. (x-5)²+ (y+2)²= 4 C. (x-5)²+ (y-2)²= 16 D. (x-5)²+ (y-2)²= 4
1338	Question Image	
1339	Question Image	A. -1 B. 0 C. 1 D. None of these
1340	Question Image	A. -1 B. 0 C. 1 D. None of these
1341	Question Image	
1342	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
1343	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
		A. I quadrant B. II quadrant

1344	Question Image	B. II quadrant C. III quadrant D. IV quadrant
1345	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
1346	Sin 45° = _____	
1347	Cot 45° = _____	
1348	Sec 30° = _____	
1349	Tan 30° = _____	
1350	Cosec 60° = _____	
1351	Cos 60° = _____	A. 1 B. 2 C. 1/2 D. 3
1352	Cos 0° = _____	A. -1 B. 0 C. 1 D. Undefined
1353	Sin 90° = _____	A. -1 B. 0 C. 1 D. Undefined
1354	Tan 180° = _____	A. -1 B. 0 C. 1 D. Undefined
1355	Sin 270° = _____	A. -1 B. 0 C. 1 D. Undefined
1356	Tan 360° = _____	A. -1 B. 0 C. 1 D. Undefined
1357	Question Image	A. -1 B. 0 C. 1 D. Undefined
1358	Question Image	
1359	Question Image	
1360	Question Image	
1361	The equation of the circle wit (-1, 1) and radius 2 is	
1362	Question Image	
1363	Question Image	
1364	The parametric equations of a circle are	
1365	Question Image	A. (g,f) B. (-g,f) C. (g,-f) D. (-g,-f)
1366	Question Image	
1367	The centre fo the circle $x^2+ y^2+ 12x -10 = 0$ is	A. (12, -10) B. (6, -5) C. (-12, 10) D. (-6, 5)
1368	Question Image	
1369	Question Image	A. (-6,4) B. (-3,2) C. (6,-4) D. (3, -2)

		D. (3, -2)
1370	Question Image	A. 11 B. 61 D. 1
1371	Question Image	A. 0 B. 1 C. 13
1372	Question Image	A. 8 C. 4 D. 64
1373	Question Image	A. (1, 3) B. (-1, -3) C. (1, -3) D. (-1, 3)
1374	Question Image	
1375	Two circles are said to be concentric if they have	A. same radius B. same chord C. same centre D. same diameter
1376	Question Image	
1377	Question Image	
1378	Question Image	
1379	Question Image	A. 5 B. 25 D. 3
1380	Question Image	A. 2 B. 4 C. 3 D. 16
1381	Question Image	
1382	Question Image	
1383	Question Image	
1384	The general equation of a circle is	
1385	Question Image	
1386	Question Image	
1387	If (0, 0) and (1, 0) are the end points of a diameter, then the equation of the circle is	
1388	Question Image	
1389	If (0, 0) and (-1, 0) are end points of a diameter, then the equation of the circle is	
1390	If (0, 0) and (0, -1) are end points of a diameter, then the equation of the circle is	
1391	Question Image	
1392	If the circle $x^2+ y^2+ 2gx +2fy + c = 0$ passes through the origin then	A. c = 0 B. c = -1 C. c = -2 D. c = 1
1393	If (x_1, y_1) and (x_2,y_2) are the end points of a diameter then the centre of the circle is	
1394	Question Image	
1395	Question Image	A. c = 0 B. c = -1 C. c = -2 D. c = 1
1396	Question Image	A. c = 0 B. c = -1 C. c = -2 D. c = 1

1397	Question Image	
1398	If (2, 3) and (2, 5) are end points of a diameter of a circle, then the centre of the circle is	A. (2, 4) B. (4, 8) C. (0, 2) D. (0, -2)
1399	Question Image	
1400	Question Image	
1401	Question Image	
1402	Question Image	
1403	Question Image	
1404	Question Image	
1405	Question Image	
1406	Question Image	D. none of these
1407	Question Image	
1408	Question Image	D. none of these
1409	Question Image	D. none of these
1410	Question Image	
1411	Question Image	D. none of these
1412	Question Image	D. none of these
1413	Question Image	D. none of these
1414	Question Image	
1415	The tangents drawn from the point P to a circle are imaginary if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. none of these
1416	The tangents drawn from the point P to a circle are real and coincident if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. none of these
1417	Question Image	
1418	The tangents drawn from the point P to a circle are real and distinct if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. none of these
1419	Question Image	
1420	Question Image	
1421	The physical quantity which can be specified by a number alongwith unit is called a	A. scalar B. vector C. constant D. none of these
1422	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant D. none of these
1423	Which of the following is a scalar	A. weight B. force C. speed D. momentum
1424	Which of the following us a scalar	A. displacement B. velocity C. acceleration D. density
1425	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass

		B. mass
1426	Which of the following is a vector	A. length B. momentum C. volume D. speed
1427	Which of the following is a vector.	A. work B. time C. density D. electric field
1428	Which of the following is a scalar.	A. force B. frequency C. weight D. acceleration
1429	Which of the following is a vector.	A. energy B. force C. work D. power
1430	Which of the following is a vector.	A. distance B. temperature C. energy D. acceleration
1431	Question Image	
1432	Question Image	
1433	Which of the following does not represent absolute value of a vector	A. magnitude B. length C. norm D. number
1434	Which of the following represents a vector	D. (x, y)
1435	The unit vector along x-axis is	D. none of these
1436	The unit vector along y-axis is	D. none of these
1437	The unit vector along z-axis is	D. none of these
1438	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
1439	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
1440	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
1441	The zero vector is	A. [0, 0, 0] B. [1, 1, 1] C. [0, 1, 0] D. [0, 0, 1]
1442	Which of the following is not a unit vector	A. [1, 1, 1] B. [0, 1, 0] C. [0, 0, 1] D. [1, 0, 0]
1443	Question Image	
1444	Question Image	
1445	Question Image	
1446	Question Image	
1447	Question Image	D. none of these
1448	Question Image	
1449	Question Image	
1450	Question Image	
		A. parallel vectors

1451	Question Image	B. perpendicular vectors C. concurrent vectors D. collinear vectors
1452	A vector with magnitude one is called	A. constant vector B. unit vector C. zero vector D. null vector
1453	Question Image	
1454	Question Image	D. none of these
1455	Question Image	
1456	Question Image	D. none of these
1457	Question Image	D. none of these
1458	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
1459	Question Image	
1460	Question Image	
1461	Question Image	
1462	Question Image	A. perpendicular vectors B. parallel vectors C. concurrent vectors D. none of these
1463	The position vector of a point (x, y) in xy plane is	D. none of these
1464	The position vector of any point in space is	
1465	Question Image	
1466	The position vector of the point P(a, b, c) is	
1467	Question Image	
1468	Question Image	
1469	Question Image	
1470	Question Image	
1471	Question Image	
1472	Question Image	
1473	Question Image	
1474	Question Image	
1475	If 2 and 2 are x and y components of vector then its angle with x-axis is	A. 30° B. 45° C. 60° D. 90°
1476	Question Image	
1477	Question Image	
1478	Question Image	
1479	Question Image	
1480	Question Image	
1481	Question Image	
1482	Question Image	

1483	Question Image	A. a₁+ a₂ B. a²₁+ a²₂
1484	Question Image	
1485	Question Image	
1486	Question Image	
1487	Question Image	D. none of these
1488	Question Image	
1489	Question Image	
1490	Question Image	A. 25 B. 16 C. 5 D. 0
1491	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
1492	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
1493	Question Image	
1494	Question Image	D. none of these
1495	Question Image	D. none of these
1496	Question Image	D. none of these
1497	Question Image	
1498	Question Image	D. none of these
1499	Question Image	
1500	Question Image	A. 0 B. 1
1501	Question Image	
1502	Question Image	
1503	Question Image	
1504	Question Image	
1505	Question Image	
1506	Question Image	
1507	Question Image	
1508	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
1509	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
1510	Question Image	
1511	Question Image	
1512	Question Image	
1513	Question Image	
1514	Question Image	
1515	Question Image	

1516	Question Image	
1517	Question Image	
1518	Question Image	
1519	Question Image	
1520	Question Image	D. none of these
1521	The solution of the equation 3 $\tan^2 x = 1$ is _____	D. none of these
1522	Question Image	
1523	The solution set of the equation 4 $\cos^2 x$ - 3 + 0 is	D. none of these
1524	The solution set of the equation 1 + Cos x = 0 is _____	D. none of these
1525	Question Image	D. none of these
1526	Question Image	D. none of these
1527	Question Image	D. none of these
1528	Question Image	
1529	Question Image	
1530	Question Image	
1531	Question Image	D. none of these
1532	Question Image	A. I andII quadrants B. II andIII quadrants C. III andIVquadrants D. none of these
1533	Question Image	A. I andII quadrants B. II andIII quadrants C. II andI<span style="color: rgb(34, 34, 34); font-family:

		"Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">Vquadrants D. none of these
1534	The solution set of sin x + cos x = 0 is	
1535	The solution set of trigonometric equation contains	A. one element B. two elements C. three elements D. Infinite elements
1536	General solution of 1 + cos x = 0 is	
1537	Question Image	D. all
1538	Question Image	
1539	Question Image	
1540	Question Image	
1541	Question Image	D. both a & c
1542	Question Image	
1543	Question Image	A. trigonometric equation B. conditional equation C. identity D. None
1544	Domain of sin x is _____	
1545	Domain of cosec x is _____	
1546	Domain of cos x is _____	
1547	Domain of sec x is _____	
1548	Domain of tan x is _____	
1549	Domain of cot x is _____	
1550	Range of sin x is _____	A. [-1, 1] B. R C. Negative real numbers D. None of these
1551	Range of cosec x is _____	A. {-1, 1} B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
1552	Range of cos x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
1553	Range of sec x is _____	A. [-1, 1] B. R C. Negative real numbers D. R = {x | -1 < x < 1}
1554	Range of tan x is _____	A. [-1, -] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
1555	Range of cot x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
1556	Period of sin x is	
1557	Period of cos x is _____	
1558	Period of tan x is _____	
1559	Period of cosec x is _____	
1560	Period of sec x is _____	
1561	Period of cot x is _____	

1562	Period of sin 3x is _____	
1563	Period of cos 2x is _____	
1564	Period of tan 4x is _____	
1565	Question Image	
1566	Question Image	
1567	Question Image	
1568	Period of 3 sin x is _____	
1569	Period of 2 cos x is _____	
1570	Question Image	
1571	Domain of 3 sin x is _____	A. [-3, 3] B. R C. Positive real numbers D. None of these
1572	Domain of 2 cos x is _____	A. [-2, 2] B. R C. Negative real numbers D. None of these
1573	Range of 2 tan x is _____	A. [-2, 2] B. -1 < x < 1 C. R D. None of these
1574	Range of 3 sin x is _____	A. [-3, 3] B. [-1, 1] C. R D. None of these
1575	Range of 3 cot x is _____	A. [-1, 1] B. [-3, 3] C. R D. None of these
1576	A function f(x) is said to be the periodic function if for all x in the domain of f, there exists a smallest positive number p such the f(x + p) = _____	A. f(p) B. f(x) C. f(o) D. None of these
1577	A triangle which is not right is called an _____ triangle	A. Acute B. Obtuse C. Oblique D. None of these
1578	Question Image	A. The law of consines B. The law of sines C. The law of tangents D. None of these
1579	Question Image	A. The law of of sines B. The law of tangents C. The law of consines D. None of these
1580	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
1581	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
1582	Question Image	A. The law of sines B. The law of tangents C. The pythagorus theorem D. None of these
1583	The law of tangents is _____	
1584	The law of consines is	
1585	The law of sines is	
1586	If a, b, c are the measures of the sides of a triangle then	

1587	Question Image	
1588	Question Image	
1589	Question Image	
1590	Question Image	
1591	Question Image	
1592	Question Image	
1593	Question Image	
1594	Question Image	
1595	Question Image	
1596	Question Image	
1597	Question Image	
1598	Question Image	
1599	Question Image	
1600	Question Image	
1601	Question Image	
1602	Question Image	
1603	Question Image	
1604	The angle AOP which the ray from an observer's eye at O to an object at P at a lower level makes with horizontal ray OA through O is called the	A. Angle of depression B. Angle of elevation C. Acute angle D. Obtuse angle
1605	A circle passing through the vertices of any triangle is called _____	A. In circle B. Circum circle C. Escribed circle D. None of these
1606	A circle drawn inside a triangle and touching its sides is called	A. In-circle B. Circum circle C. Escribed circle D. None of these
1607	A circle which touches one side of a triangle externally and the other two sides produced is called _____	A. In-circle B. Circum cirle C. Escribed circle D. None of these
1608	Question Image	A. R B. 2R C. r D. 2r
1609	Question Image	
1610	Question Image	
1611	E-radius corresponding to < A is	
1612	E-radius corresponding to < B is	
1613	E-radius corresponding to < C is	
1614	Question Image	
1615	Question Image	
1616	The domain of the principle sine function is	
1617	The range of the principal sine function is	
1618	The domain of the principle cos function is	
1619	The domain of the principal tan function is	
1620	The range of the principle cos function is	

1621	The range of the principle cot function is	
1622	Question Image	
1623	Question Image	
1624	Question Image	
1625	Question Image	
1626	Question Image	
1627	Question Image	
1628	Question Image	
1629	Question Image	A. 0 B. -1 C. 1/2 D. 1
1630	Question Image	
1631	Question Image	
1632	Question Image	
1633	Question Image	
1634	Question Image	
1635	Question Image	
1636	Question Image	
1637	Question Image	
1638	Question Image	
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1640	Question Image	
1641	Question Image	
1642	Question Image	
1643	Question Image	
1644	Question Image	
1645	Question Image	
1646	Question Image	
1647	Question Image	
1648	Question Image	
1649	Question Image	
1650	Question Image	
1651	Question Image	
1652	For Cosine Rule of any triangle ABC, $b^2$is equal to	A. a²- c²+ 2ab cos A B. a³+ c³- 3ab cos A C. a²+ c²- 2ac cos B D. a²- c²4bc cos A
		A. 69°

1653	In a triangle ABC, if angle A = 72° , angle B = 48° and c = 9 cm then Ĉ is	A. 69° B. 66° C. 60° D. 63°
1654	Considering Cosine Rule of any triangle ABC, possible measures of angle A includes	A. Angle A is obtuse B. Angle A is acute C. Angle A is right-angle D. All of above
1655	Sine rule for a triangle states that	A. a/sin A = b/sin B = c/sin C B. sin A/a = sin B/b = sin C/c C. a/sin A + b/sin B + c/sin C D. 2a/sin A = 2b/sin B = 2c/sin C
1656	By expressing sin 125° in terms of trigonometrical ratios, answer will be	A. sin 65° = 0.9128 B. sin 55° = 0.8192 C. sin 70° = 0.5384 D. sin 72° = 0.1982
1657	By expressing cos 113° in terms of trigonometrical ratios, answer will be	A. − cos 76° = -0.7093 B. − cos 65° = -0.4258 C. − cos 67° = -0.3907 D. − cos 62° = -0.8520
1658	Name the property used in 1000 x 1 = 1000	A. additive inverse B. multiplicative inverse C. additive identity D. multiplicative identity
1659	Name the property used in a (b-c) = ab - ac	A. commutative property of multiplication B. distributive property of multiplication C. associative property of multiplication D. multiplicative inverse
1660	Question Image	A. additive property B. multiplicative property C. additive identity D. multiplicative identity
1661	Question Image	A. additive property B. multiplicative property C. additive inverse D. additive identity
1662	Question Image	A. real number B. complex number C. rational number D. irrational number
1663	Question Image	A. 0 B. 1 C. -1 D. 2
1664	Question Image	
1665	Question Image	A. real part of z B. imaginary part of z C. conjugate of z D. modulus of z
1666	Question Image	B. 1 C. -1
1667	Question Image	A. 1 B. -1
1668	The sum of complex number (a,b) and (c,d) is	
1669	The product of complex numbers (a,b) and (c,d) is	A. (ac, bd) B. (ac-bd, ad+bc) C. (ab,cd) D. (ac+bd,ad-bc)
1670	Question Image	
1671	Every real number is	A. a positive integer B. a rational number C. a negative integer D. a complex number
1672	Question Image	A. x C. y
1673	Question Image	
		A. (x, y)

1674	Question Image	B. (kx, y) C. (x, ky) D. (kx, ky)
1675	The multiplicative inverse of (a,b) is	
1676	Question Image	
1677	Question Image	
1678	Question Image	
1679	Question Image	
1680	The number of subsets of a set having three elements is	A. 4 B. 6 C. 8 D. none of these
1681	If A and B are two sets then any subset R of A x B is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
1682	If A and B are two sets then any subset R of B x A is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
1683	If A is a set then any subset R of A x A is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
1684	The set of first elements of the ordered pairs in a relation is called its	A. domain B. range C. relation D. function
1685	Question Image	
1686	Question Image	
1687	Question Image	
1688	Question Image	
1689	Question Image	
1690	Question Image	A. a constant function B. linear function C. quadratic funtion D. none of these
1691	The graph of a linear function is	A. a circle B. triangle C. a straight line D. none of these
1692	Question Image	A. square root function B. identity function C. linear function D. quadratic function
1693	Question Image	D. none of these
1694	The negation of a number	A. a relation B. a function C. unary operation D. binary operation
1695	Question Image	D. none of these
1696	Question Image	
1697	Question Image	
1698	Question Image	A. -a -b -c B. 1 C. 0 D. -1
1699	Question Image	A. 0 B. 1 C. -A D. -1

1700	Which of the following is an identity matrix?	D. none of these
1701	Question Image	
1702	Question Image	
1703	Question Image	
1704	Question Image	A. -1 B. 0 C. 2 D. 1
1705	Question Image	A. 1 B. -1 C. 5 D. 2
1706	The cube roots of 8 are	
1707	Question Image	A. 0 B. 1 C. 2 D. 3
1708	Question Image	A. 2 B. 4 C. 8 D. 16
1709	Question Image	A. 4 B. 6 C. 8 D. 10
1710	Question Image	
1711	Question Image	A. -1 B. 0 C. 1 D. undefined
1712	Question Image	A. -1 B. 0 C. 1 D. undefined
1713	Question Image	A. -1 B. 0 C. 1 D. undefined
1714	Question Image	B. 0 C. 1 D. undefined
1715	Question Image	A. 0 C. 1
1716	Through how many radians does the minute hand of a clock turn in one hour	
1717	Through how many radians does the hour hand of a clock turn in one hour	
1718	Question Image	
1719	What is the circular measure of the angle between the hands of a watch at 4 O'clock	
1720	Question Image	
1721	The system of measurement in which the angle is measured in radians is called the	A. circular system B. CGS system C. sexagesimal system D. none of these
1722	The system of measurement in which the angle is measured in degrees, minutes and seconds is called the	A. circular system B. CGS system C. sexagesimal system D. none of these
1723	The central angle of an arc of a circle whose length is equal to the radius of the circle is called the	A. degree B. radian C. minute D. second

1724	In one hour the minute hand of a clock turns through	
1725	In one hour, the hour hand of a clock turns through	
1726	In one hour, the minute hand of a clock turns through	
1727	In one hour, the hour hand of a clock turns through	
1728	The radian measure of the central angle of an arc 50 m long on a circle of radius 25 m is	A. 3 B. 2 C. 1
1729	The area of a sector with central angle of 0.5 radians in a circular region whose radius is 2m is	
1730	The area of sector with central angle of 1 radians in a circular region whose radius is 2 m is	
1731	Question Image	
1732	Question Image	
1733	Question Image	A. 1 D. -1
1734	Question Image	
1735	Question Image	
1736	Question Image	
1737	Question Image	
1738	Question Image	
1739	Question Image	
1740	Question Image	B. 1 C. 2 D. -2
1741	Question Image	
1742	Question Image	
1743	Question Image	
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1745	Question Image	
1746	Question Image	
1747	Question Image	
1748	Question Image	
1749	Question Image	
1750	Question Image	
1751	Question Image	
1752	Question Image	
1753	Question Image	
1754	Question Image	
1755	Question Image	
1756	Question Image	
1757	Question Image	A. 0 B. 1 C. -1

		D. none of these
1758	Question Image	
1759	Question Image	
1760	Question Image	
1761	Question Image	
1762	Question Image	
1763	Question Image	
1764	Question Image	
1765	Question Image	
1766	Question Image	
1767	Question Image	
1768	Question Image	
1769	Question Image	A. 0 B. 1 D. none of these
1770	Question Image	A. 0 B. 1 D. -1
1771	Question Image	A. 0 B. 1 C. -1 D. none of these
1772	Question Image	A. 0 B. 1 D. -1
1773	Question Image	
1774	Question Image	
1775	Question Image	
1776	Question Image	C. 2x D. 2
1777	Question Image	A. 0 B. 1 C. 2 D. none of these
1778	Question Image	
1779	Question Image	
1780	Question Image	
1781	Question Image	
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1808	Question Image	
1809	Question Image	
1810	Question Image	
1811	Question Image	
1812	Question Image	
1813	Question Image	
1814	Question Image	
1815	Question Image	D. none of these
1816	Question Image	
1817	The inclination of a line parallel to x-axis is	
1818	The inclination of a line parallel to y-axis is	
1819	Question Image	
1820	Question Image	A. 0 B. 1
1821	Question Image	A. 0 B. 1
1822	Question Image	A. 0 B. 1
1823	Question Image	A. 0 B. 1
1824	Question Image	A. 0 B. 1 D. undefined
1825	The slope of x-axis is	A. 0 B. undefined C. 1
1826	The slope of y-axis is	A. 0 B. undefined C. 1
1827	Question Image	A. 0 B. 1 C. 1

		C. -1 D. undefined
1828	Question Image	
1829	Question Image	
1830	Question Image	A. 1 B. 0 C. 5 D. 2
1831	Question Image	A. 9 B. -9 C. 0 D. 1
1832	Question Image	A. 0 D. undefined
1833	Question Image	D. none of these
1834	Question Image	
1835	Question Image	
1836	Question Image	
1837	Question Image	
1838	Question Image	D. none of these
1839	Question Image	
1840	Question Image	
1841	Question Image	
1842	Question Image	
1843	Question Image	
1844	Question Image	
1845	Question Image	
1846	Question Image	
1847	Question Image	A. 184 D. none of these
1848	Question Image	A. 6 C. 20 D. 0
1849	A line segment whose end points lie on a circle is called	A. the secant of the circle B. the arc of the circle C. the chord of the circle D. the circumference of the circle
1850	A chord passing through the centre of the circle is called	A. the secant of the circle B. the tangent of the circle C. the arc of the circle D. the diameter of the circle
1851	Question Image	A. 1 B. 0
1852	Question Image	A. 0 B. 1
1853	Question Image	C. 0 D. 1
1854	Question Image	C. 1 D. 0
1855	Question Image	
1856	Question Image	
1857	Question Image	C. 0 D. 1
1858	Question Image	D. none of these

1858	Question Image	D. none of these
1859	Question Image	D. none of these
1860	Question Image	D. none of these
1861	Question Image	
1862	Question Image	D. none of these
1863	Question Image	D. none of these
1864	Question Image	
1865	Question Image	
1866	Question Image	
1867	Question Image	
1868	Question Image	
1869	Question Image	A. 12 B. 6 C. 8 D. none of these
1870	If the angle between two vectors with magnitude 2 and 15 is 30°then their scalar product is	B. 15 C. 30
1871	Zero is	A. An irrational number B. A rational number C. A negative integer D. A positive number
1872	6 is	A. A prime integer B. An irrational number C. A rational number D. An odd integer
1873	Question Image	A. A rational number B. A irrational number C. An even integer D. A factor of 36
1874	3/2 is	A. An irrational number B. Whole number C. A positive integer D. A rational number
1875	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
1876	Question Image	A. A positive integer B. A negative integer C. A natural number D. An irrational number
1877	The value of x, and y, when $(x + iy)^2 = 5 + 4i$	A. X = 2, y = -1 B. X = -2, y=1 C. X = 2, y = -1 D. X = 2, y = 2
1878	If Z = (1,2), then Z^{-1}= ?	A. (0.2, 0.4) B. (-0.2, 0.4) C. (0.2, -0.4) D. (-0.2, -0.4)
1879	If $Z_1 = 1 + i$, $Z_2 = 2+3i$, then $\|Z_2 - Z_1\|$ = ?	
1880	Question Image	A. 15 B. 15 i C. -15 i D. -15
1881	The solution set of the equation $\|3x + 2\| = 5$ is	
1882	The equation $\|x + 4\| = x$ has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
1883	Question Image	

1884	What is the conjugate of -7 -2i?	A. -7 + 2i B. 7 + 2i C. 7 -2i D. None of these
1885	Question Image	A. -3 -2i B. 3 +2i C. 1 + 2i D. 1 - 2i
1886	The value of x, and y, when $(x + iy)^2 = 5 + 4i$	A. X = 2, y = 1 B. X = -2, y = 1 C. X = 2, y = -1 D. X = 2, y = 2
1887	The square root of 2i - 20i is	A. +-(5 - 2i) B. +-(5 + 2i) C. (5 - 2i) D. None of these
1888	The multiplicative inverse of 1 - 2i is	
1889	Question Image	
1890	Geometrically, the modulus of a complex number represents its distance from the	A. Point (1, 0) B. Point (0, 1) C. Point (1, 1) D. Point (0, 0)
1891	The set {1, 2, 3, 4, ...} is called	A. Set of Natural numbers B. Set of whole numbers C. Set of rational number D. Set of irrational numbers
1892	Question Image	A. Set of whole number B. Rational Numbers C. Complex numbers D. Whole numbers
1893	QUQ'	
1894	The symbol of irrational is	A. W B. N C. Q D. Q'
1895	Question Image	A. Rational B. Irrational C. Natural D. Odd
1896	Question Image	A. Rational B. Irrational C. Even D. Odd
1897	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of above
1898	1/3 is a decimal	A. Recurring B. Terminating C. Non-terminating D. None of the above
1899	Question Image	A. N B. r C. 2r D. π
1900	Question Image	A. Closure law of addition B. Associative law of addition C. Additive inverse D. Additive identity
1901	Question Image	A. Commutative law of addition B. Associative law of addition C. Additive identity D. Additive inverse
1902	Associative law of multiplication	A. ab = ba B. a(bc) = (ab) c C. a(b+c) = ab + ac D. (a + b)c = ac + bc

1903	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplication identity C. Associative law of multiplication D. Multiplication inverse
1904	Question Image	A. Commutative law of multiplication B. Closure law of multiplication C. Associative law of multiplication D. Multiplication identity
1905	Question Image	A. Reflexive property B. Symmetric property C. Cancellations property w.r.t. addition D. Transitive property
1906	Question Image	A. Symmetric property B. Cancellation property w.r.t. multiplication C. Reflexive property D. Transitive property
1907	If 4 > b or a < b than a = b is a	A. Additive property B. Transitive property C. Trichotomy property of inequality D. None of above
1908	Question Image	A. Multiplication property B. Additive property C. Trichotomy property D. Transitive property of inequality
1909	Question Image	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
1910	$(a^{-1})^{-1}$=	A. a⁻¹ B. a C. -a D. None of above
1911	Question Image	A. Principle of equality of Fractions B. Rule for product of fraction C. Golden rule of fraction D. Rule of quotient of Fraction
1912	Question Image	A. Rule of quotient of fraction B. Golden rule of fraction C. Rule for product of fraction D. Principle for equality of fraction
1913	Question Image	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t. to addition
1914	Question Image	A. Additive property of inequality B. Commutative property C. Additive inverse D. Additive identity
1915	i =	
1916	In (x + iy), y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
1917	i^3=	A. -1 B. i C. -i D. 1
1918	(a+bi) - (c+di)=	A. (a+b) = (c+d) B. (a+c) + i(b+d) C. (a - c) + (c- d)i D. (a - c)+ (b - d)i
1919	Question Image	
1920	(a, b) + (-a, -b) =	A. (0,0) B. (a, b) C. (-a, -b) D. (1, 1)
1921	(a,0) x (c, 0) =	A. (0,ac) B. (ac, 0) C. (0,0) D. (a, c)

1922	i^2 =	A. 1 B. 2 C. -1 D. 0
1923	Question Image	A.
1924	(7, 9) + (3, -5) =	A. (4, 4) B. (10, 4) C. (9, -5) D. (7, 3)
1925	Question Image	
1926	Question Image	
1927	In polar form of complex number r =	
1928	Question Image	
1929	The multiplicative inverse of -3i is	A. 3i B. -3i C. -1/3i D. 1/3 i
1930	i^{101}=	A. i B. i² C. -i D. -1
1931	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_1 - Z_2\|$ = ?	
1932	Question Image	A. 0 B. 1 C. -1 D. None of these
1933	Question Image	A. z is purely imaginary B. a is any complex number C. z is real D. None of these
1934	Question Image	A. 15 B. 15 i C. -15 i D. -15
1935	If z_1= 2 + 6i and z_2= 3 + 7i, then which expression defines the product of $z_1$and z_2?	A. 36 + (-32)i B. -36 + 32i C. 6 + (-11)1 D. 0, +(-12)i
1936	Which element is the additive inverse of (a, b) in Complex numbers?	A. (a, 0) B. (0, b) C. (a, b) D. (-a, -b)
1937	What is the conjugate of -6 -i?	A. -6 +i B. 6+i C. -6 -i D. 6 -i
1938	Which of the following has the same value as i^{113}?	A. i B. -1 C. -i D. 1
1939	Question Image	
1940	Z is the set of integers, (z, *) is a group with a * b = a + b + 1, a, b $\in$G. then inverse of a is	A. -a B. a + 1 C. -2 -a D. None of these
1941	G = {e, a, b, c} is an Abelian group with e as identity element. The order of the other elements are	A. 2, 2, 2 B. 3, 3, 3 C. 2, 2, 4 D. 2, 3, 4
1942	Question Image	
1943	Question Image	A. 4 B. 3 C. 2 D. 1

1944	Question Image	A. A = C B. A = B C. B = C D. None of these
1945	The complement of set A relative to universal set U is the set	
1946	The multiplicative inverse of x such that x = 0 is	A. -x B. does not exist C. 1/x D. 0
1947	Multiplicative inverse of "1" is	A. 0 B. -1 C. 1 D. {0, 1}
1948	In a school, there are 150 students. Out of these 80 students enrolled for mathematics class, 50 enrolled for English class, and 60 enrolled for Physics class. The students enrolled for English cannot any other class, but the students of mathematics and Physics can take two courses at a time. Find the number of students who have taken both physics and mathematics	A. 40 B. 30 C. 50 D. 20
1949	Which of the following is the subset of all sets?	
1950	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
1951	The set of the first elements of the ordered pairs forming a relation is called its	A. Function on B B. Range C. Domain D. A into B
1952	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
1953	The set of complex numbers forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Subtraction
1954	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. 0 D. Does not exist
1955	The set {1, -1, 1, -1}, form a group under	A. Addition B. Multiplication C. Subtraction D. None
1956	The set of all positive even integers is	A. Not a group B. A group w.r.t. subtraction C. A group w.r.t. division D. A group w.r.t. multiplication
1957	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
1958	The set (Q, .)	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
1959	The set (Z, +) forms a group	A. Forms a group w.r.t. addition B. Non commutative group w.r.t. multiplication C. Forms a group w.r.t multiplication D. Doesn't form a group
1960	For any set B, BUB' is	A. Is set B B. Set B' C. Universal set D. None of these
1961	Question Image	A. A B. B C. A' D. None of these

		D. None of these
1962	In set builder notation the set {0, 1, 2, ..., 100} can be written as	
1963	Question Image	A. 3 B. 1 C. 2 D. 4
1964	Question Image	A. 1 B. 12 C. 5 D. 29
1965	Question Image	A. A = B B. B = C C. A = C D. None of these
1966	The total number of subsets that can be formed out of the set {a, b, c} is	A. 1 B. 4 C. 8 D. 12
1967	Question Image	
1968	The set {-1, 1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
1969	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
1970	If a set S contains "n" elements then P (S) has ..... number of elements	A. 2ⁿ B. 2²ⁿ C. 2 . n D. n²
1971	Additive inverse of -a -b is	A. a B. -a + b C. a - b D. a + b
1972	Question Image	A. 1/x B. -x C. 2x D. 0.5 x
1973	Question Image	A. -x B. Infinite set C. {-4, 4} D. None of these
1974	The identity elements with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
1975	Multiplicative inverse of 0 is	A. 0 B. 1 C. +-1 D. Does not exist
1976	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
1977	In a country, 55% of the male population has houses in cities while 30% have houses both in cities and in village. Find the percentage of the population that has house only in villages.	A. 45 B. 30 C. 25 D. 50
1978	Φset is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection
1979	Question Image	A. Singleton set B. A set with two points C. Empty set D. None of these
1980	The set { {a, b} } is	A. Infinite set B. Singleton set

1980	The set { {a, b} } is	C. Two points set D. Empty set
1981	Question Image	
1982	If #n = $(n-5)^2$+ 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
1983	The set of the first elements of the orders pairs forming a relations is called its	A. Relation in B B. Range C. Domain D. Relation in A
1984	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
1985	The graph of a quadratic function is	A. Circle B. Straight line C. Parabola D. Triangle
1986	The function f{(x, y) | y = ax^2+ bx + c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function
1987	To each element of a group there corresponds _____ inverse element	A. Two B. One C. No D. Three
1988	The set of integer is	A. Finite group B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group
1989	Question Image	A. Addition B. Multiplication C. Division D. Both addition and multiplication
1990	The set {-1, 1} is	A. Group under the multiplication B. Group under addition C. Does not form a group D. Contains no identity element
1991	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. +-1 D. 0
1992	The set of complex numbers forms	A. Commutative group w.r.t addition B. Commutative group w.r.t multiplication C. Commutative group w.r.t division D. Non commutative group w.r.t addition
1993	The set {1, -1, i, -i}	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
1994	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
1995	The set {Z\{0}} is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
1996	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
1997	Power set of X i.e P(X) _____ under the binary operation of union U	A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
1998	Question Image	A. a = 2, b = 3 B. a = 3, b = 2 C. a = 2, b = 1, 2 D. a = 3. b = 3

1999	Question Image	
2000	Question Image	
2001	Question Image	A. A²- 5A + 7I = 1 B. 2A²- 3A + 7I = 0 C. A²- 5A + I = 0 D. A²- 5A + 7I = 0
2002	Question Image	A. -3 B. -7 C. 1 D. 0
2003	Question Image	A. 1 B. 0 C. 3 D. -1
2004	Question Image	A. 1 B. 0 C. -1 D. 2
2005	(ABC)' =	A. CBA' B. CBA C. C' B' A' D. None of these
2006	If A is a skew-symmetric matrix of order n and P, any square matrix of order n, prove that P' AP is	A. Skew-symmetric B. Symmetric C. Null D. Diagonal
2007	Let A be a square matrix. Then, 1/2 (A-A') is	A. Skew-symmetric B. Symmetric C. Null D. None of the above
2008	Question Image	A. 1 B. -1 C. 0 D. I
2009	Question Image	
2010	Question Image	A. a²b²c² B. 4a²b²c² C. 4abc D. None
2011	Question Image	
2012	Question Image	A. 3, -3, 11 B. 3, 3, 11 C. -3, 3, -11 D. -3, -3, 11
2013	Question Image	
2014	If A and B are two matrices such that AB = B and BA =A, then $A^2+ B^2=$	A. 2 AB B. 2 BA C. A + B D. AB
2015	Question Image	A. I B. 14 I C. 0 D. None of these
2016	A and B be two square matrices and if their inverse exist, the $(AB)^{-1}=$	A. A⁻¹B⁻¹ B. AB⁻¹ C. A⁻¹B D. B⁻¹A⁻¹
2017	Question Image	
2018	Question Image	A. x =0, y =4 B. x = -1, y = 2 C. x = 2, y = 3 D. x = 3, y = 4
2019	Question Image	A. a = -1/2, b = -1 B. a = 1, b = 2 C. a = 2, b = 3 D. None of above

2020	Question Image	
2021	Matrices A = [aij] 2 x 3 and B =[bij] 3 x 2 are suitable for	A. BA B. A² C. AB D. B²
2022	Question Image	A. Singular B. Non-singular C. Adjoint D. None of above
2023	A square matrix A = [aij] is lower triangular matrix when:	A. aij = 0 for all i < j B. bij = 0 C. cij = 0 D. dij =0
2024	A square matrix A = [aij] is upper triangular when	A. cij = 0 B. bij = 0 C. aij = 0 for all i > j D. dij = 0
2025	The square matrix A is skew-symmetric when At=	A. -B B. -C C. -A D. -D
2026	Question Image	A. A⁻ B. A^t C. -A D. A
2027	Question Image	A. A B. -A C. A^t D. A⁻
2028	Question Image	
2029	An equation of the form ax + by = k is homogeneous linear equation when:	
2030	System of linear equations is inconsistent if	A. System has no solution B. System has one solution C. System has two solution D. None of above
2031	For trival solution |A| is	A. A B. |A| is non zero C. A = 0 D. None of these
2032	For non-trival solution |A| is	A. A = 0 B. A^t= 0 C. |A| = 0 D. None of these
2033	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a, b and c
2034	We also the system of non-homogeneous linear equations by	A. a and b B. b and c C. c and a D. a, b and c
2035	If A = $[a_{ij}]$ is (m x n) matrix, then transpose of A is of the order	A. m x m B. m x n C. n x n D. n x m
2036	For a square matrix A, if A = A^t, then A is called	A. matrix B. Transpose C. Symmetric D. Non-symmetric
2037	Question Image	A. I B. |A| C. |A| I D. None of these
2038	If for the matrix A, A^5= I, then A^{-1}=	A. A² B. A³ C. A D. None of above

2039	If the trace of matrix A is 5, then the trace of the matrix 3A is	A. 3/5 B. 5/3 C. 8 D. 15
2040	Question Image	A. 0 B. 1 C. 2 D. 4
2041	The order of the matrix A is 3 x 2 and that of B is 2 x 3. The order of the matrix BA is	A. 3 x 3 B. 3 x 2 C. 2 x 5 D. 5 x 2
2042	Question Image	A. 6, -12, -18 B. -6, 4, 9 C. -6, -4, -9 D. -6, 12, 18
2043	Question Image	A. A(<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);">α) - A(β) B. A(α) + A(β) C. A(α-β) D. A(α+β)
2044	Question Image	A. 4A - 3I B. 3A - 4I C. A - I D. None of these
2045	Question Image	A. Symmetric B. Skew-symmetric C. Hermitian D. Skew hermitian
2046	Question Image	
2047	Question Image	A. a = 4, b = 1 B. a = 1, b = -4 C. a = 0, b = 4 D. a = 2, b = 4
2048	Question Image	A. Orthogonal B. Involutary C. Idempotent D. Nilpotent
2049	Question Image	
2050	Question Image	A. 0 B. abc C. 1/abc D. None of these
2051	Question Image	A. 0 B. Independent of a C. Independent of b D. Independent of c
2052	Let A is a 3 x 3 matrix and B is its adjoint matrix. If |B| = 64, then |A| =	
2053	Question Image	A. K/6 B. 2K C. 3K D. 6K
2054	Question Image	A. 2s² B. 2s³ C. s³ D. 3s³
2055	Question Image	A. 9/4 B. 4/9 C. 1 D. None of these
2056	The condition for polynomial equation $ax^2 + bx + c = 0$ to be quadratic is	
2057	Question Image	

2057	Question Image	
2058	Question Image	
2059	Both the roots of the equation (x - b) (x - c) + (x - c)(x - a) + (x - a)(x - b) = 0 are always	A. Positive B. Negative C. Real D. None of these
2060	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
2061	If the roots of $ax^2 + b = 0$ are real and distinct then	A. ab > 0 B. a = 0 C. ab < 0 D. a > 0, b > 0
2062	If one root of the equation $ix^2 - 2(i + 1) x + (2 - i) = 0$ is 2 - i, then the other root is	A. -i B. 2 + i C. i D. 2 - i
2063	If a > 0, b > 0, c > 0, then the roots of the equation $ax^2 + bx + c = 0$ are	A. Real and negative B. Non-real with negative real parts C. Real and positive D. Nothing can be said
2064	The quadratic equation $8 \sec^2\theta - 6 \sec\theta + 1 = 0$ has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
2065	Question Image	A. b = c B. a = c C. a = c D. b = 0
2066	If the roots of $ax^2 + bx + c = 0$ are equal in magnitude but opposite in sign, then	A. a = 0 B. b = 0 C. c = 0 D. None of these
2067	The value of p for which both the roots of the equation $4x2 - 20x + (25p2 + 15 p - 66) = 0$ are less than 2, lies in	
2068	Question Image	
2069	The roots of the equation $2^{2x} - 10.2^x + 16 = 0$ are	A. 2, 8 B. 1, 3 C. 1, 8 D. 2, 3
2070	Question Image	A. n if n is even B. 0 for any natural number n C. 1 if in odd D. None of these
2071	If $x^2 + px + 1$ is a factor of $ax^3 + bx + c$, then	A. a²+ c²= -ab B. a²- c²= -ab C. a²- c²= ab D. None of these
2072	Question Image	A. (a - c)²= b²- c² B. (a - c)²= b²+ c² C. (a + c)²= b²- c² D. (a + c)²= b²+ c²
2073	The set of real roots of the equation $\log_{(5x+4)}(2x+3)^3 - \log_{(2x+3)}(10x^2 + 23x + 12) = 1$ is	A. {-1} B. {-3/5} C. Empty set D. {-1/3}
2074	The value of k (k > 0) for which the equation $x^2 + kx + 64 = 0$ and $x^2 - 8x + k = 0$ both will have real roots is	A. 8 B. -16 C. -64 D. 16
2075	Question Image	A. Only one real solution B. Exactly three real solution C. Exactly one rational solution D. Non-real roots
2076	Question Image	A. Rational B. Irrational C. Non-real D. Zero

2077	If $2x^{1/3}+ 2x^{-1/3}= 5$, then x is equal to	A. 1 or -1 B. 2 or 1/2 C. 8 or 1/8 D. 4 or 1/4
2078	The equation (cos p - 1)x^2+ x (cos p) + sin p = 0 in the variable x, has real roots, then p can take any value in the interval	A. (0, 2π) B. (-π, -0) C. (0,π) D. None of these
2079	If the roots of x^2+ ax + b = 0 are non-real, then for all real x, x^2+ ax + b is	A. Negative B. Positive C. Zero D. Nothing can be said
2080	Question Image	A. 1 B. 2 C. 0 D. 4
2081	Question Image	A. (-1, 2) B. (-1, 1) C. (1, 2) D. {-1}
2082	In a quadratic equation with leading co-efficient 1, a student reads the co-obtain the roots as -15 and -4. The correct roots are	A. 6, 10 B. -6, -10 C. 8, 8 D. -8, -8
2083	Question Image	A. Two real roots B. Two positive roots C. Two negative roots D. One positive and one negative root
2084	Let the equation ax^2- bx + c = 0 have distinct real roots both lying in the open interval (0, 1) where a, b, c are given to be positive integers. Then the value of the ordered triplet (a, b, c) can be	A. (5, 3, 1) B. (4, 3, 2) C. (5, 5, 1) D. (6, 4, 1)
2085	If the roots of ax^2- bx - c = 0 change by the same quantity, then the expression in a, b, c that does not change is	
2086	p, q, r and s are integers. If the A.M. of the roots of x2- px + q2= 0 and G.M. of the roots of x2- rx + s2= 0 are equal, then	A. q is an odd integer B. r is an even integer C. p is an even integer D. s is an odd integer
2087	Question Image	
2088	If$\alpha,\beta$are the roots of ax^2+ bx + c = 0 andα+ h,β+ h are the roots of px^2+ qx + r=0, then h =	
2089	If the roots of ax^2+ bx + c = 0 (a > 0) be greater than unity, then	A. a + b + c = 0 B. a + b + c > 0 C. a + b + c < 0 D. None of these
2090	Question Image	A. 15 B. 9 C. 7 D. 8
2091	Question Image	
2092	Question Image	A. Lies between 4 and 7 B. Lies between 5 and 9 C. Has no value between 4 and 7 D. Has no value between 5 and 9
2093	For the equation $\|x^2\|$ + |x| -6 =0, the roots are	A. One and only one real number B. Real with sum one C. Real with sum zero D. Real with product zero
2094		A. 2 B. 1

2094	Root of the equation $3^{x+1} + 3^{1-x} =$ is	C. 0 D. -1
2095	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
2096	If $a(p + q)^2 + bpq + c = 0$ and $a(p + r)^2 + 2bpr + c = 0$, then qr equals	A. p²+ c/a B. p²+ a/c C. p²+ c/a D. p²- c/a
2097	An open sentence formed by using the sign of equality "=" is called	A. Equation B. In equation C. True sentence D. False sentence
2098	$2x = 3$ is a conditional equation it is true for	A. 2 B. 3 C. 3/2 D. 2/3
2099	Which is the proper rational function	
2100	Question Image	A. A = x, B = 1 B. A = 0, B = 2 C. A = -1, B = 1 D. A = x-1, B = x+1
2101	Question Image	
2102	$(x + 2)^2 = x^2 + 4x + 4$ is	A. A linear equation B. A cubic equation C. A quadratic equation D. None
2103	$x^2 + x - 6 = 0$ is a conditional equation and it is true for	A. 2, 3 B. 2, -3 C. -2, -3 D. -2, 3
2104	The symbol _____ shall be used both for equation and identity	A.
2105	Question Image	A. Improper rational fraction B. Rational fraction C. Proper rational fraction D. None of above
2106	Question Image	A. Proper fraction B. Improper fraction C. Rational fraction D. None of these
2107	Question Image	A. Rational fraction B. Proper fraction C. Improper rational fraction D. None of these
2108	There are _____ types of rational fraction	A. Three B. Four C. Five D. Two
2109	Question Image	
2110	Which is a proper rational fraction	
2111	Question Image	A. A = x, B = 1 B. A = 0, B = 2 C. A = -1, B = 1 D. A = x-1, B = x + 1
2112	Question Image	
2113	$(x + 2)^2 = x^2 + 4x + 4$ is	A. A linear equation B. A cubic equation C. A quadratic equation D. None
2114	$x^2 + x - 5 = 0$ is	A. A polynomial B. An inequality C. An identity D. None
2115	Question Image	

2116	A fraction in which the degree of the numerator is less the degree of the denominator is called	A. Polynomial B. Proper fraction C. Rational fraction D. None
2117	A relation in which the equality is true only for some values of the unknown is called	A. An identity B. An equation C. A polynomial D. None
2118	Question Image	
2119	The next term of the sequence 1, 2, 4, 7, 11, ... is.	A. 15 B. 16 C. 17 D. 18
2120	If a, b, c are in A.P., then 3^a, 3^b, $3^c$are in	A. A.P. B. G.P. C. H.P. D. None of these
2121	If a, b, c, d, e, f are in A.P.,then e-c is equal to	A. 2(c - a) B. 2(f - d) C. 2(d - c) D. d - c
2122	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. mn²
2123	5th term of a G.P. is 2, then the product of first 9 terms is	A. 256 B. 128 C. 512 D. None of these
2124	The third term of a G.P. is 4, The product of first five terms is	A. 43 B. 45 C. 46 D. None of these
2125	Given two numbers a and b. Let A denote the single A.M. between these and S denote the sum of n A.M.'s between them. Then S/A depends upon	A. n, a, b B. n, a C. n, b D. n
2126	If $S_r$denotes the sum of the first r terms of a G.P., then S_n, S_{2n}- S_n, S_{3n}- $S_{2n}$are in	A. A.P. B. G.P. C. H.P. D. None of these
2127	If a^x= b^y= $c^z$and a, b, c are in G.P. then x, y, z are in	A. A.P. B. G.P. C. H.P. D. None of these
2128	The A.M. of two numbers is 34 and G.M. is 16, the numbers are	A. 2 and 64 B. 64 and 3 C. 64 and 4 D. None of these
2129	If p, q, r and in A.P., a is G.M. between p and q and b is G.M. between q and r, then a^2, q^2, $b^2$are in	A. A.P. B. G.P. C. H.P. D. None of these
2130	Let $S_n$denote the sum of the first n terms of an A.P. If S_{2n}= 3 S_n: $S_n$is equal to	A. 4 B. 6 C. 8 D. 10
2131	If x, y, z are the pth, qth, rth terms of an A.P. and also of G.P., then x^{y-z}. y^{z-x}. z^{x-y}eqals	A. xyz B. 0 C. 1 D. None of these
2132	Question Image	A. 15/23 B. 7/15 C. 7/8 D. 15/7
2133	Question Image	A. 12 B. 13 C. 14 D. 15
		A. A.P.

2134	Question Image	B. G.P. C. H.P. D. None of these
2135	99th term of the series 2 + 7 + 14 + 23 + 34 + ... is	A. 9998 B. 9999 C. 10000 D. None of these
2136	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	
2137	Question Image	
2138	Question Image	A. 1 B. 2 C. 3/2 D. 5/2
2139	If the pth, qth, and rth terms of an A.P. are in G.P:., then the common ratio of the G.P. is	
2140	pth term of an H.P. is qr and qth term is pr then the rth term of the H.P. is	A. pqr B. 1 C. pq D. pqr²
2141	If $a_1 = a_2 = 2$, $a_n = a_{n-1} - 1$ $(n > 2)$, then a_5 is	A. 1 B. 0 C. -1 D. -2
2142	If a, b, c are in AP., a, b, c are in G.P. then A, m^2b, c are in	A. A.P. B. G.P. C. H.P. D. None of these
2143	Question Image	A. 2²- n - 1 B. 1 - 2⁻ⁿ C. n + 2⁻ⁿ-1 D. 2ⁿ- 1
2144	Every term of a G.P. is positive and also every term is the sum of two preceding terms. Then the common ratio of the G.P. is	
2145	The consecutive terms of a progressions are 30, 24, 20. The next term of the progression is	
2146	If three unequal numbers p, q, r are in H.P. and their squares are in A.P., then the ration p : q : r is	
2147	Let a_1, a_2, a_3, $a_4$and $a_5$be such that a_1, a_2, and $a_3$are in A.P., a_2, $a_3$and $a_4$are in G.P and a_3, $a_4$and $a_5$are in H.P. Then, a_1, $a_3$and $a_5$are in	A. G.P. B. A.P. C. H.P. D. None of these
2148	The 10th common term between the series 3+7+11+..... and 1 + 6 +11 + ... is	A. 191 B. 193 C. 211 D. None of these
2149	If b_1, b_2, b_3, ... are in G.P. with first term unity and common ratio r, then the minimum value of $b_1 - b_3 + b_5$is equal to	A. 3/4 B. 1/4 C. 1 D. None of these
2150	Three consecutive terms of a progression are 30, 24, 20. The next terms of the progression is	
2151	The third term of a G.P. is the square of first term. If the second term is 8, then the 6th term is	A. 120 B. 124 C. 128 D. 132
2152	Question Image	
2153	The sum of the squares of three distinct real numbers, which are in G.P., is S^2. if their sum isαS then	
2154	Question Image	A. 1/2 B. 2 C. 1/4 D. 4

2155	Question Image	
2156	An A.P., a G.P. and a H.P. have the same first and last terms and the same odd numbers of terms, the middle terms of the three series are in	A. A.P. B. G.P. C. H.P. D. None of these
2157	Let the sequence 1, 2, 2, 4, 4, 4, 4, 8, 8, 8, 8, 8, 8, 8, 8, ... where n consecutive terms have the value n, then 1025th term is	A. 2⁹ B. 2¹⁰ C. 2¹¹ D. 2⁸
2158	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
2159	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
2160	Two balanced dice are tossed once, the sample space when the integers on the faces of two dice are the same is	A. {(1, 1), (2, 2), (3, 3)} B. {(4, 4), (5, 5), (6, 6)} C. {(1, 1), (2, 2), (3, 3), (4, 4), (5, 5), (6, 6)} D. None of these
2161	Three unbiased coins are tossed. Then the probabilities of getting two heads is	A. 3/8 B. 1/8 C. 1/4 D. None of these
2162	An unbiased die is thrown. Then the probability of getting a prime is	A. 1/2 B. 2/3 C. 3/4 D. None of these
2163	A coin is tossed. If head comes up, a die is thrown but if tail comes up, the coin is tossed again. The probability of obtaining a head and an even number is	A. 1/8 B. 2/8 C. 3/8 D. None of these
2164	A card is drawn from a pack of cards numbered 1 to 52, the probability that the number on the card is a perfect square is	A. 1/13 B. 2/13 C. 7/52 D. None of these
2165	A bag contains 3 white, 4 black and 2 red balls. If 2 balls are drawn at random, then the probability that both the ball are white is	A. 1/18 B. 1/12 C. 1/36 D. None of these
2166	Form a group of 5 men and 3 women, a committee of 4 persons is to be selected randomly. The probability that there is a majority of men is	A. 1/4 B. 1/3 C. 1/2 D. 1/6
2167	Six boys and 3 girls are to be seated at random, in a row, for a photograph. The probability that no two girls will sit together is	A. 1/12 B. 1/6 C. 5/12 D. 7/12
2168	Four cards are drawn at random from a pack of 52 playing cards. The probability of getting all the four cars of the same suit is	A. 44/4165 B. 22/4165 C. 11/4165 D. None of these
2169	5 unbiased coins coins are tossed simultaneously. The probability of getting at least one head is	A. 1 / 32 B. 31 / 32 C. 1 / 16 D. None of these
2170	Two unbiased dice are thrown. The probability that the total score is > 5 is	A. 1 / 18 B. 7 / 18 C. 13 / 18 D. 11 / 18
2171	Two cards are drawn at random from a well shuffled pack of cards. The probability that at least one of them is a face card is	A. 3 / 17 B. 5 / 17 C. 7 / 17 D. 9 / 17
2172	Three dice are thrown together. The probability of getting a total of at least 6 is	A. 103 / 108 B. 10 / 216 C. 93 / 108 D. None of these
	There are 25 tickets bearing number from 1 to	A. 7 / 25

2173	25. One ticket is drawn at random. The probability that the number on it is a multiple of 5 or 6 is	B. 9 / 25 C. 11 / 25 D. None of these
2174	In a class of 100 students, 60 drink tea, 50 drink coffee and 30 drink both. A student from his class is selected at takes at last one of 2 drinks is	A. 2 / 5 B. 3 / 5 C. 4 / 5 D. None of these
2175	The value of n, when ${}^{n}P_{2}= 20$ is	A. 3 B. 4 C. 6 D. 5
2176	Riaz, Saba. Maria, Shehzad are to give speeches in a class. The teacher can arrange the order of their presentation in	A. 4 ways B. 12 ways C. 256 ways D. 24 ways
2177	If $4\ {}^{6}P_{r}= {}^{6}P_{r+1}$, then r is equal to	A. 4 B. 3 C. 2 D. 1
2178	All letters of the word "AGAIN" are permuted in all possible ways and the words so formed (with or without meaning) are written as in dictionary, then the 50th word is	A. NAAGI B. NAAIG C. IAANG D. INAGA
2179	The number of significant numbers which can be formed by using any number of the digits 0, 1, 2, 3, 4 but using each not more than once in each number is	A. 260 B. 356 C. 410 D. 96
2180	Number of permutations of n distinct objects taken r(<n - 3) at a time which exclude 3(<n) particular objects is	A. 3! P(n, r - 3) B. P(n, 3) P(n, r - 3) C. P(r, r)P(n, r - 3) D. P(n - 3, r)
2181	The number of ways of arranging the letter AAAAA BBB CCC D EE F in a row when no two C's are together is	
2182	Fifteen girls compete in a race. The first three places can be taken by them in	A. 3! ways B. 12! ways C. 15 x 14 x 13 ways D. 42 ways
2183	There are n seats round a table numbered 1, 2, 3 .... n. The number of ways in which m person can take seats is	A. ⁿP_m B. ⁿC_mx (m - 1) ! C. ⁿ⁻¹P_m D. None of these
2184	Eight chairs are numbered 1 to 8. Two women and three men wish to occupy one chair each. First, the women choose the chairs from amongst the chairs marked 1 to 4 and then the men select the chairs from amongst the remaining. The number of possible arrangement is	A. ⁶C₃x ⁴C₂ B. ⁴C₂x ⁴P₃ C. ⁴P₂x ⁶P₃ D. None of these
2185	An integer is chosen at random from the number ranging from 1 to 50. the probability that the integer chosen is a multiple of 2 or 3 or 10 is	A. 3 / 10 B. 5 / 10 C. 7 / 10 D. 9 / 10
2186	Question Image	A. 0.9 B. 0.74 C. 0.2016 D. None of these
2187	Question Image	A. 1.5 B. 1.2 C. 8 D. None of these
2188	Question Image	
2189	Question Image	A. 1 / 2 B. 1 / 3 C. 1 / 4 D. None of these
2190	A bag contains 7 whit, 5 black and 4 rd balls. If two balls are drawn at random from the bag, the probability that they are not of the same color is	A. 73 / 120 B. 83 / 120 C. 67 / 120 D. 43 / 120

2191	Two cards are drawn at random without replacement. the probability that the first is a king and second is not a king is	A. 48 / 663 B. 24 / 663 C. 12 / 663 D. None of these
2192	A bag contains 5 white, 7 red and 5 black balls. If four balls are drawn one by one with replacement, the probability that none is white is	A. (11/16)² B. (5/16)² C. (11/16)⁴ D. (5/16)⁴
2193	A committee consists of 9 experts taken from three institutions A, B, and C, of which 2 are from, A, 3 form B and 4 from C. If three experts resign, then the probability that they belong to different institutions is	A. 1 / 729 B. 1 / 24 C. 1 / 21 D. 2 / 7
2194	Three numbers are chosen random without replacement from {1, 2, 3, ..., 10}. the probability that minimum of the chosen numbering is 3 or their maximum is 7	A. 7 / 40 B. 5 / 40 C. 11 / 40 D. None of these
2195	Out of 40 consecutive natural numbers, two are chosen at random. Probability that the sum of the numbers is odd, is	A. 14 / 29 B. 20 / 39 C. 1 / 2 D. n
2196	The probability of getting a number between 1 and 100 which is divisible by 1 and itself if only is	A. 1 / 4 B. 1 / 2 C. 3 / 4 D. 25 / 98
2197	If two balls are drawn from a bag containing 3 white, 4 black and 5 red balls. Then the probability that the drawn balls are of different colours is	A. 1 / 66 B. 3 / 66 C. 19 / 66 D. 47 / 66
2198	Five engineering, four mathematics, two chemistry books are placed on a table at random.The probability that the books of each kind are all together is	
2199	The key for opening a door is in a bunch of 10 keys. A man attempts to open the door by trying the keys at random discarding the wrong key. The probability that the door is opened in the 5th trial is	A. 1 / 10 B. 2 / 10 C. 3 / 10 D. 4 / 10
2200	A machine operates if all of its three components function. The probability that the first component fails during the year is 0.14, the second component fails is 0.10 and the third component fails is 0.05. the probability that the machine will fail during the year is	A. 0.2647 B. 0.2692 C. 0.3647 D. None of these
2201	A combination lock on a suitcase has 3 wheels each labeled with nine digits from 1 to 9. If an opening combination is a particular sequence of three digits with no repeats, the probability of a person guessing the right combination is	A. 1 / 500 B. 1 / 504 C. 1 / 252 D. 1 / 250
2202	Out of 10, 000 families with 4 children each, the number of families all of whose children are daughters is	A. 375 B. 500 C. 625 D. 150
2203	A card is drawn from a pack of cards numbered 2 to 53. the probability that the number on the card is prime number less than 20 is	A. 2 / 13 B. 4 / 13 C. 5 / 13 D. 8 / 13
2204	An experiment yields 3 mutually exclusive and exhaustive events A, B, C, if P(A) =2 and P(B) = 3. then P(C) =	A. 1 / 11 B. 2 / 11 C. 3 / 11 D. 6 / 11
2205	A box containing 10 mangoes out of which 4 are rotter. Two mangoes are taken together from the box. If one of them is found to be good, the probability that the other is also good is	A. 1 / 3 B. 8 / 15 C. 5 / 13 D. 5 / 9
2206	For two events A and B if P(A) = P (A/B) = 1/4 and P(B/A) = 1/2, then	A. A is sub-event of B B. A and B are mutually exclusive C. A and B are independent and P(A/B) = 3/4 D. None of these
	Given two independent event A and B such	A. 0.28 B. 0.13

2207	that P(A) = 0.30 and P(B) = 0.60. Probability of getting neither A nor B is	C. 0.12 D. 0.42
2208	A and B throw a dice. The probability that A's throw is not greater then B's is	A. 5 / 12 B. 7 / 12 C. 1 / 6 D. 1 / 2
2209	A die is thrown 100 times. If getting an odd number is considered a success, the variance of the number of successes is	A. 50 B. 25 C. 10 D. 100
2210	Question Image	A. 5 / 12 B. 3 / 8 C. 5 / 8 D. 7 / 4
2211	Three integers are chosen at random from the first 20 integers. Then probability that their product is even, is	A. 2 / 19 B. 3 / 29 C. 17 / 19 D. 4 / 19
2212	Cycle tyres are supplied in lots of 10 and there is a chance if 1 in 500 tyres to be defective. Using Poisson distribution, the approximate number of lots containing no defective tyre in a consignment of 10, 0000 lots is	A. 9028 B. 9208 C. 9802 D. 9820
2213	If in the expansion of $(1+x)^n$, co-efficients of 2nd, 3rd and 4th terms are in A.P., then x=	A. 4 B. 5 C. 6 D. 7
2214	Question Image	A. ¹⁰C₆ B. ¹⁰C₅ C. ¹⁰C₄ D. None
2215	Question Image	A. 405 / 256 B. 504 / 259 C. 450 / 263 D. None
2216	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
2217	Question Image	A. 2 and 9 B. 3 and 2 C. 2/3 and 9 D. 3/2 and 6
2218	Question Image	
2219	The positive integer just greater than $(1+0.0001)^{10000}$is	A. 4 B. 5 C. 2 D. 3
2220	If the sum of co-efficient in the expansion of $(a+b)^n$is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924
2221	If the sum of co-efficient in the expansion of $(a+b)^n$is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924
2222	If the expansion of $(1 + x)^{20}$, then co-efficient of rth ad (r + 4)th term are equal, then r is	A. 7 B. 8 C. 9 D. 10
2223	Digit in the unit place of the number 183! + 3^{183}	A. 7 B. 6 C. 3 D. 0
2224	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1 D. None
2225	The greatest term in the expansion of $(3+2x)^9$,	A. 4th B. 4th and 5th C. 5th

	when x=1 is	C. 5th D. 6th
2226	If the 4th term in the expansion of $(px + x^{-1})^m$ is 2.5 for all $x \in R$, then	
2227	Question Image	A. ab=-1 B. ab = 1 C. ab = 2 D. None
2228	If $(1+x)^n=C_0+ C_1x +C_2x^2+ .....+C_nx^1$ then $C_0C_2+ C_1C_3+ C_2C_4+ .....+C_{n-2}C_n=$	
2229	The greatest integer which divides the number 101^{100}- 1 is	A. 100 B. 1000 C. 10000 D. 100000
2230	If $(1+x-2x^3)^6= 1+a_1x + a_2x^2+ a_3x^3+$ ..... the the value of $a_2+ a_4+ a_6+$ .....$+a_{12}$ will be	A. 32 B. 31 C. 64 D. 1024
2231	Question Image	A. ⁿC_r B. ⁿ⁺¹C_{r+1} C. ⁿC_{r+1} D. None
2232	Question Image	A. 3/8 B. 7/8 C. 1/8 D. None
2233	For every positive integers n 1+5+9+....+ (4n - 3) is	A. n(2n - 1) B. (2n - 1) C. n - 1 D. n
2234	When we expand $(a + 2b)^5$ then	A. a⁵+ 10a⁴b + 40a³b²+ 80a²b³+ 80ab⁴+ 32b⁵ B. a⁵+ a⁴b + a³b²+ a²b³+ ab⁴+ b⁵ C. 5a⁵+ 4a⁴b + 3a³b²+ 2a²b³+ 1 ab⁴+ b⁵ D. None
2235	(2.02)4 s equal to	A. 16 B. 16.6496 C. 17 D. 18
2236	$7^{2n}+ 3^{n-1}. 2^{3n-3}$ is divisible by	A. 24 B. 25 C. 9 D. 13
2237	$(51)^4$ is equal to	A. 7065201 B. 8065201 C. 6765201 D. 6565201
2238	The term involving x^4 in the expansion of $(3 - 2x)^7$ is	A. 120 B. 1512 C. 1250 D. 15120
2239	$(0.90)^{1/2}$ is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
2240	Question Image	
2241	$(0.90)^{1/2}$ is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
2242	Question Image	A. Imaginary B. Rational C. Irrational D. Real numbers
2243	Number of terms in the expansion of $(a+x)^n$ is	A. n - 1 B. n + 1 C. n + 2 D. n + 3

		D. n + 3
2244	Question Image	A. n < 8/5 B. n < 5/8 C. |n| < 8/5 D. |n|>8/5
2245	${}^{n}C_{2}$= exists when n is _____	
2246	1st four terms of the expansion $(1-x)^{-2}$are	A. 1 + 2x + 3x²+ 4x³ B. 3x²+ 2x + 1 C. 1 + 3x + 4x²+ 5x³ D. None of these
2247	The expansion $(1 + x)^{-3}$holds when	A. |x| > 1 B. |x| < 1 C. x < 1 D. x > 1
2248	The middle term of the expansion $(1 + 2x)^{6}$is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
2249	If n is add the expansion $(a + x)^{n}$has middle terms	A. 2 B. 3 C. 4 D. 5
2250	Question Image	A. Less then 1 B. Equal to 1 C. Greater than 1 but less then 2 D. Greater then or equal to 2
2251	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
2252	If cos 20°=K and cos x=2 k^{2}-1, then the possible values of x between 0° and 360° are	A. 140° B. 50° and 140° C. 50° and 130° D. 40° and 320°
2253	The maximum value of sinθcos$\theta$is	A. 1 B. 1/2 C. 1/4 D. 1/6
2254	If sin x + $\sin^{2}x$ = 1, then the value of $\text{Cos}^{12}x$ + $3\cos^{10}x$ + $3\cos^{8}x$ + $\cos^{6}x$ + 2 $\cos^{4}x$ + $\cos^{2}x$-2 is equal to	A. 0 B. 1 C. 2 D. sin²x
2255	The maximum value of 12 sinθ-9 $\sin^{2}\theta$is x	A. 3 B. 4 C. 5 D. None of these
2256	The maximum value of 12 sinθ-9 $\sin^{2}\theta$is x	A. 3 B. 4 C. 5 D. None of these
2257	The maximum value of sin x + cos x is	
2258	Question Image	A. Right angled B. Obtuse angled C. Isosceles D. Equilateral
2259	Sin 50°-sin 70°+sin 10° is equal to	A. 1 B. 0 C. 1/2 D. 2
2260	The value of $\sin^{2}20°$ + $\sin^{2}70°$ is equal to	A. 1 B. 2 C. -1 D. 1/2
2261	If sin A = cos A, 0°<A<90° then A is equal to	A. 1 B. 1/2 C. 0 D. None of these
2262	The value of sin 28°cos 17°+cos 28°sin 17°is	
		A. 45°

2263	Question Image	A. 45 B. 30° C. 75° D. 60°
2264	Question Image	
2265	Question Image	
2266	Question Image	
2267	The value of the expression sinθ+ cosθlies between	
2268	The value of the expression 3 cosθ+ 4 sinθθlie between	A. -7 and 7 B. -25 and 25 C. -1 and 1 D. -5 and 5
2269	Tan 3x tan 2x-tan x is equal to	A. Tan x tan 2x tan 3x B. -tan x tan 2x tan 3x C. Tan x tan 2x - tan - tan x tan 3x - tan 2x tan 3x D. None of these
2270	Question Image	A. G.P B. H.P. C. A.P. D. No particular sequence
2271	Let P(x_1, y_1) and Q(x_2, y_2) be two points in the co-ordinate plane. Let d = distance between P and Q	
2272	Fundamental law is	
2273	Tan(α-β)=	
2274	Question Image	A. -sinθ B. cosθ C. sinθ D. -cosθ
2275	cos 2α=	A. sin²α+ cos²α B. -cosθ C. tanθ D. None of these
2276	sin(180° -θ)=	A. cosθ B. -cosθ C. Tanθ D. Sinθ
2277	sinα=	A. 2 sinαcosα B. 2 sinαcosβ

		C. 2 sinα/2 cosα/2 D. 1+ tan²α/2
2278	cos$\theta/2=$	
2279	Tan 2$\theta=$	
2280	sin ($\alpha+\beta)=$	A. sinαcosβ- cosαsinβ B. sinαcosβ- cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα+ cosβsinβ
2281	sin (α -β)=	A. sinαcosβ- cosαsinβ B. sinαcosβ+ cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα- cosβsinβ
2282	sin (α+β) + sin (α-β)	A. 2 sinαcosβ B. sin (2αβ) C. sinαcosα D. None of these
2283	sin (α+β) - sin (α -β) =	A. 4 cosαsinβ B. 2 cosαsinβ C. 4 cosαcosβ D. 4 sin αsinβ
		A. 1 - 2 sin²α B. sin ²α+ cos²<span

2284	cos 2α=	style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">β C. sin²α- cos²β D. None of these
2285	sin 2 α=	
2286	tanθ/2	
2287	If cosα= 4/5, then cosα/2	
2288	sin$^2\alpha$cos$^2\alpha$=	A. -1 B. 0 C. 1 D. None of these
2289	cos$^4\theta$- sin$^4\theta$=	A. cos4θ B. cos2θ C. -sinθ D. sin2θ
2290	cos (α+β) + cos (α-β) =	A. 4 cosαcosβ B. 2 cosαcosβ C. 2 sinαsinβ D. 2 sinαcosβ
2291	Cos (α+β) - cos (α-β) =	A. -2 sinα sinβ B. 2 sinαcosβ C. -2 sinαcosα D. 4 sinα cosβ
2292	Express as a sum or difference: 2 sin 5θcosθ	A. cos 4θ- cos 2θ B. sin 4θ+ sin 2θ C. cos 4θ+ cos 2θ D. sin 4θ- sin 2θ
2293	cos (180° -θ)=	A. sinθ B. - cosθ C. - sinθ D. None of above
2294	sin 540° =	A. 0 B. 1 C. 2 D. 3
2295	tan (-135°) = _____θ	A. 0 B. 1 C. 2 D. 3

		D. 3
2296	sec (-360°) = _____	A. 0 B. 1 C. 2 D. 3
2297	cos 315° = _____	
2298	$2\pi+\theta$ will have terminal side in Quad	A. I B. II C. III D. IV
2299	Which one is a pair of allied angles	A. (180° -θ) B. (180° -θ,180° +θ) C. (180° +θ) D. None of these
2300	sin $(2\pi-\theta)$	A. cosθ B. sinθ C. tanθ D. -sinθ
2301	cos $(\alpha-\beta)$ = cosαcosβ+ sinαsin$\beta$is true for all	A. α>β> 0 B. α>β C. β>α D. None of these
2302	Distance between A(3, 8), B(5, 6) is	
2303	Domain of sin$\theta$is	A. Set of real numbers B. Set of complex numbers C. Set of natural numbers D. Set of even numbers
2304	Domain of cos$\theta$is	A. Set of odd numbers B. Set of integers C. Set of real numbers D. Set of complex numbers
2305	Range of sin$\theta$is	
2306	Range of cos$\theta$is	
2307	Domain of cot$\theta$is	
2308	Range of tan$\theta$is	A. Set of complex numbers B. Set of real numbers C. Set of odd numbers D. Set of positive integers only
2309	Range of cot$\theta$is	A. (+∞to -∞) B. (-1 to +1) C. (-5 to +5) D. Set of even numbers only
2310	Domain of sec$\theta$is	
2311	Domain of cosec$\theta$is	
2312	Range of sec$\theta$is	A. Z - {x | -1 < x < 1} B. W - {x | -1 < x < 1} C. R - {x | -1 < x < 1} D. R
2313	Range of cosec$\theta$is	A. W - {y | -1 < y < 1} B. R - {y | -1 < y < 1} C. O - {y | -1 < y < 1} D. R
		A. π

2314	Period of Sine and Cosine function is	 B. 2π C. -π D. -2π
2315	Period of Tangent function is	A. 0° B. -π C. π D. 2π
2316	Period of Cotangent function is	A. π B. -π C. 0 D. -2π
2317	The function sine and Cosine have the closed internal as their range	A. [1, 0] B. [-1, 1] C. [0, 1] D. [-1, 2]
2318	Domain of tangent function is	
2319	The range of y = cot x = _____	A. -<i>∞</i>> y > +<i>∞</i> B. -<i>∞</i>> x > +<i>∞</i> C. -<i>∞ <</i>y < +<i>∞</i> D. None of above
2320	Domain of y = cot x = _____	
2321	The range of y = sin x is _____	A. [1, -1] B. [-1, 1] C. [0, -1] D. [-∞+∞]
2322	The Domain of y = sin x is _____	A. Set of real numbers B. Rational C. Irrational no. D. None of above
2323	tan (π-θ) = _____	A. - sinθ B. - tanθ C. - cosθ D. - cotθ
2324	The period of cosec 10x is _____	
2325	The period of tan [x/3] is _____	A. 2π B. 4π C. 3π D. 5<span style="font-family: "Times New Roman"; font-size: 24px; color:

		D. 3π
2326	Tangent is a periodic function and its period is _____	A. 2π B. 3π C. π D. 4π
2327	Sine is a periodic function and its period is _____	A. π B. s C. 2π D. 4π
2328	An airplane flying at height of 300 meters above the ground passes vertically above another plane at an instant when the angle of elevation of the two planes from the same point on the ground are 60° and 45° respectively. Then the height of the lower plane from the ground is (in meters).	
2329	A man of height 6 ft observes the top of a tower and the foot of the tower at angles of 45° and 30° of elevation and depression respectively. The height of the tower is	
2330	The angles of elevation of the top of a tower at the top and the foot of a pole of height 10 m are 30° and 60° respectively. The height of the tower is	A. 10 m B. 15 m C. 20 m D. None of these
2331	AB is a vertical pole and C is its middle point. The end A is on the level ground and P is any point on the level ground other than A. the portion CB subtends and angle β at P. If AP : AB = 2 : 1 then β =	
2332	Question Image	A. 30° B. 60° C. 45° D. None of these
2333	A tower subtends an angle of 30° at a point distant d from the foot of the tower and on the same level as the foot of the tower. At a second point, h vertically above the firs, the angle of depression of the foot of the tower, is 60°. The height of the tower is	A. h/3 B. h/3d C. 3h D. 3h / d
2334	At a point 15 meters away from the base of a 15 meters high house, the angle of elevation of the top is	A. 90° B. 60° C. 30° D. 45°
2335	A person standing on the bank of a river finds that the angle of elevation of the top of a tower on the opposite bank is 45°. then which of the following statements is correct?	A. Breadth of the river is twice the height of the tower B. Breadth of the river an the height of the tower are the same C. Breadth of the river is half of the height of the tower D. None of these
2336	The angle of depression of a point situated at a distance of 70 meters from the base of a tower is 45°. The height of the tower is	A. 70 m B. 85 m C. 35 m D. None of these
2337	A person standing on the bank of a river observes that the angle subtended by a tree of the opposite bank is 60°, when he retreats 40 m from the bank, he finds the angle to be 30°. The height of the tree and the breadth of the river are	
2338	A chimney is such that on walking towards it 50 m in a horizontal line through its base the angular elevation of its top changes from 30° to	

	angular elevation of its top changes from 30° to 45°. The height of the chimney is	
2339	An observer on the top of a cliff 200 m above the sea level, observes the angles of depression of two ships on opposite sides of the cliff to be 45° and 30°, respectively. The distance between the ships if the line joining them points to the base of cliff is	
2340	A tower subtends an angle α at a point on the same level as the root of the tower and at a second point, b meters above the first, the angle of depression of the foot of the tower is β. The height of the tower is	A. b cotαtanβ B. b tanαtanβ C. b tanαcotβ D. None of these
2341	The upper 3/4 the portion of a vertical pole subtends an angle $\tan^{-1}3/5$ at a point in the horizontal plane through its foot and at a distance 40 m from the foot. A possible height of the vertical pole is	A. 20 m B. 40 m C. 60 m D. 80 m
2342	A person standing on the bank of a river observes that the angle of elevation of the top of a tree on the opposite bank of the river is 60° and when he retires 40 meters away from the tree the angle of elevation becomes 30°. The breadth of the river is	A. 40 m B. 30 m C. 20 m D. 60 m
2343	If the elevation of the sun is 30°, then the length of the shadow cast by a tower of 150 ft height is	
2344	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	
2345	The angle of elevation of a tower from a point A due south of it is x and from a point B due east of A is y. If AB = 1, then the height h of the tower is given by	
2346	The horizontal distance between the two towers is 60 m. the angular elevation of the top of the taller tower as seen from the top of the shorter one is 30°. If the height of the taller tower is 150 m, the height of the shorter one is	A. 116 m B. 200 m C. 216 m D. None of these
2347	PQ is a post of given height a, and AB is a tower at some distance; α and β are the angles of elevation of B, the top of the tower, at P and Q respectively. The height of the tower and its distance from the post are	
2348	120° degrees are equal to how many radians?	
2349	If the angle of a triangle are in the ratio 2 : 3 : 7, the triangle is	A. Obtuse B. Acute C. Right angle D. Isosceles
2350	Area of Δ ABC=	A. ab sinα B. 1/2 ab sinα C. 1/2 ac sinγ D. 1/2 ac sinβ
2351	If you are looking a high point from the ground, then the angle formed is	A. Angle of elevation B. Angle of depression C. Right angle D. Horizon
		A. sinθ= 1/2

2352	If θ= 60° then	B. tanθ= cot 30° C. θ=π/4 D. secθ= 4
2353	If Cosθ=0, thenθ= _____	A. nπ/2 B. (2n + 1)π/2 C. (2n - 1)π/2 D. (4n + 1)π/2
2354	If five triangles are constructed having sides of the lengths indicated below, the triangle that will NOT be a right triangle is	A. 8, 15, 17 B. 3, 4, 5 C. 12, 15, 18 D. 5, 12, 13
2355	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ is equal to	A. 1/2 cos⁻¹(3/5) B. 1/2 sin⁻¹(3/5) C. 1/2 tan⁻¹(3/5) D. tan⁻¹1/2
2356	The value of sin [arc cos (-1/2)] is	
2357	Question Image	A. 1 B. -1 C. 0 D. None of these
2358	If 2 $\tan^{1}(\cos x) = \tan^{-1}(\text{cosec}^{2}x)$, then x is equal to	A. π/ 3 B. π/ 2 C. π/ 6 D. π
2359	Question Image	
2360	Question Image	A. π/ 2 B. π/ 3 C. π/ 4 D. π
2361	Question Image	A. π/ 4 B. π/ 6 C. π/ 3 D. 2π/ 3
2362	Question Image	A. 1 B. 7 C. 4 D. None of these
		A. 3

2363	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$ then $p^2 + q^2 + r^2 + 2pqr$ is equal to	B. 1 C. 2 D. -1
2364	Question Image	
2365	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
2366	Question Image	A. 1 B. -1 C. 0 D. None of these
2367	Question Image	A. 0 B. 1 C. -1 D. None of these
2368	Question Image	
2369	Question Image	A. Cos 2x = sin 4y B. Cos 4y = cos 2x C. Cos 3y = sin 4x D. None of these
2370	Question Image	A. 1/3 B. 1 C. 3 D. None of these
2371	$\tan^{-1}x > \cot^{-1}x$ holds for	A. x > 1 B. x < 1 C. x = 1 D. All values of x
2372	Question Image	
2373	Question Image	A. 1 B. 0 C. 3 D. -3
2374	Question Image	A. 20 B. 10 C. 0 D. None of these
2375	Question Image	A. 2 B. 5 C. 7 D. None of these
2376	The solution set of the equation $\tan^{-1}x - \cot^{-1}x = \cos^{-1}(2 - x)$ is	A. [0, 1] B. [-1, 1] C. [1, 3] D. None of these
2377	Question Image	A. 16 / 7 B. 6 / 17 C. 7 / 16 D. None of these
2378	Question Image	A. π / 3 B. π / 4 C. π / 2 D. π
2379	Question Image	A. π / 4 B. π / 6 C. π / 3 D. 0
2380	$\tan(\cot^{-1}x)$ is equal to	A. cot(tan⁻¹x) B. tan x C. secon x D. None of these
2381	$\sin[\cot^{-1}\{\cos(\tan^{-1}x)\}]=$	
2382	Question Image	A. π B. π / 2 C. π / 3 D. π / 4

2383	Question Image	A. π / 3 B. π / 4 C. π / 6 D. 0
2384	Question Image	
2385	Question Image	
2386	If $\tan^{-1}3 + \tan^{-1}x = \tan^{-1}8$, then x=	A. 5 B. 1/5 C. 5/14 D. 14/5
2387	The number of triplets (x, y, z) satisfying $\sin^{-1}x + \cos^{-1}y + \sin^{-1}z = 2\pi$ is	A. 0 B. 2 C. 1 D. Infinite
2388	$\sin^{-1}[-1/2]$ = _____	
2389	$\text{Tan}^{-1}1/x$ = _____	A. sin x B. sec⁻¹X C. cot⁻¹X D. None of these
2390	$\text{Sin}^{-1}(-x)$=	A. Cos⁻¹1/x B. - Sin⁻¹X C. Cot⁻¹X D. None of these
2391	$\text{Sec}^{-1}x$ =	A. Cos⁻¹1/x B. cosec⁻¹1/x C. Cos⁻¹(-x) D. Tan⁻¹x
2392	If Sin A = sin B, cos A = cos B, then the value of A in terms of B is	
2393	The general solution of tan 3x = 1 is	
2394	Question Image	A. 30° B. 45° C. 60° D. 75°
2395	If $4\sin^2\theta=1$, then values of θ are	
2396	Question Image	A. No solution B. One real solution C. More than one real solution D. None of these
2397	Question Image	
2398	Question Image	
2399	$\cot\theta = \sin 2\theta$ if θ=	
2400	$\cot\theta = \sin 2\theta$ if θ=	
2401	Question Image	
2402	Question Image	
2403	The number of values of x in the interval $[0, 5\pi]$ satisfying the equation $3\sin^2x - 7\sin x + 2 = 0$ is	A. 0 B. 5 C. 6 D. 10
2404	If $\sin 6\theta + \sin 4\theta + \sin 2\theta$, then θ=	
2405	The number of solution of the equation $\tan x + \sec x = 2\cos x$ lying in the interval $[0, 2\pi]$ is	A. 0 B. 1 C. 2 D. 3
2406	Question Image	A. A finite non-empty set B. Null set C. Both a and b D. None of these
2407	The smallest positive root of the equation tan x	

2407	- x = 0 lies on	
2408	General solution of tan 5θ = cot 2θ is	
2409	One root of the equation cos x - x + 1/2 = 0 lies in the interval	
2410	The solution of the equation $\cos^2\theta$ + $\sin\theta$ + 1 = 0 lies in the interval	
2411	If sin ($\pi\cos\theta$) = cos ($\pi\sin\theta$), then which of the following is correct?	
2412	Question Image	A. 7 B. 5 C. 6 D. None of these
2413	Question Image	A. From an empty set B. 1 C. 2 D. >2
2414	The general value of θ satisfying the equation 2 $\sin^2\theta$ - 3 $\sin\theta$ - 2 = 0 is	
2415	Question Image	
2416	Question Image	A. 1 B. 2 C. 3 D. None of these
2417	The number of points of intersection of two curves y = 2 sin x and y = $5x^2$ + 2x + 3 is	A. 0 B. 1 C. 2 D. None of these
2418	Question Image	
2419	Question Image	
2420	Question Image	A. [0,1[B. [0, 1] C.]0, 1[D. None of these
2421	Question Image	A. 2 B. 4 C. 8 D. 12
2422	Question Image	A. One-to-one and onto B. One-to-one but not on to C. Onto but not one-to-one D. Neither one-to-one nor onto
2423	Question Image	A. π B. 2π C. π/2 D. None of these
2424	The period $\sin^2\theta$ is	A. π² B. π C. 2π D. π/2
2425	The period of the function f(x) = $\sin^4x$ + $\cos^4x$ is	A. π B. π/2 C. 2π D. None of these
2426	The periods of the function f(x) = x[x] is	A. 1 B. 2 C. Non periodic D. None of these

2427	$\pi$is the period of the function	A. |sin x| + |sin x| B. sin⁴x + cos x C. sin (sin x) + sin (cos x) D. None of these
2428	Which of the following function form 1 to itself are bi-jective	A. F(x) = x + 3 B. F(x) = x⁵ C. F(x) = 3x + 2 D. F(x) = x²+ x
2429	Question Image	
2430	Question Image	A. One-one but not onto B. One-one and onto C. Onto but not one-one D. Neither one-one nor onto
2431	Question Image	A. -2 B. -1 C. 1 D. 2
2432	If f(x) = x^3- $2x^2$+ 4x -1, then f(-2) = ?	A. 0 B. -25 C. 5 D. 45
2433	Question Image	A. 0 B. -2 C. 1 D. 4
2434	p(x) = $2x^4$- $3x^3$+ 2x - 1 is polynomial of degree	A. 1 B. 2 C. 3 D. 4
2435	Which is not included in the domain of $\cos^{-1}x$	A. 0 B. 1 C. -1 D. 2
2436	Which is an explicit function	A. y = x²+ 2x - 1 B. x²+ xy + y²= 2 C. x²+ y²= xy + 2 D. All are
2437	Question Image	
2438	The domain of f(x) = log x is	A. [0,∞] B. (0,∞) C. [0,∞[D. [∞,∞]
2439	A function F(x) is called even if	A. F(x) = F (-x) B. F(x) = F(-x) C. F(x) = -F(x) D. 2F(x) = 0
2440	The range of inequality x + 2 > 4 is	A. (-1, 2) B. (-2, 2) C. (1,∞) D. None
2441	Question Image	A. 1 B. 0 C. -2 D. 3
2442	Graph of the question x^2+ y^2= 4 is	A. A circle B. An ellipse C. A parabola D. A square
		A. All real numbers except π/2 + n*π B. R

2443	Domain of y = scs x is	B. R C. All negative integers D. None of these
2444	The area of circle of unit radius =	A. 0 B. 1 C. 4 D. π
2445	Question Image	A. 0 B. 1 C. 8 D. ∞
2446	Question Image	A. 3/4 B. r C. v D. None of these
2447	Question Image	A. Does not exist because f is unbounded B. Is not attained even though f is bounded C. Is equal to 1 D. Is equal to -1
2448	Question Image	A. R/[0,4] B. R/(0,4) C. (0,4) D. [0,4]
2449	Question Image	A. (1,7/3) B. (1, 7/5) C. (1, 11/7) D. (1, 3/5)
2450	Question Image	A. 1/8 B. 1/2 C. 1/4 D. 1/6
2451	Question Image	A. 2 B. 1 C. 5 D. 0
2452	Question Image	A. 1 B. -1 C. -1/2 D. 1/2
2453	Question Image	A. xy B. y C. 0 D. x
2454	Question Image	
2455	Question Image	A. y/x B. x/y C. y/z D. None
2456	Question Image	A. 1 B. 1/2 C. 0 D. None
2457	Question Image	
2458	Question Image	
2459	Question Image	
2460	Question Image	
2461	Question Image	
2462	Question Image	
2463	Question Image	A. 0 B. U C. u/2 D. log u
	Question Image	A. y : x B. x : y

2464	Question Image	C. -y : x D. -x : y
2465	F(x) = x^xdecreases in the interval	A. (0, e) B. (0, 1) C. (-∞,0) D. None
2466	The parametric equation of a curve are $x = t^2$, $y = t^3$then	
2467	Question Image	A. 2x + 2y B. 4 - x² C. -x/y D. x/y
2468	Question Image	A. xa^{x-1} B. a^x C. x in a D. a^xln a
2469	Question Image	
2470	Question Image	
2471	Question Image	
2472	If a particle moves according to the law $s = t^3 - t^2$, then its velocity at time t = 1.5 is	A. 9/2 B. 15/4 C. 5 D. None
2473	The velocity of a particle moving along a straight line is given by $v = 3t + t^2$. The acceleration of the particle after 4 seconds from the start is	A. 4 B. 11 C. 26 D. None
2474	The distance s of a particle in time t is given by $s = t^3 - 6t^2 - 4t - 8$. Its acceleration vanishes at t =	A. 1 B. 2 C. 3 D. 4
2475	If $s = 2t^3 - 3t^2 + 15t - 8$ is the equation of motion of a particle, then its initial velocity is	A. 8 B. 15 C. -6 D. None
2476	The equation of motion of a stone thrown vertically up wards is $s = ut - 4.9t^2$the maximum height attained by it =	
2477	If c is a constant number and if f is the function defined by the equation f(x) =c for all values of x, then f is differentiable at every x and f is defined by the equation f(x)	A. f B. 1 C. C D. 0
2478	Question Image	A. -2x cos x² B. -2x²sin x² C. -x²sin x D. -2x²sin x²
2479	Second derivative of $y = x^9 + 10x^2 + 2x - 1$ at x = 0 is	A. 10 B. 20 C. 12 D. 1
2480	Derivative of strictly increasing function is always	A. Zero B. Positive C. Negative D. Both (A) and (B)
2481	Any point, where f is neither increasing nor decreasing and f(x) = 0 at that point, is called a	A. Minimum B. Maximum C. Stationary point D. Constant point
2482	If y = sin (ax + b), then fourth derivative of y with respect to x =	A. a⁴cos (ax + b) B. a⁴sin (ax + b) C. -a⁴sin (ax + b) D. a⁴tan (ax + b)
2483	Water seeps out of a conical filter at eh constant rate of 5 cm/sec. the height of the cone of water in the filter is 15 cm. the height of	

	the filter is 20 cm and radius of the base is 10 cm. the rate at which the height of the water decreases is	
2484	Sand falls from a tube in such a way that it forms a cone whose height is always 4/3 times the radius of its base and radius of the base increases at the rate of 1/8 cm/sec. When this radius is 1 meter, the rate at which the amount of sand increases is	
2485	Question Image	A. 2, 3 B. 3, 3 C. 2, 6 D. 2, 4
2486	Te order of the differential equation of all conics whose axes coincide with the axes of co-ordinates is	A. 2 B. 3 C. 4 D. 1
2487	Question Image	A. 1 B. 2 C. 3 D. 4
2488	Question Image	A. 1 B. 2 C. 3 D. 4
2489	The differential equation representing the family of curves y = A cos (x + B), where A, B are parameters, is	
2490	The differential equations of all conis whose axes coincide with the co-ordinate axis is	
2491	The differential equation of all st. lines which are at a constant distance to form the origin is	
2492	Question Image	
2493	Question Image	A. y + 1 = Ae^x B. y + 1 = Axe^x C. xe^x= C D. y + xe^x= C
2494	Question Image	
2495	Question Image	
2496	Question Image	
2497	Which of the following integrals can be evaluated	
2498	Question Image	
2499	Question Image	
2500	Question Image	A. A variable B. A constant C. 0 D. None of these
2501	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
2502	Question Image	
2503	Question Image	
2504	Question Image	A. Y = -x log x -x + c B. Y = x log x + x C. Y = x log x - x + c D. None of these
	The arbitrary constants involving in the solution	A. Boundaries

2505	The arbitrary constants involving in the solution can be determined by the given conditions. Such conditions are called	B. Variable separable C. Initial values D. None
2506	If the lower limit of an integral is a constant and the upper limit is a variable, then the integral is a	A. Constant function B. Variable value C. Function of upper limit D. All
2507	If the graph of f is entirely below the x-axis, then the value of definite integral is	A. = 0 B. < 0 C. > 0 D. None
2508	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
2509	Question Image	A. 0 B. 1 C. 2 D. 4
2510	Question Image	A. π B. π/6 C. -π/2 D. 2π
2511	Question Image	
2512	Which of the following integrals can be evaluated	
2513	If l, m, n are the d.c.'s of a line, then	A. l2+ m2+ n2= 0 B. l2+ m2+ n2= 1 C. l + m + n = 1 D. l = m = n = 1
2514	The points (5, 2, 4)(6, -1, 2) and (8, -7, k) are collinear if k is equal to	A. -2 B. 2 C. 3 D. -1
2515	The direction cosines of a line equally inclined with co-ordinate axes are	
2516	The direction cosines of any normal to the xy-plane are	A. <1, 0, 0> B. <0, 1, 0> C. <1, 1, 0> D. <0, 0, 1>
2517	The distance of the points (3, 4, 5) from y-axis is	
2518	Question Image	A. (3, 1, -2) B. (3, -2, 1) C. (2, -1, 3) D. (-1, -2, -3)
2519	The st. lines whose direction cosines satisfy al + bm + cn = 0, fmn + gnl + hlm=0 are perpendicular if	
2520	The projections of a line segment on x, y, z axes are 12, 4, 3. The length and the direction cosines of the line segment are	
2521	Question Image	A. 0 B. 2 C. 4/3 D. 5/3
2522	The point which divides the line joining the points (2, 4, 5) and (3, 5, -4) in the ratio -2 : 3 lines on	A. ZOX plane B. XOY plane C. YOZ plane D. None of these
2523	The distance of the plane 2x - 3y + 6z + 14 = 0	A. 14 B. 2

	from the origin is	C. -2 D. 11
2524	The equation of the plane which bisects the line joining (2, 3, 4) and (6, 7, 8) is	A. x + y + z - 15 = 0 B. x - y + z - 15 = 0 C. x - y - z - 15 = 0 D. x + y + z + 15 = 0
2525	The lines l1and l2intersect. The shortest distance between them is	A. Positive B. Negative C. Zero D. Infinity
2526	The equations of the line thro' the point (2, 3, -5) and equally inclined to the axis are	
2527	The points (5, 0, 2), (2, -6, 0), (4, -9, 6) and (7, -3, 8) are vertices of a	A. Square B. Rhombus C. Rectangle D. Parallelogram
2528	The points (5, -4, 2),(4, -3, 1),(7, -6, 4),(8, -7, 5) are vertices of a	A. Square B. Parallelogram C. Rectangle D. Rhombus
2529	Question Image	
2530	Question Image	A. -10 B. 10/7 C. -10/7 D. -7/10
2531	Question Image	A. Parallel to the plane B. At right angles to the plane C. Lies in the plane D. Meet the plane obliquely
2532	The foot of perpendicular from (α,β,γ) only y-axis is	A. (α, 0, 0) B. (0,β, 0) C. (0, 0, γ) D. (0, 0, 0)
2533	64.A point (x, y, z) moves parallel to xy plane. Which of the three variables x, y, z remain fixed?	A. z B. x C. y D. x and y
2534	Question Image	
2535	Question Image	
2536	The intercepts of the plane 2x - 3y + 4z = 12 on the co-ordinate axes are given by	A. 2, -3, 4 B. 6, -4, -3 C. 6, -4, 3 D. 3, -2, 1.5
2537	Question Image	A. x-axis B. y-axis C. z-axis D. None of these
2538	The equation of the sphere passing thro' (0, 0, 0), (a, 0, 0), (0, b, 0), (9, 0, c) is	A. x²+ y²+ z²+ 2 ax +2 by + 2cz = 0 B. x²+ y²+ z²- 2ax - 2 by - 2cz = 0 C. x²+ y²+ z²- ax - by - cz = 0 D. x²+ y²+ z²+ ax + by + cz = 0
2539	The center of the sphore which passes thro' (a, 0, 0), (0, b, 0), (0, 0, c) and (0, 0, 0) is	
2540	The equation of the sphere thro' the origin and making intercepts a, b, c on co-ordinate axes is	A. x²+ y²+ z²+ ax + by + cz = 0 B. x²+ y²+ z²- 2ax - 2 by - 2 cz = 0 C. x²+ y²+ z²= a + b + c D. x²+ y²+ z²- ax - by - cz =0
2541	If x < y, 2x = A, and 2y = B, then	A. A = B B. A < B C. A < x D. B < y
2542	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b

	negative?	C. -a D. (a - b)²
2543	If 4 - x >5, then	A. x > 1 B. x > -1 C. x < 1 D. x < -1
2544	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
2545	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
2546	A farmer possesses 100 hectometers of land and wants to grow corn and wheat. Cultivations of corn requires 3 hours per hectometer while cultivation of wheat requires 2 hours per hectometer. Working hours cannot exceed 240. If he gets a profit of Rs. 20 per hectometer for corn and Rs. 15 per hectometer for wheat. The profit function for the farmer is	A. P(x, y) = 20x + 15y B. P(x, y) = 2x + 3y C. P(x, y) = x + y D. P(x, y) = 3x + 2y
2547	Which is in the solution set of 4x - 3y < 2	A. (3, 0) B. (4, 1) C. (1, 3) D. None
2548	For which of the following ordered pairs (s, t) is s + t > 2 and s - t < -3?	A. (3, 2) B. (2, 3) C. (1, 8) D. (0, 3)
2549	If -1 < x < 0, which of the following statements must be true?	A. x < x²< x³ B. x < x³< x² C. x²< x³< x D. x²< x < x³
2550	Question Image	A. p < r B. p > rr C. p + r < 0 D. p - r < 0
2551	The total cost of 2 apples and 3 oranges is $1.70, which of the following is true	A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined
2552	x is a member of the set [-1, 0, 3, 5] y is a member of the set {-2, 1, 2, 4} which is possible?	A. x - y = -6 B. x - y < -6 C. x - y > -6 D. None
2553	r + 3 >5 then which is true	A. r + 2 > 4 B. r + 2 < 4 C. r + 2 = 4 D. None
2554	ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
2555	s > t then	A. (s - t)²> (t - s)² B. (s - t)²< (t - s)² C. (s - t)²= (t - s)² D. None
2556	Optimize means _____ a quantity under certain constraints	A. Minimize B. Maximize C. Maximize or minimize D. None of these
2557	There may be _____ feasible solution in the feasible region	A. Infinite B. Finite C. Defined D. None of above
2558	Inequalities have _____ symbol	A. 2 B. 3 C. 4 D. 1
		A. Parabola B. Circle

2559	The graph of linear equation 2x + 3y = 10	B. Circle C. Hyperbola D. Straight line
2560	The solution set of x < 4 is	A. -∞< x < 4 B. -∞> x > 4 C. -∞< x < 2 D. -∞> x > 2
2561	The eccentricity of the conic $9x^2 - 16y^2 = 144$ is	A. 4/5 B. 5/4 C. 4/3 D. 3/4
2562	The line y = 4x + c touches the hyperbola $x^2 - y^2 = 1$ if	
2563	Question Image	
2564	A rectangular hyperbola whose centre is C is cut by any circle of radius r in four points P, Q, R and S. Then $CP^2 + CQ^2 + CR^2 + CS^2$ =	A. r² B. 2 r² C. 3 r² D. 4 r²
2565	Question Image	A. A parabola B. An ellipse C. A hyperbola D. A circle
2566	Question Image	A. 1 B. 5 C. 7 D. 9
2567	Question Image	
2568	The equation $x^2 + y^2 = 0$ represents	A. A circle B. A degenerate circle C. An empty set D. A st. line
2569	Circumcentre of the triangle, whose vertices are (0, 0), (6, 0) and (0, 4) is	A. (2, 0) B. (3, 0) C. (0, 0) D. (3, 2)
2570	The line Ax + By + C = 0 will touch the circle $x^2 + y^2 = \lambda$ when	A. C²=λ(A²+ B²) B. A²=λ(A²+ C²) C. B²=λ(A²+ C²) D. None of these
2571	The equation of the chord of the circle $x^2 + y^2 - 4x = 0$ whose mid-point is (1, 0) is	A. y = 2 B. y = 1 C. x = 2 D. x = 1
2572	The length of the tangent from (2, 1) to the circle $x^2 + y^2 + 4y + 3 = 0$ is	
2573	The eccentricity of the parabola $y^2 = -8x$ is	A. -2 B. 2 C. -1 D. 1
2574	The equation of the directrix of the parabola $x^2 = 4ay$ is	A. x + a = 0 B. x - a = 0 C. y + a = 0 D. y - a = 0
2575	The equation of the parabola with directirx x = 2 and the axis y = 0 is	A. y²= 8x B. y²= -8x C. y²= 4x D. y²= -4x

2576	The line $y = 2x + c$ is a tangent to the parabola $y^2 = 16x$ if c equals	A. -2 B. -1 C. 0 D. 2
2577	The slope of the normal at the point $(at^2, 2at)$ of the parabola $y^2 = 4ax$ is	A. 1/t B. t C. -t D. -1/t
2578	The equation $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ represents an ellipse if	
2579	The latus rectum of the ellipse $5x^2 + 9y^2 = 45$ is	A. 10 / 3 B. 5 / 3 C. 3 / 5 D. 3 / 10
2580	Question Image	A. An ellipse B. A parabola C. A circle D. A hyperbola
2581	A circle is a limiting case of an ellipse whose eccentricity	A. Tends to a B. Tends to b C. Tends to 0 D. Tends to a + b
2582	Question Image	A. 2 b B. 2 a C. 2 ab D. a + b
2583	The line 3x - 4y = 0	A. Is a tangent to the circle x²+ y²= 25 B. Is a normal to the circle x²+ y²=25 C. Does not meet the circle x²+ y²= 25 D. Does not pass thro' the origin
2584	The equation of a line parallel to the tangent to the circle $x^2 + y^2 = 16$ at the point (2, 3) and passing thro' the origin is	A. 2x + 3y = 0 B. 2x - 3y = 0 C. 3x + 2y = 0 D. 3x - 2y = 0
2585	A square is inscribed in the circle $x^2 + y^2 - 2x + 4y + 3 = 0$. Its sides are parallel to the co-ordinate axes. Then one vertex of the square is	
2586	If the st. line $3x + 4y = K$ touches the circle $x^2 + y^2 - 10x = 0$ then the value of K is	A. -1 or 20 B. -10 or 40 C. -2 or 20 D. 2 or 20
2587	If a cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. Parabola B. Circle C. Hyperbola D. Ellipse
2588	The constant distance of all points of the circle from its centre is called the	A. Radius of the circle B. Secant of the circle C. Chord of the circle D. Diameter of the circle
2589	Question Image	
2590	The radius of the circle $(x - 1)^2 + (y + 3)^2 = 61$ is	A. 8 B. 4 C. 64 D. None of these
2591	The point on $y^2 = 4ax$ nearest to the focus has its abciassae equal to	A. -a B. a C. a/2 D. 0
2592	If t is the parameter for one end of a focal chord of the parabola $y^2 = 4ax$, then its length is	
2593	If (a, b) is the mid-point of a chord passing thro' the vertex of the parabola $y^2 = 4x$, then	A. a = 2b B. 2a = b C. a²= 2b D. 2a = b²
2594	The parabola $y^2 = x$ is symmetric about	A. x-axis B. y-axis C. Both x and y-axis D. The line y = x

2595	If x + y + 1 = 0 touches the parabola $y^2=\lambda x$, then λ is equal to	A. 2 B. 4 C. 6 D. 8
2596	The circle $(x - 2)^2+ (y + 3)^2= 4$ is not concentric with the circle	A. (x - 2)²+ (y + 3)²= 9 B. (x + 2)²+ (y - 3)²= 4 C. (x + 2)²+ (y - 3)²= 8 D. (x - 2)²+ (y + 3)²= 5
2597	The point (x_1, y_1) lies outside the circle $x^2+ y^2+ 2gx + 2fy + c =0$ if	
2598	The equation of the normal to the circle $x^2+ y^2= 25$ at (4, 3) is	A. 3x - 4y =0 B. 3x - 4y =5 C. 4x + 3y = 5 D. 4x + 3y = 25
2599	A line segment whose end points lie on a circle is called	A. The secant of the circle B. The arc of the circle C. The chord of the circle D. The circumference of the circle
2600	The perpendicular bisector of any chord of a circle	A. Passes through the centre of the circle B. Does not pass through the centre of the circle C. May or may not pass through the centre of the circle D. None of these
2601	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. None of these
2602	The axis of the parabola $y^2= 4ax$ is	A. X = 0 B. Y = 0 C. X = y D. X = -y
2603	The end points of the major axis of the ellipse are called its	A. Foci B. Vertices C. Co - vertices D. None of these
2604	The vertices of the ellipse $x^2+ 4y^2= 16$ are	
2605	The line through the centre and perpendicular to the transverse axis is called the	A. Major axis B. Minor axis C. Focal axis D. Conjugate axis
2606	The two different parts of the hyperbola are called its	A. Vertices B. Directrices C. Nappes D. Branches
2607	The number of real tangents that can be drawn to the ellipse $3x^2+ 5y^2= 32$ passing thro. (3, 5) is	A. 0 B. 1 C. 2 D. Infinite
2608	The locus of the point of intersection of tangents to an ellipse at two points, sum of whose eccentric angles is constant is	A. A parabola B. A circle C. An ellipse D. A st. line
2609	Question Image	A. Free vector B. Null vector C. Unit vector D. None of these
2610	Unit vector in the positive direction of x-axis is	
2611	A vector of magnitude zero is called	A. Position vector B. Null vector C. Free vector D. None of these
2612	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
2613	Question Image	
2614	Which of the vectors have opposite direction?	
		A. l²+ m²+ n²= 0

2615	Question Image	B. l²- m²+ n²= 1 C. l²+ m²+ n²= 1 D. l²+ m²- n²= 0
2616	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
2617	Question Image	
2618	Question Image	A. 0 B. 90° C. 180° D. 360°
2619	If the angle between two vectors with magnitude 6 and 2 is 60° when their scalar product is	A. 12 B. 6 C. 3 D. 0
2620	If the vector 2i + 4j - 7k and 2i + 6j + xk are perpendicular then x = ?	A. 0 B. 2 C. 4 D. 7
2621	Question Image	A. A B. 0 C. Unit vector D. None
2622	The angle between the vectors 3i + j - k and 2i - j + k is	
2623	3j . k x i	A. 0 B. 1 C. 3 D. 9
2624	Question Image	
2625	Question Image	
2626	Question Image	
2627	Question Image	A. A,. B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
2628	If C is the mid point of AB and P is any point outside AB, then	
2629	Question Image	A. 0 B. 1 C. -1 D. None
2630	Gooch crucible is made of :	A. Brass. B. Porcelain. C. Bronze. D. Gold.
2631	The real number system contains.	A. Positive Numbers B. Negative numbers C. Zero D. (option a, b and c)
2632	For each real number, there is a number which is its	A. Negative B. Possitive C. Opposite D. Similar
2633	Rational number is a number which can be written as a terminating decimal fraction or a	A. Non-terminating decimal fraction B. Non-recurring C. Recurring decimal fraction D. a, b and c
2634	The set of rational number is represented by	A. W B. R C. Q' D. Q
2635	Union of the sets of rational and irrational numbers is called 6th set of	A. Natural numbers B. Real numbers C. Whole numbers D. Prime numbers

2636	There is no element common in	A. N and W B. E and W C. N and O D. Q and Q'
2637	√11 is	A. an irrational number B. Rational number C. odd number D. Negative number
2638	The decimal fraction in which we have finite number of digits in its decimal part is called.	A. recurring decimal fraction B. Non terminating faction C. Non recurring fraction D. terminating decimal fraction
2639	The square root of every incomplete square is an	A. Rational numbers B. Even numbers C. odd numbers D. Irrational numbers
2640	It is not possible to find the exact value of	A. π B. √9 C. ∛27 D. √1
2641	Such fraction which can not be written in the form ofp/q where p,q and q≠ 0,such fractions are called.	A. Fractinal numbers B. Rational Numbers C. Even Numbers D. Whole Numbers
2642	Q ∪ Q' =	A. Q B. Q' C. N D. R
2643	Some of two real numbers is also a real number , this property is called:	A. Commutative property w.r.t addition B. Closure property w.r.t. addition C. Associative property w.r.t. addition D. Distributive property w.r.t addition
2644	The multiplicative inverse ofx^(-1) is	A. x B. a-2 C. 0 D. 1
2645	I is not	A. Real number B. Natural number C. Prime Number D. Whole Number
2646	The additive identity of real number is	A. 1 B. 2 C. 1/2 D. 0
2647	4/√49 is a	A. Irrational Number B. Prime Number C. Rational number D. Whole number
2648	The√ is used for the	A. Positive square root B. Negative square root C. +ve and -ve square root D. Whole number
2649	The negative square root of 9 can be written as:	A. -√9 B. √9 C. √18 D. -√18
2650	If a and b are real numbers then a+b is also real number this law is called	A. associative law of addition B. closure law of addition C. Distributive law of addition D. Commutative law of addition
2651	The identity element with respect to subtraction is	A. 0 B. -1 C. 0 and 1 D. None of thes
2652	If 0 = R, thenthe additive inverse of a is	A. 1/9 B. ^{1/-9} C. a D. -a
2653	2/9,5/7∈ R,(2⎪9)(5⎪7)=10/63∈R this property is called	A. Associative property B. Identity property C. Commutative property

		D. Closure property w.r.t multiplication
2654	3.5+5.4=5.4+3.5 =8.9 this property of addition is called	A. additive identity B. associative property C. commulative property D. closure property
2655	√2 +√3 +√5) = (√2 +√3 +√5: this property is called	A. associative property w.r.t addition B. commutative property C. Closure property w.r.t addition D. Additive identity
2656	The set of positive integers, 0 and negative integers is known as the set of	A. Natural numbers B. Rational numbers C. All integers D. Irrational numbers
2657	If P is a whole number greater than 1, which has only P and I are factors. Then P is called	A. Wholw number B. Prime number C. Even number D. Odd number
2658	Any whole number can be written as a product of factors which are	A. Odd numbers B. Prime number C. Rational number D. Even number
2659	14 is not a	A. Prime number B. Whole number C. Even number D. Real number
2660	24 can be written as a product of	A. Odd factors B. Even factors C. Whole factors D. Prime factors
2661	Which of the following statement is true?	A. A set is a collection of non-empty object B. A set is a collection of only numbers C. a set is any collection of things D. a set is well-defined collection of objects
2662	If T = {2,4,6,8,10,12}, then	A. T = (First six natural numbers) B. T = (First six odd numbers) C. T = (First six real numbers) D. T = (First six even numbers)
2663	Which of the following is the definition of singleton	A. The objects in a set B. A set having no element C. A set having no subset D. None of these
2664	If S = {3,6,9,12.....}, then	A. S = Four multiples of 3 B. S = Set of even numbers C. S = Set of prime numbers D. S = All multiples of 3
2665	If P = {x/x = p/q where p,q∈ Z and q≠ 0}, then P is the set of	A. Irrational numbers B. Even numbers C. Rational numbers D. Whole numbers
2666	A = B iff	A. All elements of A also the elements of B B. A and B should be singleton C. A and B have the same number of elements D. If both have the same element
2667	The set of months in a year beginning with S.	A. {September, October, November} B. Singleton set C. Null set D. Empty set
2668	*P∉ A means*	A. Pis subset of A B. Pis an element of A C. P does not belongs to A D. A does not element of P
2669	If there is one-one correspondence between A and B, then we write.	A. A = B B. A⊆ B C. A⊇ B D. A ~ B
2670	if A = (x/x€ Q^ 0 < x < 1}, the A is	A. Infinite set B. Finite set C. Set of rational numbers D. Set of real numbers
2671	Empty set is	A. Not subset of every set B. Finite set

2671	Empty set is	C. Infinite set D. Not the member of real numbers
2672	Every set is an improper subset of	A. Empty set B. Equivalent set C. Itself D. Singleton set
2673	{0} is a	A. Empty set B. Singleton set C. Zero set D. Null Set
2674	Z is a	A. Infinite set B. Finite set C. Singleton set D. Set of all integers
2675	If A = {x/x is a positive integer and 4≤x<23}, then A=	A. {1,2,3,4,5,6,7} B. {4,5,6.....22} C. {1,2,3,.....23} D. {1,2,3,4,5}
2676	If C={p/p < 18, p is a prime number}, then C =	A. {2,3,4,.....17} B. {2,4,6,8.....16} C. {1,3,5,7,9,11,13,15,17} D. {3,6,9,12,15}
2677	If a = {2m/2m < 9 ,m€ p} , the (n A) =	A. {2,3,4,5,6,7,8} B. {2,4,6,8.....16} C. { 4, 6} D. {2,3,5,7}
2678	If B ={x/x€ Z ^ - 3 < x < 6}, then n (B) =	A. 5 B. {-3,-2,-1,0,1,2,3,4,5,6} C. 8 D. 9
2679	If 0 = {1,3,5.....}, then n (0) =	A. Infinite B. Even numbers C. odd integers D. 99
2680	If A = {2m/m^3= 8 , m€ Z} then A =	A. {1,8,27} B. {4} C. (2,4,6} D. {2,16,54}
2681	If A⊆ B, and B is a finite set, then	A. n (a) < n(B) B. n(B)<(A) C. n(A)≤ n (B) D. n(A)≥ n(B)
2682	The set of even prime numbers is	A. (2,4,6,8,10} B. {2,4,6,8,10,12} C. {1,3,5,7,9} D. {2}
2683	If D = {a} , the P(D) =	A. {a} B. <!--[if gte msEquation 12]><m:oMathPara><m:oMath><m:r>⌀</m:r></m:oMath></m:oMathPara><![endif]--><!--[if !msEquation]--><!--[if gte vml 1]><v:shapetype id="_x0000_t75" coordsize="21600,21600" o:spt="75" o:preferrelative="t" path="m@4@5l@4@11@9@11@9@5xe" filled="f" stroked="f"> <v:stroke joinstyle="miter"/> <v:formulas> <v:f eqn="if lineDrawn pixelLineWidth 0"/> <v:f eqn="sum @0 1 0"/> <v:f eqn="sum 0 0 @1"/> <v:f eqn="prod @2 1 2"/> <v:f eqn="prod @3 21600 pixelWidth"/> <v:f eqn="prod @3 21600 pixelHeight"/> <v:f eqn="sum @0 0 1"/> <v:f eqn="prod @6 1 2"/> <v:f eqn="prod @7 21600 pixelWidth"/> <v:f eqn="sum @8 21600 0"/> <v:f eqn="prod @7 21600 pixelHeight"/> <v:f eqn="sum @10 21600 0"/> </v:formulas> <v:path o:extrusionok="f" gradientshapeok="t" o:connecttype="rect"/> <o:lock v:ext="edit" aspectratio="t"/> </v:shapetype><v:shape id="_x0000_i1025" type="#_x0000_t75" style='width:6.75pt; height:14.25pt'> <v:imagedata src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image001.png" o:title="" chromakey="white"/> </v:shape><![endif]--><!--[if !vml]--><img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025" style="font-family: Calibri, sans-serif; font-size: 11pt;">⌀<!--[endif]--><!--[endif]--><o:p></o:p> C. {⌀,{a}} D. {⌀,a}
2684	If E = { } , then P(E)	A. ⌀ B. { } C. {(2),(4),(6)....} D. (⌀)

2685	The number of subset of {0} is	A. 1 B. 2 C. 3 D. None
2686	The many subset can be formed from the set {a,b,c,d}	A. 8 B. 4 C. 12 D. 16
2687	The number of proper subset of A ={a.b.c.d} is	A. 3 B. 6 C. 8 D. 15
2688	The number of subsets of B = {1,2,3,4,5}	A. 10 B. 32 C. 16 D. 5
2689	0 is a symbol of	A. singleton set B. Empty set C. Equivalent set D. Infinite set
2690	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite
2691	A quadratic equation in x is an equation that can be witten in the form	A. ax²+ b = 0 B. ax³ +b²+c=0 C. ax² +bx+c=0 D. ax³ +bx³+cx=0
2692	Another name of quadratic equation is	A. Polynomial B. 2nd degree polynomial C. Linear equation D. simaltaneous equations
2693	A quadratic equation has two	A. roots B. degree C. variables D. constants
2694	The roots of the equation x2 +6x-7=0,are	A. 1 B. 2 C. 1 and -7 D. -7
2695	the largest degree of the terms in the polynomials is called	A. terms of the polynomial B. degree of a polynomial C. co-efficient D. monomial
2696	The solution of the quadratic equation x2 -7x + 10=0, is	A. 2 B. 5 C. 2,5 D. 7
2697	The graph of the quadratic equation is	A. Straight line B. Circle C. Parabola D. elipse
2698	In quadratic equation $f(x) = ax^2$,if a >0, then the graph of parabola	A. Opens up B. Opens down C. close up D. symmetric w.r.t.x.axis
2699	In quadratic equation $y=ax^3$ +bx+c, if b and c are both zero then the graph is	A. Symmetric w.r.t.y-axis B. Symmetric w.r.t.x-axis C. Straight Line D. Circle
2700	In quadratic equation, if the replacement of y with -y leaves the equation unchanged, then the graph is	A. Straight line B. Circle C. Hyperbola D. Symmetric w.r.t.0
2701	The root of the quadratic equation are	A. 3 B. 2 C. 1 D. 4
2702	If a parabola opens down, then its vertex is at	A. Right of the parabola B. Left of parabola

	the	C. Lowest point on the parabola D. Highest point on the parabola
2703	If f(x) = ax^2, and a>0, then the lowest point on the parabola is called.	A. Vertex of parabola B. Co-ordinates of parabola C. Roots of the equation D. Coefficient of the equation
2704	The standard parabolic form of the equation f(x) = x^2 +4 x +1 is	A. x(x+4)+1 B. (x+2)²-3 C. (x+4)³ + 9 D. x(x-2)²+1
2705	The standard form of the quadratic function f(x) = -x^2 +4x+2, is	A. (x-2)²+6 B. -(x-2)² + 6 C. (x-3)²+5 D. (x+4)²-7
2706	The minimum value of the quadratic function f(x) = x2 +6x -2, is	A. 11 B. 6 C. -11 D. 13
2707	The minimum value of the quadratic function f(x) = 5 x 2-11,is	A. -11 B. 6 C. -7 D. 7
2708	The vertex of the graph of the quadratic function f(x) = x2 -10, is	A. (0 , -10) B. (-10,0) C. (10,0) D. (0,10)
2709	The vertex of the graph of the quadratic function f(x) =-x2+6x+1,is	A. (-3,10) B. (-3,-10) C. (3,10) D. (3,-10)
2710	The maximum value of the quadratic function f(x) = -2x2+20x,is	A. 4 B. 3 C. 50 D. 7
2711	The maximum value of the quadratic function f(x) = 2x2-4x+7,is	A. 3 B. 5 C. -3 D. -5
2712	Which of the following is factor of p(x) =2x3 +3x2+3x+2 ?	A. x+1 B. 2x+1 C. 3x+1 D. 2x-1
2713	(x-1) is a factor of	A. 2x³-3x²+9 B. 2x³-5x-8 C. 48x²⁻46x-9 D. x⁹-1
2714	If 3x4 +4x3+x5is divided by x+1 , which of the following is the remainder	A. 7 B. -2 C. 6 D. 1
2715	Which of the following is factor of x11+a11, where n is an odd integer	A. x-a B. x+a C. 2x-a D. 2x+a
2716	If x-2 and x-1 both are factors of x^3-3x^3+2x-4p, then P must equal to	A. 1 B. 2 C. 0 D. -2
2717	The synthetic division method is only used to divide a polynomial by	A. quadratic equation B. binomial C. linear equation D. monomial
2718	If a polynomial p(x) is divided by x-c, then the remainder is	A. p(x) B. x-c C. c D. P(c)
2719	A polynomial P(x)has a factor (x-a)if P(a) =	A. a B. x C. 1 D. 0
		A. itself

2720	Each complex cube root of unity is square of	A. itself B. 1 C. -1 D. the other
2721	Sum of all the four forth roots of unity is	A. 1 B. -1 C. i D. 0
2722	When rational fraction is separated into partial fractions, the result is	A. an identity B. A fraction C. A partial sum D. Improper fraction
2723	An improper rational fraction can be reduced by division to a	A. Proper fraction B. Polynomial C. mixed form
2724	To express a single rational fraction as a sum of two or more single rational fractions which are called	A. improper fractions B. Partial fractions C. mixed form D. Polynomials
2725	An equation which hold good for all values of the variables is called	A. Identity B. fraction C. mixed form D. Partial equation
2726	Sequence also called.....	A. Series B. Function C. progressions D. Elements
2727	A sequence is a functions whose domain is a subset of the set of	A. Natural numbers B. Real numbers C. Whole numbers D. Rational numbers
2728	If all members of a sequence are real numbers then it is called a	A. Series B. Function C. Real sequence D. Range
2729	A sequence having no last term is called	A. arithmetic sequence B. Geometric sequence C. Finite sequence D. Infinite sequence
2730	If the domain of sequence is finite set then the sequence is called	A. geometric sequence B. infinite sequence C. finite sequence D. arithmetic sequence
2731	1,1/3,1/5,1/7,1/9..... is a	A. geometric sequence B. finite sequence C. infinite sequence D. arithmetic series
2732	The element range of sequence are called	A. Series B. progression C. Members D. Terms
2733	The 6th term of the sequence 7,9,12,16.....is	A. 27 B. 32 C. 20 D. 19
2734	1/2,1/3,1/4,1/5.....is	A. a geometric sec B. an arithmetric series C. finite sequence D. an infinite sequece
2735	What is the 26th term of the sequence, if its general term is $a_n = (-1)^{n+1}$	A. 2 B. 26 C. 27 D. 1
2736	The sixth term of the sequence 1,3,12,60....is	A. 1500 B. 72 C. 2160 D. 2520
2737	The difference of two consecutive terms of an A.P is called the	A. Common difference B. Common ratio C. Geometric series D. Geometric mean
		A. 20

2738	The fifth term of an A.P. Whose first term is 5 and common difference is 3,is	A. 20 B. 17 C. 25 D. 30
2739	The seventh term of an A.P whose first term is P and common difference is q. is	A. P-6q B. P+6q C. P-4q D. P-nq
2740	The sum of first twenty odd integers in A.P is	A. 400 B. 397 C. 404 D. 408
2741	The 31 term of the A.P 5,2,-1.....is	A. -82 B. 82 C. 85 D. -85
2742	The 26th term of the A.P -2,-4,10,.....is	A. 136 B. -136 C. 148 D. -148
2743	if a_9 =19,a9=31 are the 6th and 9th term of an A.P. and d=4 is the common difference, then 18th term of the sequence is	A. 65 B. 67 C. 71 D. 75
2744	How many term are there in the A.P, in which a_1 = 11 , a_n =68, d=3	A. 30 B. 27 C. 20 D. 21
2745	The nth term of an A.P., is 12-4n. Its common difference is	A. 8 B. 4 C. 4 D. 16
2746	The 7th term of the A.P 7,11,15,is	A. 24 B. 31 C. 26 D. 23
2747	If a,b,c are in arithmetic progression, then 1/a,1/b.1/c are in	A. A.M B. G.M C. H.M D. G.P
2748	If 6th term of a series in A.P, is -2 and 8th term is -8, the first term of the serie is	A. 13 B. -13 C. 18 D. -10
2749	if a_1 =3, d=7 and a_n =59 , then the number of terms in A.P is	A. 7 B. 9 C. 11 D. 13
2750	A number A is said to be the A.M between the two numbers a and b if a, A, b are in	A. A.M B. A.P C. G.P D. G.M
2751	If 5,7 and 9 are A.Ms between a and b, then a and b is equal to	A. 2 and 12 B. 1 and 10 C. 3 and 11 D. -7 and 2
2752	The sum of an indicated number of terms in a sequence is called	A. sequence B. progression C. Series D. Mean
2753	A series consisting of an unlimited number of terms is termed as an	A. Finite sequence B. Infinite sequence C. ^{Infinite series} D. geometric sequence
2754	There are 16 point in a plane, in which 6 are collinear. how many lines can be drawn by joining these points?	A. 10 B. 66 C. 71 D. 106
2755	What is the probability of being born on Wednesday?	A. 1/7 B. 1/2 C. 1/3 D. 1/8

2756	A class contains nine boys and three girls, in how many ways can the teacher choose a committee of four?	A. 60 B. 460 C. 495 D. 272
2757	A die is rolled. What is the probability that the dots on the top are greater than 4?	A. 1/4 B. 1/2 C. 1/3 D. 1/33
2758	A die is thrown, the probability that the dots on the top are prime numbers or odd numbers is	A. 1/2 B. 2/3 C. 1/3 D. 2/5
2759	The probability that the sum of dots appearing in two successive thrown of two dice, in every time 7 is	A. 1/5 B. 1/36 C. 1/7 D. 1/63
2760	Two coins are tossed twice each. The probability that the head appears on the first toss and the same forces appear in the two tosses is	A. 1/4 B. 1/2 C. 1/3 D. 1/7
2761	n!/(n-1)!=	A. n B. n! C. (n-1)! D. 0!
2762	There is no integer n for which 3^n is	A. Odd B. even C. Natural D. Prime
2763	For each natural number n, n (n+1) is	A. an even B. an odd C. multiple of 3 D. Irrational
2764	n(n-1)(2n-1), for all natural numbers n, is divisible by	A. 12 B. 6 C. 2 D. 18
2765	The sum of the cubes of three consecutive natural number is divisible by	A. 9 B. 6 C. 5 D. 10
2766	If n is any positive integer ,t hen 2+4+6+.....+2 n=	A. 2ⁿ-1 B. 2ⁿ+1 C. n²+1 D. n(n+1)
2767	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8
2768	If n € N , then n(n+3) is always	A. Multiple of 3 B. Multiple of 6 C. odd D. even
2769	For n€ N,$2^{n>2}$ > n is to only when	A. n<2 B. n≤ 4 C. n≥ 4
2770	For≥ -2 , 1+3+5+.....+(2n+5)	A. (n+2)² B. (n-2)² C. 2n+1 D. (n+3)²
2771	If nis positive integers, then 2^n>2n+1, only when	A. n≤ 3 B. n≥ 3 C. n≤ 2 D. n≤ 1
2772	for n€ N, $3^{2n + 7}$ is divisible by	A. 7 B. 8 C. 9 D. 10
2773	n! > 2^n-1 is true when	A. n≤ 3 B. n≤ 6 C. n≥ 4

		D. n≤ 6
2774	n^2 - 1 divisible by 8 when n is	A. an odd integer B. an even integer C. Irrational D. Prime Number
2775	The middle term of $[1/x-x]^{10}$ is	A. -152 B. -252 C. 371 D. -421
2776	$(x^3-1/2x)^6$ is	A. 15/16 x² B. 2/13 x² C. 17/7 x² D. 16/15 x²
2777	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
2778	The middle term of $(x-y)^8$is	A. 25 x⁴y⁴ B. 70 x⁴y⁴ C. 120 x⁴y⁴ D. 97x⁴y⁴
2779	The term involving x^4 in the expansion (3-2x) is	A. 217x⁴ B. 15120x⁴ C. 313x⁴ D. -25x⁴
2780	(x3-1/x)12	A. 295 B. 495 C. 395 D. 722
2781	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
2782	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
2783	The coefficient of the third term of $(8a-b)^{1/3}$, after simplification is	A. -228 B. 1/288 C. 1/220 D. -1/177
2784	The term involving x4 the expansion (3-2x)7 is	A. 217 x4 B. 15120x4 C. 313x4 D. -25x4
2785	The 8th term of $(1+2x)^{-1/2}$is	A. -221/16 x⁷ B. -225/18 x⁷ C. -407/9 x³ D. -429/16 x⁷
2786	The 7th term of $(3^8 + 6^4x)^{11/4}$ is	A. -19217/3 x⁶ B. 189/2 6⁴x C. 2227/12 x³ D. -19712/3 x⁶
2787	The seventh term of (x3+1/x)8is	A. 71 B. -22 C. 27 D. 28
2788	The term independent of x is the expansion $(x^3+1/x)^{12}$	A. 295 B. 495 C. 395 D. 722
2789	The 5th term of $(3a-2b)^{-1}$ is	A. 77b²/a⁵ B. 16b²/243 a⁵ C. 17b⁴/43a⁵ D. 25b³/43a⁵
2790	The fifth term of (a+2x3)17 is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
2791	The coefficient of x^{18} in $(ax^4-bx)^9$ after	A. 84a³ b⁶ B. 22a³b⁶

	expansion is	C. 27a⁴b⁵ D. 28a³b⁶
2792	The fifteenth term of $(3-a)^{15}$ is	A. -17a¹² B. -945a¹³ C. -941a¹³ D. -515a¹²
2793	For all positive integral value of n, $3^n < n!$, when	A. n> 6 B. n< 6 C. n<11 D. n>11
2794	The period of tan x/7 is	A. 3π B. 7π C. 15π D. 5π
2795	The period of 2 cos x is	A. 30π B. 7π C. 5π D. 2π
2796	The period of|sin⨍02x| is	A. π/2 B. -π/2 C. π D. π/3
2797	The period of|sin⨍02x| is	A. π/2 B. -π/2 C. π D. π/3
2798	The period of cos(7x-5) is	A. π/7 B. 7π/2 C. π/2 D. 2π/7
2799	The period of 3 sin x is	A. 2π B. 9π C. 3π D. 5π
2800	Tangent is .....function	A. Inverse B. one-one C. in-to D. Periodic
2801	2π is the period of	A. sin□ B. tan□ C. cot□ D. all circular function
2802	The range of the tangent function is	A. all real numbers B. -1 ≤ x ≥ 1 C. natural number D. z⁺
2803	The period of the function csc x/4 us	A. 4x B. π/4 C. 8π D. π/8
2804	What is the period of 5 cot x=?	A. π B. -π C. π/2 D. 2π
2805	What is the period of 6 sin x=?	A. π B. -π C. π/2 D. 2π
2806	What is the period of cos 6x =?	A. π/2 B. π/3 C. π/4 D. π
2807	What is the period of tan 4/3 x =?	A. π/4 B. 4π/3 C. 7π/4 D. 3π/4
2808	What is the period of sin 2x/3 cos 4x=?	A. π B. 2π C. π/2 D. π/3
		A. 2p

2809	The period of sin x/2 = Cos x/3 is	B. 12p C. 13p D. 7p
2810	The period of cot 8x is	A. π/10 B. 9π/7 C. π/9 D. π/8
2811	The process of finding the unknown elements in triangle is called the	A. solution of the triangle B. Mean differnece C. Engineering distance D. angle of depressin
2812	A triangle has six	A. side B. elements C. angle D. tangents
2813	A vertical pole is 8m high and the length of its shadow is 6m. The angle of elevation of the sun of the moment is	A. 57□ B. -48□ C. 27□ D. 53□
2814	In ladder leaning against a vertical well makes an angle of 24□with the wall, Its foot is 5m from the wall, its length is	A. 5.47m B. 2m C. 7m D. 6.29m
2815	The angle of elevation of the top of a tree from a point 17 meters from is foot is 42□The height of the tree is	A. 12m B. 21m C. 17m D. 15m
2816	The towers each 120 meters high are 800 meters apart. The measure of the angle of elevation from the base of one tower to the top of the other is	A. 12[□] B. 9[□] C. 7[□] D. -120[□]
2817	A kite flying at a height of 67.2 m is attached to a fully stretched string inclined at an angle of 53 to the horizontal, the length of the string	A. 62m B. 82m C. 73m D. 57m
2818	When the angle between the ground and the sun is 30□,flag pole costss a shadow of 40 mg long. the height of the top of the flag is	A. 25m B. 23m C. 12m D. 29m
2819	The angle of depression of the point at a distance 70 meters from the foot of the tower from the top of the tower is 45□.The height of the tower is	A. 37m B. 97m C. 101m D. 70m
2820	The angle of depression of a point A on the ground from the top of the tower is 30□,then the angle of elevation of the top of the tower at the point A is	A. 60□ B. 40□ C. 41□ D. 30□
2821	If the flag-staff 6 meters high placed on the top of a tower. Makes the shadow 2√3 m on the ground, then the angle of elevation of the sun is	A. 30^o B. 35^o C. 45^o D. 60^o
2822	The angle of elevation of the tops of two towers at the middle point of the line joining the foots of the tower are $60^o$and 30^orespectively. The the ratio of the heghts of the tower is	A. 2 : 1 B. 3 : 1 C. 1 : 2 D. 1 : 3
2823	The triangle that does not have a right angle is called.	A. Isosceles triangle B. right angle triangle C. equivalent triangle D. oblique triangle
2824	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
2825	In triangle ABC, in which b=95, c=34, a =52□then the value of a=	A. 18 cm B. 18.027 cm C. 20.7 cm D. 19 cm
2826	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula

2827	If sided of□ABC are 16,20,and 33, then the value of the greatests angle to	A. 150□ 20' B. 132□ 35' C. 101□ 25' D. 160□ 50'
2828	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. haxagon
2829	The law of sines can be used to solve oblique triangle when following information is given:	A. Two angles and a side B. Two sides and an angle opposite one of the given sides C. Two sides and the angle between two sided D. Option a and b
2830	The principal value of sin-1√(3/2) is	A. -π/3 B. π/3 C. 2π/3 D. π/2
2831	The principal value of $\sin^{-1}$ (-1/2)	A. π/3 B. π/4 C. π/6 D. -π/6
2832	The domain of the function y = sin x , is	A. -π/2≤ x≤ π/2 B. π/ ≤ x≤ π C. -2π ≤ x≤ 2π D. -1 ≤ x≤ 1
2833	x = $\sin^{-1}$ 3, then the value of sin x is	A. √(3/2) B. 3 C. Not possible D. -1
2834	In the interval 0≤ x ≤ π, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
2835	The Principal value of sin-1 (-1/1/2)	A. π/2<o:p></o:p> B. -π/2<o:p></o:p> C. π<o:p></o:p> D. -π<o:p></o:p>
2836	The value of $\sin^{-1}$ 5/13 is equal to	A. Cos 5/13 B. Tan⁻¹ 5/12 C. cos⁻¹5/12 D. 2 cos⁻¹4/5
2837	The value of sin-1 24/25 is equal to	A. csc-1 25/24 B. sec-1 24/25 C. 2 tan-1 4/5 D. 2cos-1 24/25
2838	The principal value of $\sin^{-1}$[-√(√3) /2] is	A. 5π/3 B. -2π/3 C. -<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025">π/3 <!--[endif]--><o:p></o:p> D. π/3
2839	The set of all points in the plane that are equally distant from a fixed point to called a	A. Parabola B. ellipse C. Hyperbola D. Circle
2840	A cone is generated by all lines through a fixed point and the circumference of	A. a Circle B. an ellipse C. a Hyperbola D. None of these
2841	A fixed point which lies on the axis of the cone is called its:	A. axis B. apex C. plane D. diameter
2842	The surface generated by lines, consists of two parts, called:	A. vertex B. apex C. nappes D. axis
2843	The lines that form the cone are called its:	A. Generation B. Circular cone C. nappes D. conics
		A. Circle

2844	If the cone is cut by a plane perpendicular to the axis of the conec, then the section is a:	B. ellipse C. hyperbola D. parabola
2845	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the resulting section is:	A. an ellipse B. Circle C. a hyperbola D. a parabola
2846	sin ($\sin^{-1}(1/2)$)=	A. 0 B. 2 C. ∞ D. 1/2
2847	Sin -1 x=	A. sin(π/2-x) B. Sin-1 (π/2-x) C. π/2-cos-1x D. π/2 + cos-1x
2848	sn (2sin-10.8)	A. 0.56 B. 0.69 C. -0.16 D. 0.96
2849	sin -1(sin2π/3) =	A. π/2 B. 2π/3 C. -3π/2 D. π/3
2850	Sin-1(-x)=	A. x B. -x C. -sin-1 x D. cos-1 x
2851	$\sin^{-1}$ x =	A. tan⁻¹ x B. Cosec⁻¹ x C. Cosec x D. cosec⁻¹(1/x)
2852	What is the value of cos-1(1/2)?	A. π/3 B. π/4 C. 3π/2 D. π/6
2853	The value of cos(cos-1 1/2) is	A. 1/2 B. √3/2 C. -1/2 D. 1/√2
2854	What is the value of cos (cos-1 2) ?	A. √2 B. 1/2 C. undefine D. 0
2855	The exact degree value of the function sin-1(-√3/2) is	A. 70^o B. 50^o C. 90^o D. 60^o
2856	Cos (cos4π/3)=	A. π/2 B. π/3 C. 2π/3 D. -π/3
2857	If cos (2 sin-1 x) = 1/9 , then what is the value of x?	A. 1/3 B. -2/3 C. 2/3 D. 2/3 , -2/3
2858	If$\pi \leq x \leq 2\pi$, then cos-1 (cos x)=	A. cos x B. -x C. 1/x D. -x
2859	Cos-1 (-x) =	A. -x B. 1/x C. tan-1 x D. π-cos-1 x
2860	Cos-1(x)=	A. cos x B. x C. tan-1(-x) D. Sec-1 (1/x)
2861	$\cos^{-1}(\cos x)$ =	A. x B. cos x C. x = 1/x D. cos⁻² x

2862	Cos^{-1} 12/13 =	A. tan⁻¹ 3/5 B. cot⁻¹ 13/12 C. Sec⁻¹ 13/12 D. sin⁻¹ 5/13
2863	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
2864	The exact value of cos^{-1} (-1) + cos^{-1} (1) =	A. π B. -π C. π/2 D. π/3
2865	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is:	A. an ellipse B. a circle C. a parabols D. a hyperbola
2866	The familiar plane curves, namely circle, ellipse, parabola and hyperbola are called:	A. cones B. conics C. nappes D. apex
2867	The study conics, pappus used the method of:	A. analytic geometry Euclidean B. solid geometry C. Greek mathmaticians D. None of these
2868	Apollonius was a:	A. Rocket B. Muslims scientist C. Greek mathematicians D. Method of finding conics
2869	A second degree equation in which coefficients of $x^2$and y^2 are equal and there is no product therm xy represents:	A. a parabola B. a circle C. an ellipse D. a pair of lines
2870	The three noncollinear points through which a circle passe are known, then we can find the:	A. Variables x and y B. Value of x and c C. three constants f,g and c D. inverse of the circle
2871	The general equation of circle $x^3 + y^3 + 2gx + 2fy + c = 0$, contains:	A. Three independent variables B. Two independent conntants C. Three indepentent parameters D. Three independent constants
2872	Parametric equation of circle : $x^2+y^2+r^2$, are	A. r1 = x cos□ r² = y sin□ B. x = r cos□ y = r sin□ C. x = r sin□1 y = r sin□2 D. x = r₁ cos□ y = r_{2 sin□}
2873	The radius of the circle $2x^2 + 2y^2 - 4x + 12$ y+11=0 is:	A. √4.5 B. √11 C. √29 D. √15
2874	The equation $x^2 + y^2 +2g +2fy + c =0$ represents a circle whose centre is :	A. (g,f) B. (-g,-f) C. (2g ,2f) D. (-2f ,-2g)
2875	The are of the circle centred at (1 , 2) and passing through (4 , 6) is:	A. 10π B. 25π C. 5π D. 25/2π
2876	The radius of the circle $x^2 + y^2 - 6 x + 4 y +13 = 0$, is	A. 1 B. 2 C. 0 D. None of these
2877	The point of contact of the circles $x^2 + y^2 - 6x - 6y+10 = 0$ and $x^2 + y^2 =2$ is	A. (-3 ,2) B. (1 , 3) C. (-2 , -1) D. None of these
2878	Circle $x^2 + y^2 - 2y -y = 0$ and $x^2 + y^2 - 8y -4 =0$:	A. Interesect B. touch externally C. touch internally D. do not touch
2879	Two circle $x^2 + y^2+2x - 8 = 0$ and $x^2 + y^2 -6 + 6x -46 =0$:	A. touch internally B. do not intersect C. touch externally

		D. None of these
2880	If one end of the diameter of the circle $2x^2 + 2y^2 - 8x - 4y = 2 = 0$ is (2 ,3), the other end is:	A. (2,1) B. (-2,1) C. (2,-1) D. (1,-1)
2881	If one end of the diameter of the circle $x^2 + y^2 - 5x = 3y - 22 = 0$ is (3,4) the other end is:	A. (2,7) B. (-2,-7) C. (-2,7) D. (2,-7)
2882	The points of intersection of the line y = 2x -3 and the circle $x^2 + y^2 - 3x = 2y - 3 = 0$ are:	A. two B. three C. less thean two D. not intersect
2883	The slope of the tangent of the circle $x^3 + y^3 = 25$ at (4,3) is:	A. -4/5 B. 4/3 C. -25/4 D. 25/3
2884	The slope of the normal at (4,3) to the circle $x^2+y^2=25$ is	A. 3/4 B. -3/4 C. 4/3 D. -4/3
2885	The slope of the normal at (5 cos, 0, 5 sin 0) to the circle. $x^2+y^2 = 25$ is:	A. tan□ B. cos□ /sin□ C. -cot□ D. - tan□
2886	The point where the axis meets the parabola is called	A. Directrix B. Foucu C. Chord D. Vertix
2887	If (0,4) and (0,2) are vertex and focus of the parabola respectively, the the equation of the parabola is:	A. x² = 4y -32 B. x² =8y -32 C. y³ = 16 x D. x2 + 8y =32
2888	The vertex of the equation $y^2 = 4ax$ is:	A. (2, -2) B. (1,1) C. (0 , 0) D. (2 , 2)
2889	The line through the focus and perpendicular to the directrix is called _____ of the parabola	A. axis B. focal chord C. tangent D. latus rectum
2890	ℓ is a	A. variable B. Positive constant C. Positive variable D. Directrix
2891	If the focus lies on the y-axis with coordinates f(0,a) and directrix of the parabola is y = -a, the equation of parabola is:	A. y² = -4 ax B. x² = 4ay C. x² = -4ay D. y² = 4ax
2892	A line joining two distinct points on a parabola is called a _____ of the parabola.	A. Chord B. Tangent C. Lust rectum D. directrix
2893	I f the focus is F (0,-a) and directrix is the line v=a, then equation of the parabola is:	A. x² = 4ay B. y² = 4ax C. y² = -4ax D. x² = 4ax
2894	y=0 of the parabola $y^2 = 4ax$ is the	A. equation of directirx B. Equatio of the tangent C. Equation of axis D. equation of latus rectum
2895	a chord passing through the focus of a parabola is called a:	A. Focal chord B. Latus rectum C. Tangent D. Directrix
2896	The distance of point P(x,y) from focus in a parabola $y^2 = 4ax$, is:	A. 2a B. a C. x + a D. x-a
	If the vertex of the parabola is the origin and	A. 10 B. 5

2897	If the vertex of the parabola is the origin and directrix is x+5 = 0 . then its latus rectum is:	B. 5 C. 0 D. 20
2898	The conic is a parabola, when:	A. ϱ > 1 B. ϱ < 1 C. ϱ = 1 D. ϱ = 0
2899	What is the axis of the parabola $y^2 = 4ax$?	A. x = 0 B. y = 0 C. x = a D. y = 0
2900	The axis of the parabola $x^2 = 4ay$ is:	A. y = 0 B. x = 0 C. x = -a D. y = a
2901	The parabola y2 + 2y + x = 0 lie in _____ quadrant.	A. First B. Second C. Third D. Fourth
2902	The point which is closet to the focus of a parabola is:	A. vertex B. Chord C. Focus D. Directix
2903	the curve of the parabola $y^2 = -4ax$ is symmetric with respect to	A. x -axis B. y - axis C. Botha x and y- axis D. None of thes
2904	the latus rectum of the parabola $x^3 = -4ay$ is:	A. x = a B. y = -a C. x = -a D. y = 0
2905	If ϱ> 1 , then the conic, is:	A. Ellipse B. Parabola C. Hyperbola D. None of these
2906	Latus rectum = 4 x _____	A. focal distance of the vertex B. Chord C. Focus D. 1/2
2907	Which shape of the following objects are approximately parabolic ares?	A. Light reflectors B. Force C. Weight of the pendul D. None of these
2908	Coordinates of the focus of the parabola x^2 - 4x -8y-4=0 are:	A. (0,2) B. (,0,1) C. (2,0) D. (1,2)
2909	Co-ordinate of a point on the parabola $y^2 = 8x$ whose focal distance is 4 are:	A. (2 , 4) B. (-2 ,-4) C. (-2, 4) D. (2,-4)
2910	The eccentricity of parabola is:	A. 1 B. 0 C. Greater than 1 D. Less than 1
2911	The lotus of intersection of perpendicular tangents to the parabola $y^2 = 4ax$ is:	A. Axis of the parabola B. Focal chord of the parabos C. The tangent at vertex of the parabola D. a directrix of the parabola
2912	The eccentricity of ellipse becomes zero, then it takes the form of:	A. a parabols B. a straight line C. a circle D. None of these
2913	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 D. a hyperbola
2914	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

2915	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²)² C. x²-y² D. √(x²+y²)
2916	a _____quantity is one that possesses both magnitude and direction.	A. Scalar B. Vector C. Segment D. None of these
2917	The magnitude of vector a 2i-7j is	A. √23 B. √43 C. 3 D. √53
2918	The magnitude of vector a=i-3j+5k is:	A. 3 B. √35 C. √17 D. √35
2919	The modulus of 12-5i is:	A. 7 B. 13 C. √7 D. 119
2920	If G is the centroid of the triangle, then GA +GB+GC=	A. 0 B. 1 C. -1 D. 3
2921	If m and n be two scalars, then (m+n) g =	A. 0 B. m+n<img width="9" height="20" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> C. m_a+n_a D. ma - m_a <!--[endif]--><o:p></o:p>
2922	I f a =5i + 2j, then|a| =	A. √13 B. √7 C. 1/√13 D. √29
2923	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
2924	If c = 2i+j+k and d= -1 + 4j +2k, then [c-d]=	A. √7 B. √41 C. √19 D. √(2&7)
2925	If a = [1,4,3] and B= [2,-1,5] athen the mid point M of AB is:	A. [1,1,1.5] B. [2,2,1.5] C. [1.5,1.5,4] D. None of these
2926	If a = 2i +2j, b= 3i -j and c=4i +5j, the 3b -a-2c =	A. -i -15j B. i-15j C. i-3j D. None of these
2927	If|a| =|b|=|a + b|=1, then|a+ b| = 5, then|a-b| =	A. 4 B. 6 C. 5 D. 3
2928	If|a| =|b| = |a+b|=1, then|a-b| is equal to:	A. 1 B. √3 C. √2 D. 7
2929	The positive real number which is the measure of the length of a vector is called the	A. Unit vector B. Modulus C. Inverse D. None of these
2930	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
2931	O (0,0)is called:	A. Position vector B. Free vector C. Unite vector D. Null vector
		A. x-axis B. y-axis

2932	The vector i = [1,0] is called unit vector along:	B. y - axis C. z- axis D. Botha a and y-axis
2933	Vector i =	A. [1,0] B. [0,1,0] C. [0,0,1] D. None of these
2934	The vector k = [0,0,1] is called unit vector along:	A. x -axis B. y - axis C. z- axis D. None of these
2935	If the sum of two unit vectors is a unit vector the the magnitude of their difference is	A. √2 B. √3 C. 1 D. None of these
2936	If a≠ , b≠ 0 and|a=b|=|a-b|,then vectors a and b are:	A. Parallel to each other B. Perpendicular to each other C. Inclined at 60^o D. neither parallel nor perpendicular
2937	If aand bare two vectors then a+b =	A. b + a B. b - a C. ab D. a^ b
2938	If u =[3,-4],then modulus of uis:	A. 5 B. 5i C. -5 D. √5
2939	The modulus of a vector i-i+ k is:	A. √3 B. 1 C. √2 D. ∞
2940	If u =2i +pi + 5k and v = 3i + i +pk are perpendicular , then p=	A. 1 B. 2 C. -1 D. -3
2941	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
2942	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
2943	The angle between the vectors u = [-3 , 5] and v = [6 , -2] is:	A. π/2 B. -3π/2 C. π D. None of these
2944	The angle between the vectors u =2i - i + k and v = -i +i is:	A. 3π/2 B. 2π/3 C. 5π/6 D. π/3
2945	If u = 2ai +i - k and v = i +ai + 4k are perpendicular then a =	A. 4 B. 1/2 C. 3 D. 4/3
2946	if the value of the sphere, v =4/3πr^{2,} then the which of the following statement is true?	A. r is the function of v B. v is the function ofπ C. π is independent variable D. None of these
2947	A function from A to B is denoted by	A. f: A→ B B. f: B → A C. f: → A :B D. f → A→ B
2948	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	A. x is function of y B. y is a function of x C. y is independent variable D. x is real valued function
2949	The domain of y =√(x^2-9) is	A. R B. (0 , +∞) C. (-∞ , -3) U (3 , +∞) D. (0 ,∞)

2950	In the function f: A□B, the elements of a are called	A. Images B. Pre-images C. ranges D. Parameters
2951	The domain the function : f(x) = x^2 is given by	A. R B. Set of all non-negative Real numbers C. R⁻¹ D. None of these
2952	The domain of the function x/x^2 -4 is given by	A. R B. R + 2 C. [R - (<u>+</u>2) D. R-4
2953	If the domain of the function f: x□ $2x^3$+ 1 is {-1,2,3}, the range of the function is	A. {3,2,5} B. {1,3,9} C. {-1,-2,-3} D. {3,9,19}
2954	_____ invented a symbolic way to write the statement "y is a function of x" as y= f(x)	A. Leibniz B. Newton C. Euler D. None of these
2955	Every relation, which can be represented by a linear equation in two variables, represents a	A. Relation B. Cartesian product C. Function D. Graph
2956	The value of x which is unchanged by the mapping in the function defined by f ; x□ x^2 + 5x -5 for x> 0 is	A. 1 B. 5 C. -5 D. -1
2957	If x is an image of y under the function f. This can be written as	A. y = f(x) B. f(x) = 0 C. x = f(y) D. f(y) =0
2958	What is range of the function g (x) =|x-3|?	A. [0 ,∞) B. (0 ,∞) C. (-∞ ,3] D. [0,∞)
2959	The largest possible domain of the function: y=√(x) is:	A. (0 ,∞) B. 12 C. (3 , 12) D. (3 ,∞)
2960	For f(x) = x^2 + px +1, if f(3) = 3 then P =	A. 3/7 B. -2/5 C. -7/5 D. -7/3
2961	For f(x) = x2, what is the value of f(a) +f (-a) in terms of a?	A. 3a2 B. 2a2 C. 2a D. -7a
2962	If the function y=2x -3, what is the preimage of 11?	A. 11 B. 7 C. 5 D. 2
2963	if f(x) = x^3 -3x^2 +5x -1, then f(-√2)=	A. 7+7√2 B. 3+3√2 C. -7-7√2 D. -3-3√2
2964	Express the perimeter P of square as a function of its area A?	A. P = 4√A B. P =√A C. P = 2A D. P =π√A
2965	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
2966	A function of the form p(x)/Q(x) is called:	A. Rational function B. Logarithmic function C. Exponential function D. Hyperbolic function
2967	xy= 2 is:	A. a constant function B. an identity function C. an improper function

		D. implicit function
2968	A function f is said to be an even if f(-x) =	A. 0 B. 1 C. f(x) D. -f(x)
2969	f(x) = sin x is:	A. an odd function B. an even function C. an implicit function D. an exponential function
2970	f(x) = $x^3$is:	A. an odd function B. an even function C. an implicit function D. a quadratic funtion
2971	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
2972	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
2973	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
2974	f(x) = 3x/x^2 + 1 is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
2975	Order (or sense) of an inequality is changed by multiplying or dividing its each side by a:	A. Zero B. one C. negative constant D. Non negative constant
2976	Multiplying each side of an inequality by (-1) will:	A. Not effect B. Change the sign C. Become zero D. Not defined
2977	The graph of the linear equation of the form ax =by = c is a line which divided the plane into:	A. Two similar regions B. Two disjoint regions C. Four equal parts D. One region
2978	The set of ordered pairs (x,y) such that ax+ by < c, and (x,y) such that ax + by>0, are called	A. Half planes B. Boundary C. Linear Inequalities D. Feasible regions
2979	A _____ divides the plane into left and right half planes.	A. Vertical line B. Horizontal line C. Non vertical line D. Inequality
2980	The liner equation ax + by = c is called _____ of the inequality ax +by > c.	A. Associated equation B. Non-associated equation C. disjoint equation D. Feasible equation
2981	Which of the following ordered pair is a solution of the inequality x+2y<6?	A. (2,3) B. (2,2) C. (6,0) D. (1,1)
2982	For graphing a linear inequality, solid line is drawn if the inequality involves the symbols:	A. > or < B. <u>></u> or <u><</u> C. = or≠ D. = or >
2983	A point of a solution regions where two of its boundary lines intersect, is called:	A. Vertex of the solution B. Feasible point C. Point of inequality D. Null point of the solution region
2984	The corner point of the boundary lines, x-2y 2x + y = 2 is:	A. (2,6) B. (6,2) C. (-2,2) D. (2,-2)
	The corner point of the boundary lines, x- 2x	A. (8,1) B. (1,8)

2985	x+2y=10 is:	B. (1,5) C. (6,10) D. (3,5)
2986	The graph of y> 0 is the upper - half of:	A. y-axis B. x-axis C. 1st and 4th quandrant D. 2nd and 3rd quadrant
2987	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx D. lnx
2988	∫f(x) is known as:	A. Definite itegral B. Indefinite integral C. Fixed integral D. Multiple integral
2989	The integral of $3x^5$dx is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
2990	∫Sec^2 (ax + b) dx is equal to:	A. tan² (ax + b) B. 1/a tan² (ax + b) C. 1/atan (ax +b) D. tan (ax + b)
2991	∫sin(ax+b) dx is equal to:	A. 1/2a cos (ax + b) B. -1/a cos (ax +b) C. 1/a cos (ax +b) D. 1/a ln (ax + b)
2992	∫ x cos dx is equal to :	A. x cos x + sin x B. cos x + x sin x C. x cos x + x sin x D. x sin x + cos x
2993	∫x sin xdx is equal to:	A. sin x/x + cos x B. sin x - cos x/x C. x cos x + sin x D. - x cos x + sin x
2994	∫x/Sin^2 x dx is equal to:	A. x cot x + ln|sinf_0x | B. -x cot x - ln|sinf_0x | C. x cot x - ln|sinf_0x | D. x. tan x- ln|secf_0x |
2995	The area between the x-axis and the curve y = x^2 + 1 from x = 1 to 2 is:	A. 15/6 B. 15/4 C. 10/4 D. 10/3
2996	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
2997	The area under the curve y = 1/x^2 between x = 1 and x =4 is:	A. -25 B. 0.75 C. -0.35 D. -10
2998	The area enclosed between the graph y = x^2 - 4x and the x- axis is:	A. 20/3 B. 41/3 C. 32/3 D. 25/3
2999	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
3000	An equation in which at least one term contains dy/dx, d^2 y /dx^2etc, is called.	A. Differential equation B. Initial condition C. General solution D. Singular equation
3001	The solution of differential equation:	A. dy/dx+y/x = x²is : B. 4xy = x⁴+ c C. 4x = x⁴= c D. 4 y = x⁴+ c E. 4x=4x³ + c
3002	Question Image	A. 0 B. -1-w²
	In following question, a number series is given with one term missing, choose the correct	A. 35 B. 36

3003	with one term missing. choose the correct alternative that will same pattern and fill in the blank spaces.1 , 4, 9, 16, 25, x	B. 36 C. 48 D. 49