Mathematics ECAT Pre Engineering Online 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	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
423	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
424	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
425	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
426	The span of a standard parabola depends upon	A. x B. a C. y D. y2
427	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)
428	The common point to four standard parabolas	A. Focus B. Centre C. Vertex D. P(x,y)
		A. Circle

429	x =r cosθ,y= sinθ are the parametric equations of	A. Circle B. Ellipse C. Parabola D. Hyoerbola
430	The centre of the circle x2+y2 -2fx-2gy+x=0 is	A. (-g,-f) B. (g,f) C. (f,g) D. (-f,-g)
431	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
432	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
433	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
434	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
435	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
436	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
437	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
438	y=-a is the equation of the directrix of	A. y2 =4ax B. x2=-4ay C. x2=4ay D. y2=-4ax
439	The parabolay2=4ax open up if	A. a<0 B. a≠0 C. a>0 D. All are incorrect
440	The number of standard parabolic functions are is	A. 4 B. 2 C. 3 D. 1
441	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)
442	Number of conics is	A. 1 B. 3 C. 2 D. 4
443	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)
444	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
445	If 2x +y + λ =0 is normal to parabola y2 =-8x,λ= _____	A. 12 B. 8 C. 24 D. -24
446	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

447	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
448	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
449	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
450	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
451	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
452	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
453	The second degree equation 2x2 -xy+ 5x -2y +2 =0 represents	A. Circle B. Hyperbola C. Ellipse D. Pair of straight lines
454	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°
455	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
456	If either A = 0 or B =0,then Ax2 +By2 +2Gx +2Fy +c =0 represents a	A. Circle B. Hyperbola C. Ellipse D. Parabola
457	Intersection of two parabolas	A. parabola B. Two points C. Four points D. Hyperobla
458	The centre of the conic x2 +16x +4y2 -16y +76 =0 is	A. (0,10) B. (-8,4) C. (-8,-2) D. (1,1)
459	The sum of the focal distance from any point on the ellipse 9x2 +16y2 =144 is	A. 32 B. 16 C. 18 D. 8
460	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
461	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)
462	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
463	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
464	The eccentricity e of an ellipse is always	A. Rational B. Real C. Irrational

		D. Integer
465	For the parabola the line through focus and perpendicular to the directrix is called	A. Tangent B. Vertex C. Axis D. None
466	A line joining two distinct points on a parabola is called	A. Axis B. Directrix C. Chord D. Tangent
467	The directrix of y2 =-4ax is	A. y =-a B. y = a C. x = a D. x = -a
468	The ellipse and hyperbola are called	A. Concentric conics B. Central conics C. Both a b D. None
469	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
470	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
471	0 (zero) is	A. An irrational number B. A rational number C. A negative integer D. A positive number
472	6 is	A. A prime integar B. An irrational number C. A rational number D. An odd integer
473	√23 is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
474	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
475	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
476	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)
477	if Z1 = 1+i, Z2= 2+3i, then |Z2 -Z1| =	A. √3 i B. √7 C. -2-i D. √5
478	If z_1 =√-36 ,z_2 =√-25,z3 =√-16 then	A. 15 B. 15i C. -15i D. -15
479	The equation |x +4| = x has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
480	What is the conjugate of -7 -2i ?	A. -7 + 2i B. 7 +2i C. 7 -2i D. √53
481	The value of i^{4n+1}	A. 1 B. -1 C. i D. i²
482	The square root of 2i - 20i is	A. ±(5 - 2i) B. ±(5+ 2i)

	The square root of $2i - 20$ is	C. (5 - 2i) D. None of these
483	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)
484	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
485	QUQ, =	A. N B. R C. W D. Z
486	The symbol of irrational is	A. W B. N C. Q D. Q'
487	√25 is a number	A. Rational B. Irrational C. Natural D. Odd
488	√2 is a number	A. Rational B. Irrational C. Even D. Odd
489	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of these
490	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
491	∀ 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
492	Associative law of multiplication	A. ab - ba B. a(bc) = (ab) c C. a(b + c) = ab +ac D. (a +b)c = ac + bc
493	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplicative identity C. Associative law of multiplication D. Multiplicative inverse
494	∀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
495	∀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
496	∀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
497	If a > b or a < b than a = b is a	A. Additive property B. Transitive property C. Trichotomy property of inequality
498	a >b, b >c ⇒a >c is a	A. Multiplicative property B. Additive property C. Trichotomy property D. Transitive property of inequality
499	a >b ⇒a +c >b +c is known as	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
		A. a-1 B. a

500	(a-1)-1 =	B. a C. -a D. None of above
501	(√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
502	The property used in -3 <-2 ⇒0 <1	A. Commutative property B. Additive property of inequality C. Additive inverse D. Additive identity
503	*i* =	A. √1 B. √2 C. √-2 D. √-1
504	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
505	In (x +iy) y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
506	i^3 =	A. -1 B. i C. -i D. 1
507	(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
508	The conjugate of √5 *i* is	A. √5 B. -√5 i C. i D. 5i
509	(a,b) +(-a,-b) =	A. (0,0) B. (a,b) C. (-a,-b) D. (1,1)
510	(a,0) x (c,0) =	A. (0,ac) B. (ac,0) C. (0,0) D. (a,c)
511	i^2 =	A. 1 B. 2 C. -1 D. 0
512	i^9 =	A. i² B. -1 C. 1 D. i
513	√-1 b=	A. b B. 2 C. 2b D. None of these
514	(7,9) +(3,-5) =	A. (4,4) B. (10,4) C. (9,-5) D. (7,3)
515	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
516	i^{101} =	A. i B. i² C. -i D. -1
517	If Z_1 = 1+ i, Z_2 = 2+3i , then $\|Z_1 - Z_2\|$ =?	A. √5 B. √7 C. -1-2i D. √3

518	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
519	Which element is the additive inverse of (a,b) in Complex numbers	A. (a,0) B. (0,b) C. (a,b) D. (-a,-b)
520	What is the conjugate of -6 -i	A. -6 +i B. 6 + i C. -6 -i D. 6 -i
521	Which of the following has the same value as i113	A. i B. -1 C. -i D. 1
522	√(-1b) =?	A. b i B. -i b C. b2 D. i√b
523	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
524	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
525	For any set X, X∪X is	A. X B. X' C. Φ D. Universal Set
526	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
527	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
528	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
529	The multiplicative inverse of x such that x = 0 is	A. -x B. Does not exist C. 1/x D. ±1
530	Multiplicative inverse of "1" is	A. 0 B. ±1 C. 1 D. {0,1}
531	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
532	Which of the following is the subset of all sets	A. Φ B. {1,2,3} C. {Φ} D. {0}
533	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
534	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

535	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
536	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
537	The multiplicative inverse of -1 in the set {1-,1} is	A. 1 B. -1 C. ±1 D. 0 E. Does not exist
538	The set {1,-1, i, -i} form a group under	A. Addition B. Multiplication C. Subtraction D. None
539	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
540	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
541	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
542	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
543	For any set B,B∪B' is	A. Is set B B. Set B' C. Universal set
544	If A ⊆ B then A ∪ B is	A. A B. B C. A' D. A ∩B
545	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
546	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
547	If n(X) = 18, n(X∩Y) = 7, n(X∪ Y) = 40 then n(Y) =	A. 1 B. 12 C. 5 D. 29
548	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
549	Total number of subsets that can be formed out of the set {a,b,c} is	A. 1 B. 4 C. 8 D. 12
550	If x = 1/x for x ∈ R then the value of x is	A. ±1 B. 0 C. 2 D. 4
551	The set {-1,1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
552	If a set S contains n elements then P (S) has ..... number of elements	A. 2ⁿ B. 2ⁿ² C. 2.n

		D. n²
553	Additive inverse of - a - b is	A. a B. -a + b C. a - b D. a + b
554	If A = {x / x ∈ R ∧ x^2 - 16 = 0} then A =	A. - x B. Infinite set C. Φ D. {-4,4}
555	The identity element with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
556	Multiplicative inverse of 0 is	A. 0 B. 1 C. ±1 D. Does not exist
557	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
558	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
559	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
560	Φ set is the _____ of all sets	A. Subset B. Union C. Universal D. Intersection
561	{x : xε Z and x < 1} is	A. Singleton set B. A set with two points C. Empty set D. None of these
562	The set { {a,b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set
563	(A ∩ B)c =	A. A∩ B B. (A ∪ B)c C. Ac∪Bc D. Φ
564	If #n = (n-5)2 + 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
565	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
566	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
567	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
568	The function {f(x,y)|y = ax2 +bx +c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function
569	To each element of a group there corresponds inverse element	A. Two B. One C. No

	..... inverse element	C. No D. Three
570	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
571	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
572	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
573	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
574	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
575	The set R is .....w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
576	The set {Z\ {0} } is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
577	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
578	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
579	(ABC)' =	A. CBA' B. CBA C. C'B'A D. C'B'A'
580	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
581	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
582	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
583	Matrices A = [aij] 2 x 3 and B = [bij] 3 x 2 are suitable for	A. BA B. A2 C. AB D. B2
584	Cofactor of an element aij denoted by Aij is	A. (-2)i+j B. Mij C. (-1)i+j Mij D. None of above
585	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
586	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
		A. -B

587	The square matrix A is skew-symmetric when At =	B. -C C. -A D. -D
588	The square matrix A is skew Hermitian when (A)'=	A. A B. A' C. -A D. A
589	The matrix A is Hermitian when (A)' =	A. A B. -A C. A D. A'
590	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
591	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
592	For trival solution |A| is	A. A B. |A| = 0 C. A = 0 D. |A|≠ 0
593	For non-trival solution |A| is	A. non zero B. A = 0 C. |A| = 0 D. At = 0
594	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a.b and c
595	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
596	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
597	For a square matrix A, if A = At, then A is called	A. Matrix B. Transpose C. Symmetric D. Non-symmetric
598	If for the matrix A,A5 = 1,then A-1=	A. A2 B. A3 C. A D. None of above
599	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
600	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
601	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
602	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
603	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
604	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

605	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
606	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
607	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
608	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
609	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
610	Question Image	A. A complex number B. A rational number C. A natural number D. An irrational number
611	π is _____	A. A complex number B. A rational number C. A natural number D. An irrational number
612	3/4 is _____	A. An odd number B. An even number C. A natural number D. A rational number
613	Question Image	A. A rational number B. An irrational number C. An odd number D. A prime number
614	Question Image	A. A rational number B. A natural number C. An irrational number D. An integer
615	O is _____	A. A positive integer B. A negative integer C. A natural number D. An integer
616	1/3 is _____	A. A prime number B. An integer C. A rational number D. An irrational number
617	Question Image	A. A prime number B. An integer C. A whole number D. An irrational number
618	Question Image	A. A natural number B. A rational number C. An irrational number D. A whole number
619	Every recurring decimal represents	A. A natural number B. A rational number C. An irrational number D. A whole number
620	Every irrational number is	A. A real number B. A prime number C. A natural number D. An integer
621	A non-terminating, non-recurring decimal represent	A. A natural number B. A rational number C. An irrational number D. A prime number
622	Every whole number is	A. A real number B. An irrational number C. A prime number

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

640	In R the number of identity element w.r.t '+' is	C. Three D. Four
641	In R the number of identity elements w.r.t.'.' is	A. One B. Two C. Three D. Four
642	The additive inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 0
643	The multiplicative inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 1
644	The multiplicative inverse of 4 is	A. -4 B. -1/4 C. 1/4 D. 1
645	The multiplicative inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
646	The multiplicative inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
647	The additive inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
648	The additive inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
649	Question Image	A. a = a B. a < a C. a > a D. a²= a
650	Question Image	
651	Question Image	
652	Question Image	
653	In R the left cancellation property w.r.t addition is	
654	In R the right cancellation property w.r.t. addition is	
655	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
656	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
657	Question Image	A. Principle of equality of fractions B. Rule for product of fraction C. Rule for quotient of fraction
658	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
659	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
660	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
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	The set { 1 , -1} is closed w.r.t.	A. Addition B. Multiplications C. Subtraction D. None of these
663	Question Image	A. Additive property in R B. Multiplication property in R C. Cancellation property in R D. Distribution property in R
664	Which of the following sets has closure property w.r.t. addition	A. { 0 } B. { 1 } C. { 0, -1} D. { 1, -1}
665	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
666	Question Image	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. Associative property of multiplication C. Commutative property of addition D. Commutative property of multiplication
668	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
669	Name the property used in 100 + 0 = 100	A. Additive inverse B. Multiplicative inverse C. Additive identity D. Multiplicative identity
670	Name the property used in 4.1 + (-4.1) = 0	A. Additive inverse B. Multiplication inverse C. Additive identity D. Multiplication identity
671	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
672	{1, 2, 3, 4,.....} is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
673	Question Image	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
674	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
675	Let A and B be two sets. If every element of A is also an element of B then	
676	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
677	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
678	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

679	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
680	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
681	{1, 2, 3} is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
682	A = B if	D. A is equivalent to B
683	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
684	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
685	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
686	Question Image	A. A finite set B. An infinite set C. An empty set D. None of these
687	The sets {1, 2, 4} and {4, 6, 8, 10} are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Over lapping sets
688	A - B = _____	
689	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
690	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
691	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
692	Question Image	
693	If n(A) = n then n(P(A)) is	A. 2n B. n² C. n/2 D. 2ⁿ
694	What is the number of elements of the power set of {0, 1}	A. 1 B. 2 C. 3 D. 4
695	What is the number of elements of the power set of { }	A. 0 B. 1 C. 2 D. 3
696	Write down the power set of {9, 11}	
697	If A and B are two sets then intersection of A and B is denoted by	
698	Two sets A and B are said to be disjoint if	
699	Question Image	
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	A. A B. B C. A'B' D. B'A
709	Question Image	
710	Question Image	
711	Question Image	A. A B. A' C. U D. A A'
712	Question Image	B. A C. A' D. U
713	Question Image	A. A B. A' C. U D. U'
714	Question Image	A. A B. A' C. U D. None of these
715	Question Image	A. n(A) B. n(B) C. 0 D. 1
716	Question Image	A. A B. B C. U D. None of these
717	Question Image	A. A B. B C. U D. None of these
718	Question Image	A. A B. A' C. U D. None of these
719	A statement which is either true or false is called	A. Induction B. Deduction C. Propositicon D. Logic
720	If P is a proposition then its negative is denoted by	
721	If p and q are two statements then their conjunction is denoted by	
722	A conditional "if p then q" is denoted by	
723	If p and q are two statements then their biconditional 'p if q' is denoted by	
724	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
725	Question Image	A. Conclusion B. Implication

		C. Antecedent D. Hypothesis
726	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
727	Question Image	
728	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
729	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
730	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
731	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
732	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
733	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
734	A matrix with a single row is called a	A. Column matrix B. Row matrix C. Null matrix D. Identity matrix
735	A matrix with a single column is called	A. Column matrix B. Row matrix C. Identity matrix D. Null matrix
736	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
737	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
738	Question Image	A. Scalar matrix B. Identity matrix C. Null matrix D. Symmetric matrix
739	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
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	Question Image	A. Identity matrix B. Diagonal matrix C. Null matrix D. Hermitian matrix
742	Question Image	A. Hermitian matrix B. Skew-hermitian matrix C. Symmetric matrix D. Identity matrix
743	Question Image	A. Square matrix B. Row matrix C. Symmetric matrix

		D. Null matrix
744	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
745	Question Image	A. 3 x 1 B. 1 x 3 C. 3 x 3 D. 1 x 1
746	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
747	Question Image	
748	The transport of a null matrix is	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
749	The transport of a square matrix is a	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
750	The transport of a rectangular matrix is a	A. Square matrix B. Rectangular matrix C. Row matrix D. Column matrix
751	Question Image	
752	If A is any matrix then its additive inverse is	A. A B. A⁻¹ C. A^t D. -A
753	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
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. Null matrix B. Triangular matrix C. Unit matrix D. Rectangular matrix
757	Question Image	A. 1, 2, 3 B. 1, 5, 9 C. 2, 5, 8 D. 3, 6, 9
758	Question Image	A. 0 B. 1 C. -2 D. 10
759	If A is singular then |A| = _____	A. 1 B. 0 C. 2 D. None of these
760	Question Image	C. 16 D. None of these
761	If A is a non singular matrix then A^{-1}= _____	
762	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
763	Question Image	A. At B. -A C. A

		C. A D. A-1
764	Matrices are represented by	A. Natural numbers B. Real numbers C. Small letters D. Capital letters
765	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
766	Question Image	
767	Question Image	A. An upper triangular matrix B. A lower triangular matrix C. A diagonal matrix D. A null matrix
768	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
769	Question Image	
770	Question Image	A. 3 x 2 B. 2 x 3 C. 3 x 3 D. 2 x 2
771	Question Image	A. Zero matrix B. Diagonal matrix C. Column matrix D. Scalar matrix
772	The transpose of a column matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
773	The transpose of a row matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
774	The transpose of a zero matrix is a _____	A. Column matrix B. Zero matrix C. Row matrix D. Scalar matrix
775	The additive inverse of a matrix A is	D. None of these
776	Question Image	A. 2 B. 4 C. 6 D. 8
777	Question Image	A. 0 B. 1 C. 2 D. 3
778	Minor of an element $a_{ij}$is denoted by	A. M_{ij} B. A_{ij} C. |A| D. None of these
779	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
780	Question Image	
781	Roots of the equation x^2- 7x + 10 = 0 are	A. {2, 5} B. {-2, 5} C. {2,5} D. {-2,-5}
782	Roots of the equation x^2+ 7x + 12 = 0 are	A. {3, -4} B. {-3, 4} C. {3, 4} D. {-3, -4}
		A. {2, -1} B. {1, 0}

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

		D. None of these
802	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
803	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
804	If $x^3- x^2+ 5x+ 4$ is divided by x - 2, then the reminder is	A. 0 B. 2 C. 18 D. 14
805	If $3x^4+ 4x^3+ x - 5$ is divided by x + 1, then the reminder is	A. 0 B. 7 C. -7 D. 5
806	Question Image	A. c/a B. -c/a C. b/a D. -b/a
807	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
808	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
809	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
810	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
811	Roots of the equation $x^2+ 2x + 3 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these
812	Roots of the equation $x^2+ 5x - 1 = 0$ are	A. Rational B. Irrational C. Complex D. None of these
813	Roots of the equation $2x^2- 7x + 3 = 0$ are	A. Rational B. Irrational C. Complex D. None of these
814	Roots of the equation $9x^2- 12x + 4 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these
815	If one root of the equation $x^2- 3x + a = 0$ is 2 then a = _____	A. 0 B. 1 C. 2 D. 3
816	The discriminant of the quadratic equation $ax^2+ bx + c = 0$ is	A. b²+ 4ac B. b²- 4ac C. 4ac - b² D. a²- 4ac
817	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
818	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
819	If the roots of 3x2+kx + 12 = 0 are equal then k =	

	– _____	
820	If w is a cube root of unity then 1 + w + w^2= _____	A. 1 B. 2 C. 0 D. -1
821	A function from X to Y is written as	B. f : X to Y D. f : Y to Y
822	The roots of the equations will be equal if b^2- 4ac is	A. Positive B. Negative C. 1 D. Zero
823	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
824	A function from X to X is denoted as	B. f : X to Y D. f : Y to Y
825	If b^2- 4ac is positive then the roots of the equation are	A. Real B. Imaginary C. Positive D. Negative
826	Question Image	A. x = f(y) B. y = f(x) C. x = f(x) D. y = f(y)
827	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
828	The product of cube roots of unity is	A. Zero B. 1 C. -1 D. None of these
829	Question Image	A. range of f B. domain of f C. both (a) and (b) D. none of these
830	For any integer k, w^n= _____ when n = 3k	A. 1 B. 2 C. 0 D. -4
831	w^{29}= _____	A. 0 B. 1 C. w D. w²
832	w^{73}= _____	A. 0 B. 1 C. w D. w²
833	w^{28}+ w^{38}= _____	A. 0 B. 1 C. w D. -1
834	Question Image	A. images B. pre-images C. constants D. none of these
835	(2 + w) (2 + w^2) = _____	A. 1 B. 2 C. 3 D. 0
836	Question Image	A. image B. pre-image C. constant D. none of these
837	There are _____ basic techniques for solving a quadratic equation	A. Two B. Three C. Four D. None of these
		A. y = f(x)

838	If y is an image of x under the function f, then we write	B. x = f(y) C. y = x D. none of these
839	Question Image	A. f(x) = x² B. f(x²) = x C. f(x) = x D. none of these
840	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 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	Question Image	
843	If $f(x) = x^2$ then f(-2) is	A. -2 B. 2 C. 4 D. -4
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. 0 B. 2 C. -4 D. 4
846	The product of the four fourth roots of unity is	A. 0 B. 1 C. -1 D. None of these
847	If $f(x) = -x^2$ then f(-2) is	A. -2 B. 2 C. -4 D. 4
848	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
849	If $f(x)= x^3$ then f(-2) is	A. -2 B. -4 C. -8 D. 8
850	If $f(x) = -x^3$ then f(-2) is	A. -2 B. -4 C. -8 D. 8
851	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
852	If $f(x) = x^2-x$ then f(0) is	A. 0 B. 1 C. 2 D. 3
853	If $f(x) = x^2-x$ then f(1) is	A. 0 B. 1 C. 2 D. 3
854	If $f(x) = x^2- x$ then f(2) is	A. 4 B. 6 C. 2 D. 0
855	If $f(x) = x^2- x$ then f(-2) is	A. 4 B. 6 C. 2 D. 0
856	If $x^2- 7x + a$ has remainder 1 when divided by x	A. -7 B. 7

	+ 1, then a = _____	C. 0 D. None of these
857	Question Image	A. 2 C. -2 D. none of these
858	If x - 2 is a factor of ax2- 12x + a = 2a, then a = _____	A. -5 B. 5 C. 0 D. 1
859	Find a if 1 is a root of the equation x^2+ ax + 2 = 0	A. 3 B. -3 C. 2 D. 0
860	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
861	Question Image	A. 0 B. 1 C. 2 D. None of these
862	Question Image	A. 2 B. 6
863	Question Image	A. 2 D. 0
864	Question Image	A. 0 B. -4 D. none of these
865	Question Image	A. 2 B. -1 C. 8 D. not defined
866	Question Image	A. 0 B. 3 C. 9 D. -3
867	If f(x) = x^3- 2x^2+ 4x -1 then f(0) is	A. 0 B. 1 C. -1 D. none of these
868	Question Image	A. -1 B. 1 C. 2 D. -2
869	If f(x) = x^3- 2x^2+ 4x -1 then f(2) is	A. 7 B. -16 C. 16 D. -9
870	If f(x) = cos x then f(0) is	A. 0 B. 1 C. 1/2
871	Question Image	A. 0 B. 1 C. 1/2
872	If f(x) = tan x then f(0) is	A. 0 B. 1 C. 1/2
873	Question Image	A. 0 B. 1 C. 1/2
874	Question Image	A. 0 B. 1 C. 2
875	Question Image	A. 0 B. 1 C. 2 D. 1/2
		A. z² B. z²+ 2

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

894	f(x) = ax + b will be a constant function if	A. a = 1 , b = 1 B. a = 1 , b = 0
895	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
896	f(x) = ax + b will be an identity function if	A. a = 1 , b = 1 B. a = 1 , b = 0
897	sin h x = _____	
898	Question Image	
899	tan h x = _____	
900	sec h x = _____	
901	Question Image	A. sin h x B. cos h x C. tan h x D. cot 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. sec h x D. cosec h x
904	Question Image	
905	Sin $h^{-1}x$ = _____	
906	Question Image	
907	Question Image	
908	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
909	Question Image	A. An expression B. Rational fraction C. Equation D. Identity
910	(x + 3) (x + 4) = x^2+ 7x + 12 is _____	A. Quadratic equation B. Linear equation C. Cubic equation D. Identity
911	Question Image	D. none of these
912	Question Image	
913	Question Image	D. none of these
914	Question Image	
915	Question Image	
916	Question Image	
917	Question Image	
918	Question Image	A. 2x B. 3x² C. 1 D. 0
919	Question Image	
920	Question Image	A. 2C B. C³ C. 1 D. 0
921	Question Image	

922	Question Image	
923	Question Image	D. none of these
924	Question Image	A. -2x³ B. 2x⁻³ C. -2x⁻³ D. 2x³
925	Question Image	A. 3x²+ 2 B. 3x²+ 2x + 3 C. x³+ x² D. none of these
926	Question Image	
927	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
928	Question Image	A. 3 B. 2 C. 8 D. 0
929	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
930	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
931	Question Image	A. 4x + 1 B. 4x C. 2x³ D. none of these
932	Question Image	
933	Question Image	A. x³⁹ B. 40x³⁹ C. 40x⁴¹ D. none of these
934	Question Image	
935	Question Image	D. none of these
936	Question Image	A. 100x ⁹⁹ B. 100x ¹⁰¹ C. -99x ⁹⁹ D. -100x ¹⁰¹
937	Question Image	
938	Question Image	A. cos x B. - sin x C. - cos x D. tan x
939	Question Image	A. - cos x B. sin x C. - sin x D. sec x
940	Question Image	
941	Question Image	A. sec x tan x B. cos²x C. sin²x D. sec²x
942	Question Image	A. -cosec²x B. -sec²x C. - cosec x cot x D. cosec x
943	Question Image	A. sec x tan x B. -cosec x cot x C. sec²x D. -sin x
		A. cos x

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

968	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
969	Question Image	
970	Question Image	
971	Question Image	
972	Question Image	
973	Find the next two terms of 7, 9, 12, 16,...	A. 18, 20 B. 19, 22 C. 20, 25 D. 21, 27
974	Question Image	
975	The general term of a sequence is denoted by	A. a₁ B. a_n C. n D. s_n
976	Question Image	
977	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
978	Question Image	
979	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
980	-2, 1, 4, 7,.... is _____	A. Harmonic sequence B. Arithmetic sequence C. Geometric sequence D. Arithmetic series
981	Question Image	A. 3/4 B. -3/4 C. 4/3 D. -4/3
982	Question Image	A. 2x cos x2 B. -2xcosxsinx C. 2x Sin x2 D. -Sin x2
983	Arithmetic mean between a and b is	
984	Question Image	A. 2x cos x2 B. 2sinxcosx C. - sin x2 D. 2x sin x2
985	Question Image	
986	Question Image	
987	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
988	Sum of first n terms of an arithmetic series is	
989	Question Image	
990	Question Image	
991	Question Image	
992	Question Image	
993	Arithmetic mean between x - 3 and x + 5 is	A. x + 1 B. x + 2 C. x + 3 D. x + 4

994	Write the first four terms of the arithmetic sequence 5, 2, -1, ... is	A. 3 B. -4 C. 7 D. 1
995	Question Image	
996	Derivative of sin x w.r.t. sin x is	A. 0 B. 1 C. sin x D. cos x
997	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
998	Derivative of a w.r.t x is	A. 0 B. 1 C. x D. x
999	Derivative of x^3 w.r.t x is	A. 0 B. 1 C. 3x² D. x³
1000	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
1001	Question Image	
1002	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
1003	Question Image	
1004	The sum of n terms of a series is denoted by	A. d B. n C. S_n D. a_n
1005	The nth term of a G.P. is	A. a₁rⁿ B. a₁rⁿ⁺¹ C. a₁rⁿ⁻¹ D. a₁r⁻ⁿ
1006	3, 6, 12,.... is	A. A.P B. G.P. C. H.P. D. None of these
1007	Question Image	A. a^x B. a^xln a
1008	Geometric mean between a and b is	
1009	Question Image	A. 2^x B. 2^xln x C. 2^xln 2
1010	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
1011	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
1012	Find the geometric mean between 4 and 16	
1013	Question Image	
1014	Question Image	D. none of these
1015	Question Image	
1016	Question Image	A. 2x + 3 B. x²+ 3 + c

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

1037	Question Image	A. cot x + c B. tan x + c C. -cot x + c D. -tan x + c
1038	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
1039	The harmonic mean between a and b is	
1040	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
1041	H.M. between 3 and 7 is	
1042	Question Image	A. e^x+ c B. e^{-x}+ c C. x e^x+ c D. not possible
1043	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
1044	$H_1, H_2, H_3, ... H_n$are called n harmonic means between a and b if a, $H_1, H_2, H_3, ... H_n$b are in	A. H.P. B. G.P. C. A.P. D. None of these
1045	Question Image	B. a^xln a + c C. a^x+ c D. x a^x+ c
1046	Question Image	B. x⁻²+ c D. not possible
1047	Question Image	
1048	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
1049	Question Image	
1050	Question Image	
1051	Question Image	
1052	Question Image	
1053	Question Image	
1054	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
1055	Question Image	A. 1, 1/2, 0 B. 1, 2, 1 C. 1, 2, 3 D. 1, 2, 0
1056	Question Image	A. 2 B. -3/2 C. 1 D. 0
1057	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
1058	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
1059	The fifth term of the sequence a_n= 2n + 3 is _____	A. 13 B. -13 C. 8 D. 3

1060	The third term of the sequence $a_n = (-1)^{n-1}(n-7)$ is _____	A. 8 B. 4 C. -4 D. 8
1061	1 + 2 + 3 + ... + n = _____	
1062	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
1063	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)!
1064	0! = _____	A. 0 B. 1 C. 2 D. Not defined
1065	Question Image	A. 8 B. 1/56 C. 56 D. None of these
1066	8 . 7 . 6. 5 in factorial form is	
1067	Question Image	
1068	6! = _____	A. 360 B. 720 C. 6.5.4 D. None of these
1069	Question Image	A. 5x^{4 + c} B. 1/6 x⁶+ c C. 5x²+ c D. 1/5 x⁶+ c
1070	Question Image	
1071	Question Image	A. 56 B. 7 C. 8 D. 8/7
1072	n(n - 1) (n - 2) in factorial form is	
1073	(n + 2) (n + 1)n in factorial form is	
1074	Question Image	A. 3 B. 6 C. 0 D. None of these
1075	Question Image	
1076	Question Image	
1077	Question Image	
1078	Question Image	A. a cos(ax + b) + c B. - a cos(ax + b) + c
1079	Question Image	A. a sin(ax + b) + c B. - a sin(ax + b) + c
1080	Question Image	A. n! B. 0! C. 1 D. None of these
1081	Question Image	A. a tan(ax + b) + c B. - a tan(ax + b) + c
1082	Question Image	A. a cot(ax + b) + c B. - a cot(ax + b) + c
1083	Question Image	A. a sec(ax + b) + c B. - a sec(ax + b) + c
1084	Question Image	A. 0 B. 20 C. 90 D. 80

1085	Question Image	A. a cosec(ax + b) + c B. - a cosec(ax + b) + c
1086	Question Image	A. 6 B. 360 C. 120 D. 24
1087	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
1088	Question Image	A. 120 B. 5 C. 4 D. 6
1089	Number of ways of writing the letters of WORD taken all at a time is	A. 24 B. 4 C. 12 D. 6
1090	How many arrangements of the letters of the word MI SSI PPI, taken all together can be made?	
1091	In how many ways can 5 persons be seated at a round table	A. 5! B. 4! C. 3! D. 120
1092	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
1093	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
1094	How many necklaces can be made from 6 beads of different colours?	A. 120 B. 60 C. 24 D. 15
1095	Question Image	
1096	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
1097	Question Image	
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	B. sin 2x + c C. -sin 2x + c
1108	Question Image	A. cos 3x + c B. - cos 3x + c
1109	Question Image	A. sec 5x + c B. - sec 5x + c
1110	Question Image	

1111	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	
1112	Question Image	
1113	Question Image	B. a f(x) + c C. f(x) + a
1114	Question Image	A. 2x - 3x + c C. x²- 3x + c
1115	The number of the diagonals of a 6 sided figure is	A. 15 B. 21 C. 9 D. 6
1116	Question Image	A. x³- x²+ x + c B. 6x - 2 + c C. x³- 2x + c
1117	Question Image	A. cos 2x + c B. - cos 2x + c C. tan 2x + c D. cot 2x + c
1118	Question Image	
1119	Question Image	A. - cot 4x + c B. cot 4x + c C. tan 4x + c D. - tan 4x + c
1120	Question Image	A. 110 B. 220 C. 1320 D. None of these
1121	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
1122	Question Image	A. 5 B. 20 C. 9 D. 4
1123	Question Image	A. sec 3x + c B. - cosec 3x + c
1124	Question Image	
1125	The sample space for tossing a coin once is	A. {T, T} B. {H, H} C. {H, T} D. None of these
1126	The probability to get an odd number in a dice thrown once is	A. 6 B. 1 C. 1/6 D. 1/2
1127	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
1128	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
1129	Question Image	A. P(A) + P(B) B. P(A) - P(B) C. P(A) . P(B) D. P(A) / P(B)
1130	Question Image	C. ln f(x) + c D. f(x) - c
1131	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}
1132	Question Image	C. x²+ 2x + c D. (x²+ 2x -1)⁴+ c

1133	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
1134	Question Image	A. 4(x³- 3x²)³+ c B. 3x²- 6x + c
1135	Question Image	A. 0 B. -1 C. 1 D. 2
1136	Question Image	A. (x³- 3x²)⁸+ c D. 3x²- 6x + c
1137	If n is a negative integer n! is	A. 1 B. 0 C. Unique D. Not defined
1138	Question Image	B. ln(x²- x + 1) + c D. ln(2x - 1) + c
1139	Question Image	B. ln(x²- x + 1)⁴+ c
1140	9. 8. 7. 6= _____	
1141	(n + 2) (n + 1) n= _____	
1142	Question Image	
1143	Question Image	
1144	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
1145	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
1146	n(n - 1) (n - 2) .... (n - r + 1) = _____	
1147	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
1148	Question Image	
1149	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
1150	For all points (x,y) on x-axis	A. x is positive B. x is negative C. y = 0 D. y is negative
1151	20. 19. 18. 17= _____	
1152	For all points (x,y) on y-axis	A. x is positive B. x = 0 C. x is negative D. y = 0
1153	Question Image	A. 36 B. 360 C. 24 D. 6
1154	The distance between two points P(x_1, y_1) and Q (x_2, y_2) is	
1155	The number of words that can be formed out of the letters of the word ASSASSINATION is	
1156	How many arrangements of the letters of the word MATHEMATICS can be made	
1157	The square of the distance between two points P(x_1, y_1) and Q(x_2, y_2) is	

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

1180	Question Image	A. 5 B. 10 C. 20 D. 30
1181	The distance of the point (-2, -3) from the origin is	A. 2 B. -5 C. -3
1182	Question Image	
1183	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
1184	Question Image	
1185	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
1186	The distance between the points (2,3) and (3,2) is	A. 5 C. 2 D. 10
1187	If distance of (a,b) from x-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. b = 4
1188	If distance of (a,b) from y-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. a = 4
1189	If distance of (a,b) from origin is 5 then	A. a²+ b²=5 B. a = 5 C. b = 5
1190	If distance between (a,2) and (0,0) is 2 then a = _____	A. 0 B. 2 C. 4
1191	If distance between (3,b) and (0,0) is 3 then b = _____	A. 3 C. 9 D. 0
1192	Question Image	A. 1 B. 2 C. 3
1193	If n is any positive integer then n! > $2^{n-1}$for	
1194	Question Image	A. 1 B. 2 C. 3
1195	If n is any positive integer then n^2> n + 3 for	
1196	Question Image	A. 3 B. 1 C. 4
1197	The distance of the point (1.1) from the origin is	A. 0 B. 2
1198	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
1199	If n is any positive integer then n! > $n^2$for	
1200	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	
1201	a + x is _____	A. A trinomial B. A binomial C. A monomial D. None of these
1202	In the expansion of $(a + x)^n$the general term T_r	

	$+1$is	
1203	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	
1204	Question Image	A. 2 B. 7 C. 8 D. 12
1205	The mid point of the line joining the points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
1206	Question Image	A. Even B. Odd C. Prime D. None of these
1207	The sum of coefficients in the binomial expansion equals to	A. 2 B. 2ⁿ⁺¹ C. 2ⁿ⁻¹ D. 2ⁿ
1208	The distance between the points A(3,1) and B(-2,-4) is	A. 5 C. 25 D. 10
1209	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
1210	The distance between the points A(-8,3) and B(2,-1) is	B. 116 D. none of these
1211	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
1212	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
1213	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
1214	The mid point of the line segment joining the points A(3,1) and B(-2,-4) is	A. (1, -3)
1215	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)
1216	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
1217	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)
1218	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
1219	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)
1220	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd B. 3rd C. 4th D. 5th
1221	The number of terms in the expansion of $(a + b)^9$is	A. 10 B. 11 C. 9

		D. 12
1222	The mid point of the line segment joining the points (a,b) and (b,a) is	
1223	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
1224	Question Image	A. 1 B. 2 C. -1 D. 0
1225	Question Image	A. a B. 2a C. 3a D. 4a
1226	If n is odd then the middle terms in the expansion of $(a + x)^n$ are	
1227	The sum of even coefficient in the binomial expansion is	A. 2ⁿ⁺¹ B. 2ⁿ C. 2ⁿ⁻¹ D. 2n
1228	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
1229	The sum of the odd coefficients in the expansion of $(a + x)^4$ is	A. 14 B. 12 C. 8 D. 4
1230	The sum of the coefficient in the expansion of $(a + x)^5$ is	A. 32 B. 16 C. 8 D. 5
1231	The middle term in the expansion of $(a +x)^{12}$ is	A. 7th B. 8th C. 9th D. 6th
1232	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
1233	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
1234	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	
1235	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 internally	
1236	If n is any positive integer then 3 + 6 + 9 + ...+ 3n = _____	
1237	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 externally are	
1238	If n is any positive integer then $4^n > 3^n + 4$ is true for all	
1239	The centroid of a triangle divides each median in the ratio	A. 2 : 1 B. 3 : 1 C. 3 : 2 D. 1 : 1
1240	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
1241	The point of concurrency of the medians of a triangle is called	A. incentre B. circumcentre C. e-centre

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

		D. inequality
1261	Question Image	A. 360° B. 180° C. 90° D. None of these
1262	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity
1263	One degree is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
1264	2x + 3y > 4 is a linear inequality in	A. one variable B. two variables C. three variables D. none of these
1265	One minute is denoted by	A. 1⁰ B. 1' C. 1" D. None of these
1266	One second is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
1267	ax + by < c is linear inequality in	A. four variables B. three variables C. two variables D. one variable
1268	1^0= _____	A. 360' B. 60" C. 60' D. 3600'
1269	The real numbers which satisfy an inequality form its	A. solution B. coefficient C. domain D. range
1270	x = 0 is in the solution of the inequality	A. x > 0 B. 3x + 4 < 0 C. x + 3 < 0 D. x - 2 < 0
1271	1^0= _____	
1272	1^0= _____	A. 1.5 rad B. 0.5 rad C. 0.175 rad D. None of these
1273	Question Image	A. 360° B. 180° C. 90° D. None of these
1274	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
1275	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
1276	Three right angles is the angle of measure	A. 270° B. 180° C. 90° D. 270'
1277	The 60th part of one minute is called	A. Degree B. Second C. Radiam D. None of these
1278	x = 1 is in the solution of the inequality	A. x + 1 > 0 B. x - 2 > 0 C. 3x - 1 < 0 D. x + 2 < 0

1279	A right angle is the angle of measure	A. 90' B. 60° C. 60" D. 90°
1280	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
1281	x = _____ is in the solution of 2x + 3 < 0	A. 0 B. 2 C. -1 D. -2
1282	30° = _____	
1283	45° = _____	
1284	60° = _____	
1285	120°=_____	
1286	Question Image	A. 30° B. 45° C. 60° D. 120°
1287	22.5°=_____	
1288	x = _____ is in the solution of 2x + 3 ≥ 0	A. 1 B. -2 C. -3 D. -4
1289	x = _____ is in the solution of 2x - 3 < 0	A. 2 B. -2 C. 3 D. 4
1290	x = _____ is in the solution of 2x - 5 > 0	A. 0 B. 2 C. -2 D. 3
1291	150°= _____	
1292	1 radian = _____	A. 180° B. 90° C. 57.296° D. 60°
1293	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
1294	The solution set of the inequality ax + by < c is	A. straight line B. half plane C. parabola D. none of these
1295	Question Image	
1296	Question Image	A. 30° B. 45° C. 60° D. 90°
1297	Which of the following is a quadrantal angle	A. 30° B. 45° C. 60° D. 90°
1298	(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
1299	Which of the following is not a quadrantal angle	A. 90° B. 100° C. 180° D. 270°
1300	(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
1301	Question Image	
1302	(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
1303	Question Image	
1304	Question Image	
1305	(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
1306	(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
1307	Question Image	
1308	The point _____ is in the solution of the inequality 2x + 3y < 5	A. (1,1) B. (2,2) C. (0,1) D. (0,2)
1309	The point _____ is in the solution of the inequality 2x - 3y > 5	A. (1, -1) B. (2,2) C. (0,0) D. (3,0)
1310	The point _____ is in the solution of the inequality 4x - 3y < 2	A. (0,1) B. (2,1) C. (2,2) D. (3,3)
1311	Question Image	
1312	(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
1313	Question Image	
1314	The point _____ is in the solution of the inequality 2x - 3y < 4	A. (0, -2) B. (1, -3) C. (2, 2) D. (3, 0)
1315	Question Image	
1316	Question Image	
1317	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
1318	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
1319	Question Image	
1320	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
1321	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
1322	Question Image	A. I and III quadrants B. II and III quadrants C. I and II quadrants D. II and IV quadrants
1323	If the intersecting plane is parallel to a generator of the cone, but intersects its one	A. an ellipse B. a hyperbola

	nappe only, the curve obtained is	C. a circle D. a parabola
1324	Question Image	A. I and II quadrants B. I and III quadrants C. II and III quadrants D. II and IV quadrants
1325	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
1326	Question Image	
1327	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
1328	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
1329	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
1330	Question Image	
1331	Question Image	A. 0 B. 1 C. -1 D. 2
1332	Question Image	
1333	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
1334	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
1335	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
1336	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
1337	Question Image	
1338	Question Image	A. -1 B. 0 C. 1 D. None of these
1339	Question Image	A. -1 B. 0 C. 1 D. None of these
1340	Question Image	
1341	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
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

1344	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
1345	Sin 45° = _____	
1346	Cot 45° = _____	
1347	Sec 30° = _____	
1348	Tan 30° = _____	
1349	Cosec 60° = _____	
1350	Cos 60° = _____	A. 1 B. 2 C. 1/2 D. 3
1351	Cos 0° = _____	A. -1 B. 0 C. 1 D. Undefined
1352	Sin 90° = _____	A. -1 B. 0 C. 1 D. Undefined
1353	Tan 180° = _____	A. -1 B. 0 C. 1 D. Undefined
1354	Sin 270° = _____	A. -1 B. 0 C. 1 D. Undefined
1355	Tan 360° = _____	A. -1 B. 0 C. 1 D. Undefined
1356	Question Image	A. -1 B. 0 C. 1 D. Undefined
1357	Question Image	
1358	Question Image	
1359	Question Image	
1360	The equation of the circle wit (-1, 1) and radius 2 is	
1361	Question Image	
1362	Question Image	
1363	The parametric equations of a circle are	
1364	Question Image	A. (g,f) B. (-g,f) C. (g,-f) D. (-g,-f)
1365	Question Image	
1366	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)
1367	Question Image	
1368	Question Image	A. (-6,4) B. (-3,2) C. (6,-4) D. (3, -2)
1369	Question Image	A. 11 B. 61

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

1397	If (2, 6) and (2, 6) are end points of a diameter of a circle, then the centre of the circle is	B. (4, 6) C. (0, 2) D. (0, -2)
1398	Question Image	
1399	Question Image	
1400	Question Image	
1401	Question Image	
1402	Question Image	
1403	Question Image	
1404	Question Image	
1405	Question Image	D. none of these
1406	Question Image	
1407	Question Image	D. none of these
1408	Question Image	D. none of these
1409	Question Image	
1410	Question Image	D. none of these
1411	Question Image	D. none of these
1412	Question Image	D. none of these
1413	Question Image	
1414	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
1415	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
1416	Question Image	
1417	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
1418	Question Image	
1419	Question Image	
1420	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
1421	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant D. none of these
1422	Which of the following is a scalar	A. weight B. force C. speed D. momentum
1423	Which of the following us a scalar	A. displacement B. velocity C. acceleration D. density
1424	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass
1425	Which of the following is a vector	A. length B. momentum C. volume

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

1451	A vector with magnitude one is called	A. constant vector B. unit vector C. zero vector D. null vector
1452	Question Image	
1453	Question Image	D. none of these
1454	Question Image	
1455	Question Image	D. none of these
1456	Question Image	D. none of these
1457	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
1458	Question Image	
1459	Question Image	
1460	Question Image	
1461	Question Image	A. perpendicular vectors B. parallel vectors C. concurrent vectors D. none of these
1462	The position vector of a point (x, y) in xy plane is	D. none of these
1463	The position vector of any point in space is	
1464	Question Image	
1465	The position vector of the point P(a, b, c) is	
1466	Question Image	
1467	Question Image	
1468	Question Image	
1469	Question Image	
1470	Question Image	
1471	Question Image	
1472	Question Image	
1473	Question Image	
1474	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°
1475	Question Image	
1476	Question Image	
1477	Question Image	
1478	Question Image	
1479	Question Image	
1480	Question Image	
1481	Question Image	
1482	Question Image	A. a₁+ a₂ B. a²₁+ a²₂
1483	Question Image	

1484	Question Image	
1485	Question Image	
1486	Question Image	D. none of these
1487	Question Image	
1488	Question Image	
1489	Question Image	A. 25 B. 16 C. 5 D. 0
1490	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
1491	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
1492	Question Image	
1493	Question Image	D. none of these
1494	Question Image	D. none of these
1495	Question Image	D. none of these
1496	Question Image	
1497	Question Image	D. none of these
1498	Question Image	
1499	Question Image	A. 0 B. 1
1500	Question Image	
1501	Question Image	
1502	Question Image	
1503	Question Image	
1504	Question Image	
1505	Question Image	
1506	Question Image	
1507	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
1508	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
1509	Question Image	
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	D. none of these
1520	The solution of the equation 3 $\tan^2 x = 1$ is _____	D. none of these
1521	Question Image	
1522	The solution set of the equation 4 $\cos^2 x$ - 3 + 0 is	D. none of these
1523	The solution set of the equation 1 + Cos x = 0 is _____	D. none of these
1524	Question Image	D. none of these
1525	Question Image	D. none of these
1526	Question Image	D. none of these
1527	Question Image	
1528	Question Image	
1529	Question Image	
1530	Question Image	D. none of these
1531	Question Image	A. I andII quadrants B. II andIII quadrants C. III andIVquadrants D. none of these
1532	Question Image	A. I andII quadrants B. II andIII quadrants C. II andIIVquadrants D. none of these

		D. none of these
1533	The solution set of sin x + cos x = 0 is	
1534	The solution set of trigonometric equation contains	A. one element B. two elements C. three elements D. Infinite elements
1535	General solution of 1 + cos x = 0 is	
1536	Question Image	D. all
1537	Question Image	
1538	Question Image	
1539	Question Image	
1540	Question Image	D. both a & c
1541	Question Image	
1542	Question Image	A. trigonometric equation B. conditional equation C. identity D. None
1543	Domain of sin x is _____	
1544	Domain of cosec x is _____	
1545	Domain of cos x is _____	
1546	Domain of sec x is _____	
1547	Domain of tan x is _____	
1548	Domain of cot x is _____	
1549	Range of sin x is _____	A. [-1, 1] B. R C. Negative real numbers D. None of these
1550	Range of cosec x is _____	A. {-1, 1} B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
1551	Range of cos x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
1552	Range of sec x is _____	A. [-1, 1] B. R C. Negative real numbers D. R = {x | -1 < x < 1}
1553	Range of tan x is _____	A. [-1, -] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
1554	Range of cot x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
1555	Period of sin x is	
1556	Period of cos x is _____	
1557	Period of tan x is _____	
1558	Period of cosec x is _____	
1559	Period of sec x is _____	
1560	Period of cot x is _____	
1561	Period of sin 3x is _____	
1562	Period of cos 2x is _____	

1563	Period of tan 4x is _____	
1564	Question Image	
1565	Question Image	
1566	Question Image	
1567	Period of 3 sin x is _____	
1568	Period of 2 cos x is _____	
1569	Question Image	
1570	Domain of 3 sin x is _____	A. [-3, 3] B. R C. Positive real numbers D. None of these
1571	Domain of 2 cos x is _____	A. [-2, 2] B. R C. Negative real numbers D. None of these
1572	Range of 2 tan x is _____	A. [-2, 2] B. -1 < x < 1 C. R D. None of these
1573	Range of 3 sin x is _____	A. [-3, 3] B. [-1, 1] C. R D. None of these
1574	Range of 3 cot x is _____	A. [-1, 1] B. [-3, 3] C. R D. None of these
1575	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
1576	A triangle which is not right is called an _____ triangle	A. Acute B. Obtuse C. Oblique D. None of these
1577	Question Image	A. The law of consines B. The law of sines C. The law of tangents D. None of these
1578	Question Image	A. The law of of sines B. The law of tangents C. The law of consines D. None of these
1579	Question Image	A. The law of sines B. The law of consines C. The law of tangents 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 tangents C. The pythagorus theorem D. None of these
1582	The law of tangents is _____	
1583	The law of consines is	
1584	The law of sines is	
1585	If a, b, c are the measures of the sides of a triangle then	
1586	Question Image	
1587	Question Image	

1588	Question Image	
1589	Question Image	
1590	Question Image	
1591	Question Image	
1592	Question Image	
1593	Question Image	
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1596	Question Image	
1597	Question Image	
1598	Question Image	
1599	Question Image	
1600	Question Image	
1601	Question Image	
1602	Question Image	
1603	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
1604	A circle passing through the vertices of any triangle is called _____	A. In circle B. Circum circle C. Escribed circle D. None of these
1605	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
1606	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
1607	Question Image	A. R B. 2R C. r D. 2r
1608	Question Image	
1609	Question Image	
1610	E-radius corresponding to < A is	
1611	E-radius corresponding to < B is	
1612	E-radius corresponding to < C is	
1613	Question Image	
1614	Question Image	
1615	The domain of the principle sine function is	
1616	The range of the principal sine function is	
1617	The domain of the principle cos function is	
1618	The domain of the principal tan function is	
1619	The range of the principle cos function is	
1620	The range of the principle cot function is	
1621	Question Image	

1622	Question Image	
1623	Question Image	
1624	Question Image	
1625	Question Image	
1626	Question Image	
1627	Question Image	
1628	Question Image	A. 0 B. -1 C. 1/2 D. 1
1629	Question Image	
1630	Question Image	
1631	Question Image	
1632	Question Image	
1633	Question Image	
1634	Question Image	
1635	Question Image	
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1645	Question Image	
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1647	Question Image	
1648	Question Image	
1649	Question Image	
1650	Question Image	
1651	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
1652	In a triangle ABC, if angle A = 72° , angle B = 48° and c = 9 cm then $\hat{C}$ is	A. 69° B. 66° C. 60° D. 63°

1653	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
1654	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
1655	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
1656	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
1657	Name the property used in 1000 x 1 = 1000	A. additive inverse B. multiplicative inverse C. additive identity D. multiplicative identity
1658	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
1659	Question Image	A. additive property B. multiplicative property C. additive identity D. multiplicative identity
1660	Question Image	A. additive property B. multiplicative property C. additive inverse D. additive identity
1661	Question Image	A. real number B. complex number C. rational number D. irrational number
1662	Question Image	A. 0 B. 1 C. -1 D. 2
1663	Question Image	
1664	Question Image	A. real part of z B. imaginary part of z C. conjugate of z D. modulus of z
1665	Question Image	B. 1 C. -1
1666	Question Image	A. 1 B. -1
1667	The sum of complex number (a,b) and (c,d) is	
1668	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)
1669	Question Image	
1670	Every real number is	A. a positive integer B. a rational number C. a negative integer D. a complex number
1671	Question Image	A. x C. y
1672	Question Image	
1673	Question Image	A. (x, y) B. (kx, y) C. (x, ky) D. (kx, ky)

1674	The multiplicative inverse of (a,b) is	
1675	Question Image	
1676	Question Image	
1677	Question Image	
1678	Question Image	
1679	The number of subsets of a set having three elements is	A. 4 B. 6 C. 8 D. none of these
1680	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
1681	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
1682	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
1683	The set of first elements of the ordered pairs in a relation is called its	A. domain B. range C. relation D. function
1684	Question Image	
1685	Question Image	
1686	Question Image	
1687	Question Image	
1688	Question Image	
1689	Question Image	A. a constant function B. linear function C. quadratic funtion D. none of these
1690	The graph of a linear function is	A. a circle B. triangle C. a straight line D. none of these
1691	Question Image	A. square root function B. identity function C. linear function D. quadratic function
1692	Question Image	D. none of these
1693	The negation of a number	A. a relation B. a function C. unary operation D. binary operation
1694	Question Image	D. none of these
1695	Question Image	
1696	Question Image	
1697	Question Image	A. -a -b -c B. 1 C. 0 D. -1
1698	Question Image	A. 0 B. 1 C. -A D. -1
1699	Which of the following is an identity matrix?	D. none of these
1700	Question Image	

1701	Question Image	
1702	Question Image	
1703	Question Image	A. -1 B. 0 C. 2 D. 1
1704	Question Image	A. 1 B. -1 C. 5 D. 2
1705	The cube roots of 8 are	
1706	Question Image	A. 0 B. 1 C. 2 D. 3
1707	Question Image	A. 2 B. 4 C. 8 D. 16
1708	Question Image	A. 4 B. 6 C. 8 D. 10
1709	Question Image	
1710	Question Image	A. -1 B. 0 C. 1 D. undefined
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	B. 0 C. 1 D. undefined
1714	Question Image	A. 0 C. 1
1715	Through how many radians does the minute hand of a clock turn in one hour	
1716	Through how many radians does the hour hand of a clock turn in one hour	
1717	Question Image	
1718	What is the circular measure of the angle between the hands of a watch at 4 O'clock	
1719	Question Image	
1720	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
1721	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
1722	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
1723	In one hour the minute hand of a clock turns through	

1724	In one hour, the hour hand of a clock turns through	
1725	In one hour, the minute hand of a clock turns through	
1726	In one hour, the hour hand of a clock turns through	
1727	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
1728	The area of a sector with central angle of 0.5 radians in a circular region whose radius is 2m is	
1729	The area of sector with central angle of 1 radians in a circular region whose radius is 2 m is	
1730	Question Image	
1731	Question Image	
1732	Question Image	A. 1 D. -1
1733	Question Image	
1734	Question Image	
1735	Question Image	
1736	Question Image	
1737	Question Image	
1738	Question Image	
1739	Question Image	B. 1 C. 2 D. -2
1740	Question Image	
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1755	Question Image	
1756	Question Image	A. 0 B. 1 C. -1 D. none of these
1757	Question Image	

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1765	Question Image	
1766	Question Image	
1767	Question Image	
1768	Question Image	A. 0 B. 1 D. none of these
1769	Question Image	A. 0 B. 1 D. -1
1770	Question Image	A. 0 B. 1 C. -1 D. none of these
1771	Question Image	A. 0 B. 1 D. -1
1772	Question Image	
1773	Question Image	
1774	Question Image	
1775	Question Image	C. 2x D. 2
1776	Question Image	A. 0 B. 1 C. 2 D. none of these
1777	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	D. none of these
1815	Question Image	
1816	The inclination of a line parallel to x-axis is	
1817	The inclination of a line parallel to y-axis is	
1818	Question Image	
1819	Question Image	A. 0 B. 1
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 D. undefined
1824	The slope of x-axis is	A. 0 B. undefined C. 1
1825	The slope of y-axis is	A. 0 B. undefined C. 1
1826	Question Image	A. 0 B. 1 C. -1 D. undefined

1827	Question Image	
1828	Question Image	
1829	Question Image	A. 1 B. 0 C. 5 D. 2
1830	Question Image	A. 9 B. -9 C. 0 D. 1
1831	Question Image	A. 0 D. undefined
1832	Question Image	D. none of these
1833	Question Image	
1834	Question Image	
1835	Question Image	
1836	Question Image	
1837	Question Image	D. none of these
1838	Question Image	
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1841	Question Image	
1842	Question Image	
1843	Question Image	
1844	Question Image	
1845	Question Image	
1846	Question Image	A. 184 D. none of these
1847	Question Image	A. 6 C. 20 D. 0
1848	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
1849	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
1850	Question Image	A. 1 B. 0
1851	Question Image	A. 0 B. 1
1852	Question Image	C. 0 D. 1
1853	Question Image	C. 1 D. 0
1854	Question Image	
1855	Question Image	
1856	Question Image	C. 0 D. 1
1857	Question Image	D. none of these
1858	Question Image	D. none of these

1859	Question Image	D. none of these
1860	Question Image	
1861	Question Image	D. none of these
1862	Question Image	D. none of these
1863	Question Image	
1864	Question Image	
1865	Question Image	
1866	Question Image	
1867	Question Image	
1868	Question Image	A. 12 B. 6 C. 8 D. none of these
1869	If the angle between two vectors with magnitude 2 and 15 is 30°then their scalar product is	B. 15 C. 30
1870	Zero is	A. An irrational number B. A rational number C. A negative integer D. A positive number
1871	6 is	A. A prime integer B. An irrational number C. A rational number D. An odd integer
1872	Question Image	A. A rational number B. A irrational number C. An even integer D. A factor of 36
1873	3/2 is	A. An irrational number B. Whole number C. A positive integer D. A rational number
1874	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
1875	Question Image	A. A positive integer B. A negative integer C. A natural number D. An irrational number
1876	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
1877	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)
1878	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_2 - Z_1\|$ = ?	
1879	Question Image	A. 15 B. 15 i C. -15 i D. -15
1880	The solution set of the equation $\|3x + 2\| = 5$ is	
1881	The equation $\|x + 4\| = x$ has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
1882	Question Image	
1883	What is the conjugate of -7 -2i?	A. -7 + 2i B. 7 + 2i

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

		C. Associative law of multiplication D. Multiplication inverse
1903	Question Image	A. Commutative law of multiplication B. Closure law of multiplication C. Associative law of multiplication D. Multiplication identity
1904	Question Image	A. Reflexive property B. Symmetric property C. Cancellations property w.r.t. addition D. Transitive property
1905	Question Image	A. Symmetric property B. Cancellation property w.r.t. multiplication C. Reflexive property D. Transitive property
1906	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
1907	Question Image	A. Multiplication property B. Additive property C. Trichotomy property D. Transitive property of inequality
1908	Question Image	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
1909	$(a^{-1})^{-1}$=	A. a⁻¹ B. a C. -a D. None of above
1910	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
1911	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
1912	Question Image	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t. to addition
1913	Question Image	A. Additive property of inequality B. Commutative property C. Additive inverse D. Additive identity
1914	i =	
1915	ln (x + iy), y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
1916	i^3=	A. -1 B. i C. -i D. 1
1917	(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
1918	Question Image	
1919	(a, b) + (-a, -b) =	A. (0,0) B. (a, b) C. (-a, -b) D. (1, 1)
1920	(a,0) x (c, 0) =	A. (0,ac) B. (ac, 0) C. (0,0) D. (a, c)
		A. 1 B. 2

1921	i^2 =	B. 2 C. -1 D. 0
1922	Question Image	A.
1923	(7, 9) + (3, -5) =	A. (4, 4) B. (10, 4) C. (9, -5) D. (7, 3)
1924	Question Image	
1925	Question Image	
1926	In polar form of complex number r =	
1927	Question Image	
1928	The multiplicative inverse of -3i is	A. 3i B. -3i C. -1/3i D. 1/3 i
1929	i^{101}=	A. i B. i² C. -i D. -1
1930	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_1 - Z_2\|$ = ?	
1931	Question Image	A. 0 B. 1 C. -1 D. None of these
1932	Question Image	A. z is purely imaginary B. a is any complex number C. z is real D. None of these
1933	Question Image	A. 15 B. 15 i C. -15 i D. -15
1934	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
1935	Which element is the additive inverse of (a, b) in Complex numbers?	A. (a, 0) B. (0, b) C. (a, b) D. (-a, -b)
1936	What is the conjugate of -6 -i?	A. -6 +i B. 6+i C. -6 -i D. 6 -i
1937	Which of the following has the same value as i^{113}?	A. i B. -1 C. -i D. 1
1938	Question Image	
1939	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
1940	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
1941	Question Image	
1942	Question Image	A. 4 B. 3 C. 2 D. 1
1943	Question Image	A. A = C B. A = B C. B = C

		D. None of these
1944	The complement of set A relative to universal set U is the set	
1945	The multiplicative inverse of x such that x = 0 is	A. -x B. does not exist C. 1/x D. 0
1946	Multiplicative inverse of "1" is	A. 0 B. -1 C. 1 D. {0, 1}
1947	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
1948	Which of the following is the subset of all sets?	
1949	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
1950	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
1951	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
1952	The set of complex numbers forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Subtraction
1953	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. 0 D. Does not exist
1954	The set {1, -1, 1, -1}, form a group under	A. Addition B. Multiplication C. Subtraction D. None
1955	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
1956	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
1957	The set (Q, .)	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
1958	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
1959	For any set B, BUB' is	A. Is set B B. Set B' C. Universal set D. None of these
1960	Question Image	A. A B. B C. A' D. None of these
1961	In set builder notation the set {0, 1, 2, ...,	

	100} can be written as	
1962	Question Image	A. 3 B. 1 C. 2 D. 4
1963	Question Image	A. 1 B. 12 C. 5 D. 29
1964	Question Image	A. A = B B. B = C C. A = C D. None of these
1965	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
1966	Question Image	
1967	The set {-1, 1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
1968	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
1969	If a set S contains "n" elements then P (S) has ..... number of elements	A. 2ⁿ B. 2²ⁿ C. 2 . n D. n²
1970	Additive inverse of -a -b is	A. a B. -a + b C. a - b D. a + b
1971	Question Image	A. 1/x B. -x C. 2x D. 0.5 x
1972	Question Image	A. -x B. Infinite set C. {-4, 4} D. None of these
1973	The identity elements with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
1974	Multiplicative inverse of 0 is	A. 0 B. 1 C. +-1 D. Does not exist
1975	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
1976	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
1977	Φ set is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection
1978	Question Image	A. Singleton set B. A set with two points C. Empty set D. None of these
1979	The set { {a, b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set

1980	Question Image	
1981	If #n = $(n-5)^2$+ 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
1982	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
1983	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
1984	The graph of a quadratic function is	A. Circle B. Straight line C. Parabola D. Triangle
1985	The function f{(x, y) | y = ax^2+ bx + c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function
1986	To each element of a group there corresponds _____ inverse element	A. Two B. One C. No D. Three
1987	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
1988	Question Image	A. Addition B. Multiplication C. Division D. Both addition and multiplication
1989	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
1990	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. +-1 D. 0
1991	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
1992	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
1993	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
1994	The set {Z\{0}} is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
1995	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
1996	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
1997	Question Image	A. a = 2, b = 3 B. a = 3, b = 2 C. a = 2, b = 1, 2 D. a = 3, b = 3
1998	Question Image	

1999	Question Image	
2000	Question Image	A. A²- 5A + 7I = 1 B. 2A²- 3A + 7I = 0 C. A²- 5A + I = 0 D. A²- 5A + 7I = 0
2001	Question Image	A. -3 B. -7 C. 1 D. 0
2002	Question Image	A. 1 B. 0 C. 3 D. -1
2003	Question Image	A. 1 B. 0 C. -1 D. 2
2004	(ABC)' =	A. CBA' B. CBA C. C' B' A' D. None of these
2005	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
2006	Let A be a square matrix. Then, 1/2 (A-A') is	A. Skew-symmetric B. Symmetric C. Null D. None of the above
2007	Question Image	A. 1 B. -1 C. 0 D. I
2008	Question Image	
2009	Question Image	A. a²b²c² B. 4a²b²c² C. 4abc D. None
2010	Question Image	
2011	Question Image	A. 3, -3, 11 B. 3, 3, 11 C. -3, 3, -11 D. -3, -3, 11
2012	Question Image	
2013	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
2014	Question Image	A. I B. 14 I C. 0 D. None of these
2015	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
2016	Question Image	
2017	Question Image	A. x =0, y =4 B. x = -1, y = 2 C. x = 2, y = 3 D. x = 3, y = 4
2018	Question Image	A. a = -1/2, b = -1 B. a = 1, b = 2 C. a = 2, b = 3 D. None of above
2019	Question Image	

2020	Matrices A = [aij] 2 x 3 and B =[bij] 3 x 2 are suitable for	A. BA B. A² C. AB D. B²
2021	Question Image	A. Singular B. Non-singular C. Adjoint D. None of above
2022	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
2023	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
2024	The square matrix A is skew-symmetric when At=	A. -B B. -C C. -A D. -D
2025	Question Image	A. A⁻ B. A^t C. -A D. A
2026	Question Image	A. A B. -A C. A^t D. A⁻
2027	Question Image	
2028	An equation of the form ax + by = k is homogeneous linear equation when:	
2029	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
2030	For trival solution |A| is	A. A B. |A| is non zero C. A = 0 D. None of these
2031	For non-trival solution |A| is	A. A = 0 B. A^t= 0 C. |A| = 0 D. None of these
2032	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a, b and c
2033	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
2034	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
2035	For a square matrix A, if A = A^t, then A is called	A. matrix B. Transpose C. Symmetric D. Non-symmetric
2036	Question Image	A. I B. |A| C. |A| I D. None of these
2037	If for the matrix A, A^5= I, then A^{-1}=	A. A² B. A³ C. A D. None of above
2038	If the trace of matrix A is 5, then the trace of the matrix 3A is	A. 3/5 B. 5/3 C. 8

	matrix 3A is	C. 8 D. 15
2039	Question Image	A. 0 B. 1 C. 2 D. 4
2040	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
2041	Question Image	A. 6, -12, -18 B. -6, 4, 9 C. -6, -4, -9 D. -6, 12, 18
2042	Question Image	A. A(α) - A(β) B. A(α) + A(β) C. A(α-β) D. A(α+β)
2043	Question Image	A. 4A - 3I B. 3A - 4I C. A - I D. None of these
2044	Question Image	A. Symmetric B. Skew-symmetric C. Hermitian D. Skew hermitian
2045	Question Image	
2046	Question Image	A. a = 4, b = 1 B. a = 1, b = -4 C. a = 0, b = 4 D. a = 2, b = 4
2047	Question Image	A. Orthogonal B. Involutary C. Idempotent D. Nilpotent
2048	Question Image	
2049	Question Image	A. 0 B. abc C. 1/abc D. None of these
2050	Question Image	A. 0 B. Independent of a C. Independent of b D. Independent of c
2051	Let A is a 3 x 3 matrix and B is its adjoint matrix. If |B| = 64, then |A| =	
2052	Question Image	A. K/6 B. 2K C. 3K D. 6K
2053	Question Image	A. 2s² B. 2s³ C. s³ D. 3s³
2054	Question Image	A. 9/4 B. 4/9 C. 1 D. None of these
2055	The condition for polynomial equation $ax^2 + bx + c = 0$ to be quadratic is	
2056	Question Image	
2057	Question Image	

2057	Question Image	
2058	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
2059	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
2060	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
2061	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
2062	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
2063	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
2064	Question Image	A. b = c B. a = c C. a = c D. b = 0
2065	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
2066	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	
2067	Question Image	
2068	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
2069	Question Image	A. n if n is even B. 0 for any natural number n C. 1 if in odd D. None of these
2070	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
2071	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
2072	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}
2073	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
2074	Question Image	A. Only one real solution B. Exactly three real solution C. Exactly one rational solution D. Non-real roots
2075	Question Image	A. Rational B. Irrational C. Non-real D. Zero
		A. 1 or -1

2076	If $2x^{1/3}+ 2x^{-1/3}= 5$, then x is equal to	B. 2 or 1/2 C. 8 or 1/8 D. 4 or 1/4
2077	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
2078	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
2079	Question Image	A. 1 B. 2 C. 0 D. 4
2080	Question Image	A. (-1, 2) B. (-1, 1) C. (1, 2) D. {-1}
2081	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
2082	Question Image	A. Two real roots B. Two positive roots C. Two negative roots D. One positive and one negative root
2083	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)
2084	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	
2085	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
2086	Question Image	
2087	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 =	
2088	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
2089	Question Image	A. 15 B. 9 C. 7 D. 8
2090	Question Image	
2091	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
2092	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
2093	Root of the equation $3^{x-1}+ 3^{1-x}$= is	A. 2 B. 1 C. 0 D. -1

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

	is less the degree of the denominator is called	C. Rational fraction D. None
2116	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
2117	Question Image	
2118	The next term of the sequence 1, 2, 4, 7, 11, ... is.	A. 15 B. 16 C. 17 D. 18
2119	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
2120	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
2121	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
2122	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
2123	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
2124	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
2125	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
2126	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
2127	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
2128	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
2129	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
2130	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
2131	Question Image	A. 15/23 B. 7/15 C. 7/8 D. 15/7
2132	Question Image	A. 12 B. 13 C. 14 D. 15
2133	Question Image	A. A.P. B. G.P. C. H.P. D. None of these

		D. None of these
2134	99th term of the series 2 + 7 + 14 + 23 + 34 + ... is	A. 9998 B. 9999 C. 10000 D. None of these
2135	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	
2136	Question Image	
2137	Question Image	A. 1 B. 2 C. 3/2 D. 5/2
2138	If the pth, qth, and rth terms of an A.P. are in G.P:., then the common ratio of the G.P. is	
2139	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
2140	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
2141	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
2142	Question Image	A. 2²- n - 1 B. 1 - 2⁻ⁿ C. n + 2⁻ⁿ-1 D. 2ⁿ- 1
2143	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	
2144	The consecutive terms of a progressions are 30, 24, 20. The next term of the progression is	
2145	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	
2146	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
2147	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
2148	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
2149	Three consecutive terms of a progression are 30, 24, 20. The next terms of the progression is	
2150	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
2151	Question Image	
2152	The sum of the squares of three distinct real numbers, which are in G.P., is S^2. if their sum isαS then	
2153	Question Image	A. 1/2 B. 2 C. 1/4 D. 4
2154	Question Image	

2155	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
2156	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
2157	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
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	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
2160	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
2161	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
2162	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
2163	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
2164	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
2165	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
2166	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
2167	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
2168	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
2169	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
2170	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
2171	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
2172	There are 25 tickets bearing number from 1 to 25. One ticket is drawn at random. The probability that the number on it is a multiple of 5 or 6 is	A. 7 / 25 B. 9 / 25 C. 11 / 25 D. None of these

	5 or 6 is	D. None of these
2173	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
2174	The value of n, when $^{n}P_{2}$= 20 is	A. 3 B. 4 C. 6 D. 5
2175	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
2176	If 4 $^{6}P_{r}$= $^{6}P_{r+1}$, then r is equal to	A. 4 B. 3 C. 2 D. 1
2177	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
2178	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
2179	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)
2180	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	
2181	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
2182	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
2183	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
2184	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
2185	Question Image	A. 0.9 B. 0.74 C. 0.2016 D. None of these
2186	Question Image	A. 1.5 B. 1.2 C. 8 D. None of these
2187	Question Image	
2188	Question Image	A. 1 / 2 B. 1 / 3 C. 1 / 4 D. None of these
2189	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
2190	Two cards are drawn at random without replacement. the probability that the first is a	A. 48 / 663 B. 24 / 663 C. 12 / 663

	king and second is not a king is	D. None of these
2191	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
2192	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
2193	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
2194	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
2195	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
2196	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
2197	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	
2198	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
2199	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
2200	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
2201	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
2202	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
2203	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
2204	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
2205	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
2206	Given two independent event A and B such that P(A) = 0.30 and P(B) = 0.60. Probability of getting neither A nor B is	A. 0.28 B. 0.13 C. 0.12 D. 0.42

2207	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
2208	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
2209	Question Image	A. 5 / 12 B. 3 / 8 C. 5 / 8 D. 7 / 4
2210	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
2211	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
2212	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
2213	Question Image	A. ¹⁰C₆ B. ¹⁰C₅ C. ¹⁰C₄ D. None
2214	Question Image	A. 405 / 256 B. 504 / 259 C. 450 / 263 D. None
2215	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
2216	Question Image	A. 2 and 9 B. 3 and 2 C. 2/3 and 9 D. 3/2 and 6
2217	Question Image	
2218	The positive integer just greater than $(1+0.0001)^{10000}$is	A. 4 B. 5 C. 2 D. 3
2219	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
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 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
2222	Digit in the unit place of the number 183! + 3^{183}	A. 7 B. 6 C. 3 D. 0
2223	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1 D. None
2224	The greatest term in the expansion of $(3+2x)^9$, when x=1 is	A. 4th B. 4th and 5th C. 5th D. 6th

2225	If the 4th term in the expansion of $(px + x^{-1})^m$ is 2.5 for all $x \in R$, then	
2226	Question Image	A. ab=-1 B. ab = 1 C. ab = 2 D. None
2227	If $(1+x)^n = C_0 + C_1x + C_2x^2 + ...+C_nx^1$ then $C_0C_2 + C_1C_3 + C_2C_4 + ...+C_{n-2}C_n =$	
2228	The greatest integer which divides the number $101^{100} - 1$ is	A. 100 B. 1000 C. 10000 D. 100000
2229	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
2230	Question Image	A. ⁿC_r B. ⁿ⁺¹C_{r+1} C. ⁿC_{r+1} D. None
2231	Question Image	A. 3/8 B. 7/8 C. 1/8 D. None
2232	For every positive integers n 1+5+9+....+ (4n - 3) is	A. n(2n - 1) B. (2n - 1) C. n - 1 D. n
2233	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
2234	(2.02)4 s equal to	A. 16 B. 16.6496 C. 17 D. 18
2235	$7^{2n} + 3^{n-1} . 2^{3n-3}$ is divisible by	A. 24 B. 25 C. 9 D. 13
2236	$(51)^4$ is equal to	A. 7065201 B. 8065201 C. 6765201 D. 6565201
2237	The term involving x^4 in the expansion of $(3 - 2x)^7$ is	A. 120 B. 1512 C. 1250 D. 15120
2238	$(0.90)^{1/2}$ is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
2239	Question Image	
2240	$(0.90)^{1/2}$ is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
2241	Question Image	A. Imaginary B. Rational C. Irrational D. Real numbers
2242	Number of terms in the expansion of $(a+x)^n$ is	A. n - 1 B. n + 1 C. n + 2 D. n + 3
		A. n < 8/5

2243	Question Image	B. n < 5/8 C. |n| < 8/5 D. |n|>8/5
2244	$^{n}C_{2}$= exists when n is _____	
2245	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
2246	The expansion $(1 + x)^{-3}$holds when	A. |x| > 1 B. |x| < 1 C. x < 1 D. x > 1
2247	The middle term of the expansion $(1 + 2x)^{6}$is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
2248	If n is add the expansion $(a + x)^{n}$has middle terms	A. 2 B. 3 C. 4 D. 5
2249	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
2250	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
2251	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°
2252	The maximum value of $\sin\theta\cos\theta$is	A. 1 B. 1/2 C. 1/4 D. 1/6
2253	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
2254	The maximum value of 12 $\sin\theta$-9 $\sin^{2}\theta$is x	A. 3 B. 4 C. 5 D. None of these
2255	The maximum value of 12 $\sin\theta$-9 $\sin^{2}\theta$is x	A. 3 B. 4 C. 5 D. None of these
2256	The maximum value of sin x + cos x is	
2257	Question Image	A. Right angled B. Obtuse angled C. Isosceles D. Equilateral
2258	Sin 50°-sin 70°+sin 10° is equal to	A. 1 B. 0 C. 1/2 D. 2
2259	The value of $\sin^{2}20°$ + $\sin^{2}70°$ is equal to	A. 1 B. 2 C. -1 D. 1/2
2260	If sin A = cos A, 0°<A<90° then A is equal to	A. 1 B. 1/2 C. 0 D. None of these
2261	The value of sin 28°cos 17°+cos 28°sin 17°is	
2262	Question Image	A. 45° B. 30° C. 75°

		D. 60°
2263	Question Image	
2264	Question Image	
2265	Question Image	
2266	The value of the expression sinθ+ cosθlies between	
2267	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
2268	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
2269	Question Image	A. G.P B. H.P. C. A.P. D. No particular sequence
2270	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	
2271	Fundamental law is	
2272	Tan(α-β)=	
2273	Question Image	A. -sinθ B. cosθ C. sinθ D. -cosθ
2274	cos 2α=	A. sin²α+ cos²α B. -cosθ C. tanθ D. None of these
2275	sin(180° -θ)=	A. cosθ B. -cosθ C. Tanθ D. Sinθ
2276	sinα=	A. 2 sinαcosα B. 2 sinαcos<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);">β C. 2 sinα/2 cosα/2 D. 1+ tan²α/2
2277	cosθ/2=	

2277	cos$\theta/2$	
2278	Tan 2$\theta=$	
2279	sin ($\alpha+\beta$)=	A. sinαcosβ- cosαsinβ B. sinαcosβ- cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα+ cosβsinβ
2280	sin ($\alpha-\beta$)=	A. sinαcosβ- cosαsinβ B. sinαcosβ+ cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα- cosβsinβ
2281	sin (α+β) + sin (α-β)	A. 2 sinαcosβ B. sin (2αβ) C. sinαcosα D. None of these
2282	sin (α+β) - sin (α -β) =	A. 4 cosαsinβ B. 2 cosαsinβ C. 4 cosαcosβ D. 4 sin αsinβ
2283	cos 2α=	A. 1 - 2 sin²α B. sin ²α+ cos²β C. sin²α- cos²<span

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

2295	sec (-360°) = _____	C. 2 D. 3
2296	cos 315° = _____	
2297	$2\pi+\theta$ will have terminal side in Quad	A. I B. II C. III D. IV
2298	Which one is a pair of allied angles	A. (180° -θ) B. (180° -θ,180° +θ) C. (180° +θ) D. None of these
2299	sin (2π-θ)	A. cosθ B. sinθ C. tanθ D. -sinθ
2300	cos (α-β) = cosαcosβ+ sinαsinβ is true for all	A. α>β> 0 B. α>β C. β>α D. None of these
2301	Distance between A(3, 8), B(5, 6) is	
2302	Domain of sinθ is	A. Set of real numbers B. Set of complex numbers C. Set of natural numbers D. Set of even numbers
2303	Domain of cosθ is	A. Set of odd numbers B. Set of integers C. Set of real numbers D. Set of complex numbers
2304	Range of sinθ is	
2305	Range of cosθ is	
2306	Domain of cotθ is	
2307	Range of tanθ is	A. Set of complex numbers B. Set of real numbers C. Set of odd numbers D. Set of positive integers only
2308	Range of cotθ is	A. (+∞to -∞) B. (-1 to +1) C. (-5 to +5) D. Set of even numbers only
2309	Domain of secθ is	
2310	Domain of cosecθ is	
2311	Range of secθ is	A. Z - {x | -1 < x < 1} B. W - {x | -1 < x < 1} C. R - {x | -1 < x < 1} D. R
2312	Range of cosecθ is	A. W - {y | -1 < y < 1} B. R - {y | -1 < y < 1} C. O - {y | -1 < y < 1} D. R
		A. π B. 2π

2313	Period of Sine and Cosine function is	 C. -π D. -2π
2314	Period of Tangent function is	A. 0° B. -π C. π D. 2π
2315	Period of Cotangent function is	A. π B. -π C. 0 D. -2π
2316	The function sine and Cosine have the closed internal as their range	A. [1, 0] B. [-1, 1] C. [0, 1] D. [-1, 2]
2317	Domain of tangent function is	
2318	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
2319	Domain of y = cot x = _____	
2320	The range of y = sin x is _____	A. [1, -1] B. [-1, 1] C. [0, -1] D. [-∞+∞]
2321	The Domain of y = sin x is _____	A. Set of real numbers B. Rational C. Irrational no. D. None of above
2322	tan (π-θ) = _____	A. - sinθ B. - tanθ C. - cosθ D. - cotθ
2323	The period of cosec 10x is _____	
2324	The period of tan [x/3] is _____	A. 2π B. 4π C. 3π D. 5π

2325	Tangent is a periodic function and its period is _____	A. 2π B. 3π C. π D. 4π
2326	Sine is a periodic function and its period is _____	A. π B. s C. 2π D. 4π
2327	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).	
2328	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	
2329	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
2330	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 =	
2331	Question Image	A. 30° B. 60° C. 45° D. None of these
2332	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
2333	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°
2334	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
2335	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
2336	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	
2337	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 45°. The height of the chimney is	
	An observer on the top of a cliff 200 m above the sea level, observes the angles of	

2338	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	
2339	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
2340	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
2341	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
2342	If the elevation of the sun is 30°, then the length of the shadow cast by a tower of 150 ft height is	
2343	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	
2344	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	
2345	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
2346	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	
2347	120° degrees are equal to how many radians?	
2348	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
2349	Area of ΔABC=	A. ab sinα B. 1/2 ab sinα C. 1/2 ac sinγ D. 1/2 ac sinβ
2350	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
2351	If θ = 60° then	A. sinθ= 1/2 B. tanθ= cot 30° C. <span style="color: rgb(34, 34, 34); font-family: "Times New Roman";

	If θ = 60° then	font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">θ=π/4 D. secθ= 4
2352	If Cosθ=0, thenθ= _____	A. nπ/2 B. (2n + 1)π/2 C. (2n - 1)π/2 D. (4n + 1)π/2
2353	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
2354	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ 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
2355	The value of sin [arc cos (-1/2)] is	
2356	Question Image	A. 1 B. -1 C. 0 D. None of these
2357	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
2358	Question Image	
2359	Question Image	A. π/ 2 B. π/ 3 C. π/ 4 D. π
2360	Question Image	A. π/ 4 B. π/ 6 C. π/ 3 D. 2π/ 3
2361	Question Image	A. 1 B. 7 C. 4 D. None of these
2362	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$then $p^2 + q^2 + r^2 + 2pqr$ is equal to	A. 3 B. 1 C. 2 D. -1

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

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

2408	One root of the equation cos x - x + 1/2 = 0 lies in the interval	
2409	The solution of the equation $\cos^2\theta$+ $\sin\theta$+ 1 = 0 lies in the interval	
2410	If sin ($\pi\cos\theta$) = cos ($\pi\sin\theta$), then which of the following is correct?	
2411	Question Image	A. 7 B. 5 C. 6 D. None of these
2412	Question Image	A. From an empty set B. 1 C. 2 D. >2
2413	The general value ofθsatisfying the equation 2 $\sin^2\theta$- 3 sinθ-2 = 0 is	
2414	Question Image	
2415	Question Image	A. 1 B. 2 C. 3 D. None of these
2416	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
2417	Question Image	
2418	Question Image	
2419	Question Image	A. [0,1[B. [0, 1] C.]0, 1[D. None of these
2420	Question Image	A. 2 B. 4 C. 8 D. 12
2421	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
2422	Question Image	A. π B. 2π C. π/2 D. None of these
2423	The period $\sin^2\theta$is	A. π² B. π C. 2π D. π/2
2424	The period of the function f(x) = $\sin^4$x + $\cos^4$x is	A. π B. π /2 C. 2π D. None of these
2425	The periods of the function f(x) = x[x] is	A. 1 B. 2 C. Non periodic D. None of these
2426	$\pi$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
2427	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
2428	Question Image	
2429	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
2430	Question Image	A. -2 B. -1 C. 1 D. 2
2431	If $f(x) = x^3 - 2x^2 + 4x - 1$, then f(-2) = ?	A. 0 B. -25 C. 5 D. 45
2432	Question Image	A. 0 B. -2 C. 1 D. 4
2433	$p(x) = 2x^4 - 3x^3 + 2x - 1$ is polynomial of degree	A. 1 B. 2 C. 3 D. 4
2434	Which is not included in the domain of $\cos^{-1}x$	A. 0 B. 1 C. -1 D. 2
2435	Which is an explicit function	A. y = x²+ 2x - 1 B. x²+ xy + y²= 2 C. x²+ y²= xy + 2 D. All are
2436	Question Image	
2437	The domain of f(x) = log x is	A. [0,∞] B. (0,∞) C. [0,∞[D. [∞,∞]
2438	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
2439	The range of inequality x + 2 > 4 is	A. (-1, 2) B. (-2, 2) C. (1,∞) D. None
2440	Question Image	A. 1 B. 0 C. -2 D. 3
2441	Graph of the question $x^2 + y^2 = 4$ is	A. A circle B. An ellipse C. A parabola D. A square
2442	Domain of y = scs x is	A. All real numbers except π/2 + n*π B. R C. All negative integers D. None of these

2443	The area of circle of unit radius =	A. 0 B. 1 C. 4 D. π
2444	Question Image	A. 0 B. 1 C. 8 D. ∞
2445	Question Image	A. 3/4 B. r C. v D. None of these
2446	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
2447	Question Image	A. R/[0,4] B. R/(0,4) C. (0,4) D. [0,4]
2448	Question Image	A. (1,7/3) B. (1, 7/5) C. (1, 11/7) D. (1, 3/5)
2449	Question Image	A. 1/8 B. 1/2 C. 1/4 D. 1/6
2450	Question Image	A. 2 B. 1 C. 5 D. 0
2451	Question Image	A. 1 B. -1 C. -1/2 D. 1/2
2452	Question Image	A. xy B. y C. 0 D. x
2453	Question Image	
2454	Question Image	A. y/x B. x/y C. y/z D. None
2455	Question Image	A. 1 B. 1/2 C. 0 D. None
2456	Question Image	
2457	Question Image	
2458	Question Image	
2459	Question Image	
2460	Question Image	
2461	Question Image	
2462	Question Image	A. 0 B. U C. u/2 D. log u
2463	Question Image	A. y : x B. x : y C. -y : x D. -x : y

2464	F(x) = x^xdecreases in the interval	A. (0, e) B. (0, 1) C. (-∞,0) D. None
2465	The parametric equation of a curve are x = t^2, y = t^3then	
2466	Question Image	A. 2x + 2y B. 4 - x² C. -x/y D. x/y
2467	Question Image	A. xa^{x-1} B. a^x C. x in a D. a^xln a
2468	Question Image	
2469	Question Image	
2470	Question Image	
2471	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
2472	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
2473	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
2474	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
2475	The equation of motion of a stone thrown vertically up wards is s = ut - $4.9t^2$the maximum height attained by it =	
2476	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
2477	Question Image	A. -2x cos x² B. -2x²sin x² C. -x²sin x D. -2x²sin x²
2478	Second derivative of y = x^9+ $10x^2$+ 2x - 1 at x = 0 is	A. 10 B. 20 C. 12 D. 1
2479	Derivative of strictly increasing function is always	A. Zero B. Positive C. Negative D. Both (A) and (B)
2480	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
2481	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)
2482	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	
	Sand falls from a tube in such a way that it	

2483	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	
2484	Question Image	A. 2, 3 B. 3, 3 C. 2, 6 D. 2, 4
2485	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
2486	Question Image	A. 1 B. 2 C. 3 D. 4
2487	Question Image	A. 1 B. 2 C. 3 D. 4
2488	The differential equation representing the family of curves y = A cos (x + B), where A, B are parameters, is	
2489	The differential equations of all conis whose axes coincide with the co-ordinate axis is	
2490	The differential equation of all st. lines which are at a constant distance to form the origin is	
2491	Question Image	
2492	Question Image	A. y + 1 = Ae^x B. y + 1 = Axe^x C. xe^x= C D. y + xe^x= C
2493	Question Image	
2494	Question Image	
2495	Question Image	
2496	Which of the following integrals can be evaluated	
2497	Question Image	
2498	Question Image	
2499	Question Image	A. A variable B. A constant C. 0 D. None of these
2500	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
2501	Question Image	
2502	Question Image	
2503	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
2504	The arbitrary constants involving in the solution can be determined by the given conditions. Such conditions are called	A. Boundaries B. Variable separable C. Initial values D. None

2505	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
2506	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
2507	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
2508	Question Image	A. 0 B. 1 C. 2 D. 4
2509	Question Image	A. π B. π/6 C. -π/2 D. 2π
2510	Question Image	
2511	Which of the following integrals can be evaluated	
2512	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
2513	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
2514	The direction cosines of a line equally inclined with co-ordinate axes are	
2515	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>
2516	The distance of the points (3, 4, 5) from y-axis is	
2517	Question Image	A. (3, 1, -2) B. (3, -2, 1) C. (2, -1, 3) D. (-1, -2, -3)
2518	The st. lines whose direction cosines satisfy al + bm + cn = 0, fmn + gnl + hlm=0 are perpendicular if	
2519	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	
2520	Question Image	A. 0 B. 2 C. 4/3 D. 5/3
2521	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
2522	The distance of the plane 2x - 3y + 6z + 14 = 0 from the origin is	A. 14 B. 2 C. -2 D. 11
	The equation of the plane which bisects the	A. x + y + z - 15 = 0 B. x + y + z - 15 = 0

2523	The equation of the plane which bisects the line joining (2, 3, 4) and (6, 7, 8) is	B. x - y + z - 15 = 0 C. x - y - z - 15 = 0 D. x + y + z + 15 = 0
2524	The lines l1and l2intersect. The shortest distance between them is	A. Positive B. Negative C. Zero D. Infinity
2525	The equations of the line thro' the point (2, 3, -5) and equally inclined to the axis are	
2526	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
2527	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
2528	Question Image	
2529	Question Image	A. -10 B. 10/7 C. -10/7 D. -7/10
2530	Question Image	A. Parallel to the plane B. At right angles to the plane C. Lies in the plane D. Meet the plane obliquely
2531	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)
2532	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
2533	Question Image	
2534	Question Image	
2535	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
2536	Question Image	A. x-axis B. y-axis C. z-axis D. None of these
2537	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
2538	The center of the sphore which passes thro' (a, 0, 0), (0, b, 0), (0, 0, c) and (0, 0, 0) is	
2539	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
2540	If x < y, 2x = A, and 2y = B, then	A. A = B B. A < B C. A < x D. B < y
2541	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b C. -a D. (a - b)²
		A. x > 1 B. x > -1

2542	If 4 - x >5, then	C. x < 1 D. x < -1
2543	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
2544	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
2545	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
2546	Which is in the solution set of 4x - 3y < 2	A. (3, 0) B. (4, 1) C. (1, 3) D. None
2547	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)
2548	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
2549	Question Image	A. p < r B. p > rr C. p + r < 0 D. p - r < 0
2550	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
2551	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
2552	r + 3 >5 then which is true	A. r + 2 > 4 B. r + 2 < 4 C. r + 2 = 4 D. None
2553	ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
2554	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
2555	Optimize means _____ a quantity under certain constraints	A. Minimize B. Maximize C. Maximize or minimize D. None of these
2556	There may be _____ feasible solution in the feasible region	A. Infinite B. Finite C. Defined D. None of above
2557	Inequalities have _____ symbol	A. 2 B. 3 C. 4 D. 1
2558	The graph of linear equation 2x + 3y = 10	A. Parabola B. Circle C. Hyperbola D. Straight line
		A. -<span style="color: rgb(34, 34, 34); font-family: "Times New Roman";

2559	The solution set of x < 4 is	font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">∞< x < 4 B. -∞> x > 4 C. -∞< x < 2 D. -∞> x > 2
2560	The eccentricity of the conic $9x^2 - 16y^2 = 144$ is	A. 4/5 B. 5/4 C. 4/3 D. 3/4
2561	The line y = 4x + c touches the hyperbola $x^2 - y^2 = 1$ if	
2562	Question Image	
2563	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
2564	Question Image	A. A parabola B. An ellipse C. A hyperbola D. A circle
2565	Question Image	A. 1 B. 5 C. 7 D. 9
2566	Question Image	
2567	The equation $x^2 + y^2 = 0$ represents	A. A circle B. A degenerate circle C. An empty set D. A st. line
2568	Circumcentre of the triangle, whose vertices are (0, 0), (6, 0) and (0, 4) is	A. (2, 0) B. (3, 0) C. (0, 3) D. (3, 2)
2569	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
2570	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
2571	The length of the tangent from (2, 1) to the circle $x^2 + y^2 + 4y + 3 = 0$ is	
2572	The eccentricity of the parabola $y^2 = -8x$ is	A. -2 B. 2 C. -1 D. 1
2573	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
2574	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
2575	The line y = 2 x + c is a tangent to the parabola $y^2 = 16x$ if c equals	A. -2 B. -1 C. 0 D. 2

2576	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
2577	The equation $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ represents an ellipse if	
2578	The latus rectum of the ellipse $5x^2 + 9y^2 = 45$ is	A. 10 / 3 B. 5 / 3 C. 3 / 5 D. 3 / 10
2579	Question Image	A. An ellipse B. A parabola C. A circle D. A hyperbola
2580	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
2581	Question Image	A. 2 b B. 2 a C. 2 ab D. a + b
2582	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
2583	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
2584	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	
2585	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
2586	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
2587	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
2588	Question Image	
2589	The radius of the circle $(x - 1)^2 + (y + 3)^2 = 61$ is	A. 8 B. 4 C. 64 D. None of these
2590	The point on $y^2 = 4ax$ nearest to the focus has its abciassae equal to	A. -a B. a C. a/2 D. 0
2591	If t is the parameter for one end of a focal chord of the parabola $y^2 = 4ax$, then its length is	
2592	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
2593	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
2594	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

2595	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
2596	The point (x_1, y_1) lies outside the circle $x^2 + y^2 + 2gx + 2fy + c = 0$ if	
2597	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
2598	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
2599	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
2600	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. None of these
2601	The axis of the parabola $y^2 = 4ax$ is	A. X = 0 B. Y = 0 C. X = y D. X = -y
2602	The end points of the major axis of the ellipse are called its	A. Foci B. Vertices C. Co - vertices D. None of these
2603	The vertices of the ellipse $x^2 + 4y^2 = 16$ are	
2604	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
2605	The two different parts of the hyperbola are called its	A. Vertices B. Directrices C. Nappes D. Branches
2606	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
2607	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
2608	Question Image	A. Free vector B. Null vector C. Unit vector D. None of these
2609	Unit vector in the positive direction of x-axis is	
2610	A vector of magnitude zero is called	A. Position vector B. Null vector C. Free vector D. None of these
2611	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
2612	Question Image	
2613	Which of the vectors have opposite direction?	
2614	Question Image	A. l²+ m²+ n²= 0 B. l²- m²+ n²= 1 C. l²+ m²+ n²= 1 D. l²+ m²- n²= 0
		A. 1, 0, 0 B. 0, 1, 0

2615	The direction cosines of y-axis are	B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
2616	Question Image	
2617	Question Image	A. 0 B. 90° C. 180° D. 360°
2618	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
2619	If the vector 2i + 4j - 7k and 2i + 6j + xk are perpendicular then x = ?	A. 0 B. 2 C. 4 D. 7
2620	Question Image	A. A B. 0 C. Unit vector D. None
2621	The angle between the vectors 3i + j - k and 2i - j + k is	
2622	3j . k x i	A. 0 B. 1 C. 3 D. 9
2623	Question Image	
2624	Question Image	
2625	Question Image	
2626	Question Image	A. A,. B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
2627	If C is the mid point of AB and P is any point outside AB, then	
2628	Question Image	A. 0 B. 1 C. -1 D. None
2629	Gooch crucible is made of :	A. Brass. B. Porcelain. C. Bronze. D. Gold.
2630	The real number system contains.	A. Positive Numbers B. Negative numbers C. Zero D. (option a, b and c)
2631	For each real number, there is a number which is its	A. Negative B. Possitive C. Opposite D. Similar
2632	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
2633	The set of rational number is represented by	A. W B. R C. Q' D. Q
2634	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
2635	There is no element common in	A. N and W B. E and W C. N and O D. Q and Q'

2636	√11 is	A. an irrational number B. Rational number C. odd number D. Negative number
2637	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
2638	The square root of every incomplete square is an	A. Rational numbers B. Even numbers C. odd numbers D. Irrational numbers
2639	It is not possible to find the exact value of	A. π B. √9 C. ∛27 D. √1
2640	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
2641	Q ∪ Q' =	A. Q B. Q' C. N D. R
2642	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
2643	The multiplicative inverse ofx^(-1) is	A. x B. a-2 C. 0 D. 1
2644	I is not	A. Real number B. Natural number C. Prime Number D. Whole Number
2645	The additive identity of real number is	A. 1 B. 2 C. 1/2 D. 0
2646	4/√49 is a	A. Irrational Number B. Prime Number C. Rational number D. Whole number
2647	The√ is used for the	A. Positive square root B. Negative square root C. +ve and -ve square root D. Whole number
2648	The negative square root of 9 can be written as:	A. -√9 B. √9 C. √18 D. -√18
2649	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
2650	The identity element with respect to subtraction is	A. 0 B. -1 C. 0 and 1 D. None of thes
2651	If 0 = R, thenthe additive inverse of a is	A. 1/9 B. ^{1/-9} C. a D. -a
2652	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
2653	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

		D. closure property
2654	√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
2655	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
2656	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
2657	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
2658	14 is not a	A. Prime number B. Whole number C. Even number D. Real number
2659	24 can be written as a product of	A. Odd factors B. Even factors C. Whole factors D. Prime factors
2660	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
2661	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)
2662	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
2663	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
2664	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
2665	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
2666	The set of months in a year beginning with S.	A. {September, October, November} B. Singleton set C. Null set D. Empty set
2667	*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
2668	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
2669	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
2670	Empty set is	A. Not subset of every set B. Finite set C. Infinite set D. Not the member of real numbers
2671	Every set is an improper subset of	A. Empty set B. Equivalent set

		C. Itself D. Singleton set
2672	{0} is a	A. Empty set B. Singleton set C. Zero set D. Null Set
2673	Z is a	A. Infinite set B. Finite set C. Singleton set D. Set of all integers
2674	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}
2675	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}
2676	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}
2677	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
2678	If 0 = {1,3,5.....}, then n (0) =	A. Infinite B. Even numbers C. odd integers D. 99
2679	If A = {2m/m^3= 8 , m€ Z} then A =	A. {1,8,27} B. {4} C. (2,4,6} D. {2,16,54}
2680	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)
2681	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}
2682	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}
2683	If E = { } , then P(E)	A. ⌀ B. { } C. {(2),(4),(6)....} D. (⌀)
2684	The number of subset of {0} is	A. 1 B. 2 C. 3 D. None

2685	The many subset can be formed from the set {a,b,c,d}	A. 8 B. 4 C. 12 D. 16
2686	The number of proper subset of A ={a.b.c.d} is	A. 3 B. 6 C. 8 D. 15
2687	The number of subsets of B = {1,2,3,4,5}	A. 10 B. 32 C. 16 D. 5
2688	0 is a symbol of	A. singleton set B. Empty set C. Equivalent set D. Infinite set
2689	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite
2690	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
2691	Another name of quadratic equation is	A. Polynomial B. 2nd degree polynomial C. Linear equation D. simaltaneous equations
2692	A quadratic equation has two	A. roots B. degree C. variables D. constants
2693	The roots of the equation x2 +6x-7=0,are	A. 1 B. 2 C. 1 and -7 D. -7
2694	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
2695	The solution of the quadratic equation x2 -7x + 10=0, is	A. 2 B. 5 C. 2,5 D. 7
2696	The graph of the quadratic equation is	A. Straight line B. Circle C. Parabola D. elipse
2697	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
2698	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
2699	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
2700	The root of the quadratic equation are	A. 3 B. 2 C. 1 D. 4
2701	If a parabola opens down, then its vertex is at the	A. Right of the parabola B. Left of parabola C. Lowest point on the parabola D. Highest point on the parabola
2702	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

	the parabola is called.	C. Roots of the equation D. Coefficient of the equation
2703	The standard parabolic form of the equation $f(x) = x^2 + 4x + 1$ is	A. x(x+4)+1 B. (x+2)²-3 C. (x+4)³ + 9 D. x(x-2)²+1
2704	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
2705	The minimum value of the quadratic function f(x) = x2 +6x -2, is	A. 11 B. 6 C. -11 D. 13
2706	The minimum value of the quadratic function f(x) = 5 x 2-11,is	A. -11 B. 6 C. -7 D. 7
2707	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)
2708	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)
2709	The maximum value of the quadratic function f(x) = -2x2+20x,is	A. 4 B. 3 C. 50 D. 7
2710	The maximum value of the quadratic function f(x) = 2x2-4x+7,is	A. 3 B. 5 C. -3 D. -5
2711	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
2712	(x-1) is a factor of	A. 2x³-3x²+9 B. 2x³-5x-8 C. 48x²⁻46x-9 D. x⁹-1
2713	If 3x4 +4x3+x5is divided by x+1 , which of the following is the remainder	A. 7 B. -2 C. 6 D. 1
2714	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
2715	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
2716	The synthetic division method is only used to divide a polynomial by	A. quadratic equation B. binomial C. linear equation D. monomial
2717	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)
2718	A polynomial P(x)has a factor (x-a)if P(a) =	A. a B. x C. 1 D. 0
2719	Each complex cube root of unity is square of	A. itself B. 1 C. -1 D. the other
		A. 1

2720	Sum of all the four forth roots of unity is	B. -1 C. i D. 0
2721	When rational fraction is separated into partial fractions, the result is	A. an identity B. A fraction C. A partial sum D. Improper fraction
2722	An improper rational fraction can be reduced by division to a	A. Proper fraction B. Polynomial C. mixed form
2723	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
2724	An equation which hold good for all values of the variables is called	A. Identity B. fraction C. mixed form D. Partial equation
2725	Sequence also called.....	A. Series B. Function C. progressions D. Elements
2726	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
2727	If all members of a sequence are real numbers then it is called a	A. Series B. Function C. Real sequence D. Range
2728	A sequence having no last term is called	A. arithmetic sequence B. Geometric sequence C. Finite sequence D. Infinite sequence
2729	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
2730	1,1/3,1/5,1/7,1/9..... is a	A. geometric sequence B. finite sequence C. infinite sequence D. arithmetic series
2731	The element range of sequence are called	A. Series B. progression C. Members D. Terms
2732	The 6th term of the sequence 7,9,12,16.....is	A. 27 B. 32 C. 20 D. 19
2733	1/2,1/3,1/4,1/5.....is	A. a geometric sec B. an arithmetic series C. finite sequence D. an infinite sequece
2734	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
2735	The sixth term of the sequence 1,3,12,60....is	A. 1500 B. 72 C. 2160 D. 2520
2736	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
2737	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
		A. P-6a

2738	The seventh term of an A.P whose first term is P and common difference is q. is	B. P+6q C. P-4q D. P-nq
2739	The sum of first twenty odd integers in A.P is	A. 400 B. 397 C. 404 D. 408
2740	The 31 term of the A.P 5,2,-1.....is	A. -82 B. 82 C. 85 D. -85
2741	The 26th term of the A.P -2,-4,10,.....is	A. 136 B. -136 C. 148 D. -148
2742	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
2743	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
2744	The nth term of an A.P., is 12-4n. Its common difference is	A. 8 B. 4 C. 4 D. 16
2745	The 7th term of the A.P 7,11,15,is	A. 24 B. 31 C. 26 D. 23
2746	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
2747	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
2748	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
2749	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
2750	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
2751	The sum of an indicated number of terms in a sequence is called	A. sequence B. progression C. Series D. Mean
2752	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
2753	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
2754	What is the probability of being born on Wednesday?	A. 1/7 B. 1/2 C. 1/3 D. 1/8
2755	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

2756	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
2757	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
2758	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
2759	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
2760	n!/(n-1)!=	A. n B. n! C. (n-1)! D. 0!
2761	There is no integer n for which 3^n is	A. Odd B. even C. Natural D. Prime
2762	For each natural number n, n (n+1) is	A. an even B. an odd C. multiple of 3 D. Irrational
2763	n(n-1)(2n-1), for all natural numbers n, is divisible by	A. 12 B. 6 C. 2 D. 18
2764	The sum of the cubes of three consecutive natural number is divisible by	A. 9 B. 6 C. 5 D. 10
2765	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)
2766	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8
2767	If n € N , then n(n+3) is always	A. Multiple of 3 B. Multiple of 6 C. odd D. even
2768	For n€ N,$2^{n>2}$ > n is to only when	A. n<2 B. n≤ 4 C. n≥ 4
2769	For≥ -2 , 1+3+5+.....+(2n+5)	A. (n+2)² B. (n-2)² C. 2n+1 D. (n+3)²
2770	If nis positive integers, then 2^n>2n+1, only when	A. n≤ 3 B. n≥ 3 C. n≤ 2 D. n≤ 1
2771	for n€ N, $3^{2n + 7}$ is divisible by	A. 7 B. 8 C. 9 D. 10
2772	n! > 2^n-1 is true when	A. n≤ 3 B. n≤ 6 C. n≥ 4 D. n≤ 6
2773	n^2 - 1 divisible by 8 when n is	A. an odd integer B. an even integer C. Irrational

		D. Prime Number
2774	The middle term of $[1/x-x]^{10}$ is	A. -152 B. -252 C. 371 D. -421
2775	$(x^3-1/2x)^6$ is	A. 15/16 x² B. 2/13 x² C. 17/7 x² D. 16/15 x²
2776	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
2777	The middle term of $(x-y)^8$is	A. 25 x⁴y⁴ B. 70 x⁴y⁴ C. 120 x⁴y⁴ D. 97x⁴y⁴
2778	The term involving x^4 in the expansion (3-2x) is	A. 217x⁴ B. 15120x⁴ C. 313x⁴ D. -25x⁴
2779	(x3-1/x)12	A. 295 B. 495 C. 395 D. 722
2780	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
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 the third term of $(8a-b)^{1/3}$, after simplification is	A. -228 B. 1/288 C. 1/220 D. -1/177
2783	The term involving x4 the expansion (3-2x)7 is	A. 217 x4 B. 15120x4 C. 313x4 D. -25x4
2784	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
2785	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
2786	The seventh term of (x3+1/x)8is	A. 71 B. -22 C. 27 D. 28
2787	The term independent of x is the expansion $(x^3+1/x)^{12}$	A. 295 B. 495 C. 395 D. 722
2788	The 5th term of $(3a-2b)^{-1}$ is	A. 77b²/a⁵ B. 16b²/243 a⁵ C. 17b⁴/43a⁵ D. 25b³/43a⁵
2789	The fifth term of (a+2x3)17 is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
2790	The coefficient of x^{18} in $(ax^4-bx)^9$ after expansion is	A. 84a³ b⁶ B. 22a³b⁶ C. 27a⁴b⁵ D. 28a³b⁶
2791	The fifteenth term of $(3-a)^{15}$ is	A. -17a¹² B. -945a¹³

		C. -941a¹³ D. -515a¹²
2792	For all positive integral value of n,3^n< n! , when	A. n> 6 B. n< 6 C. n<11 D. n>11
2793	The period of tan x/7 is	A. 3π B. 7π C. 15π D. 5π
2794	The period of 2 cos x is	A. 30π B. 7π C. 5π D. 2π
2795	The period of|sin2x| is	A. π/2 B. -π/2 C. π D. π/3
2796	The period of|sin2x| is	A. π/2 B. -π/2 C. π D. π/3
2797	The period of cos(7x-5) is	A. π/7 B. 7π/2 C. π/2 D. 2π/7
2798	The period of 3 sin x is	A. 2π B. 9π C. 3π D. 5π
2799	Tangent is .....function	A. Inverse B. one-one C. in-to D. Periodic
2800	2π is the period of	A. sin□ B. tan□ C. cot□ D. all circular function
2801	The range of the tangent function is	A. all real numbers B. -1 ≤ x ≥ 1 C. natural number D. z⁺
2802	The period of the function csc x/4 us	A. 4x B. π/4 C. 8π D. π/8
2803	What is the period of 5 cot x=?	A. π B. -π C. π/2 D. 2π
2804	What is the period of 6 sin x=?	A. π B. -π C. π/2 D. 2π
2805	What is the period of cos 6x =?	A. π/2 B. π/3 C. π/4 D. π
2806	What is the period of tan 4/3 x =?	A. π/4 B. 4π/3 C. 7π/4 D. 3π/4
2807	What is the period of sin 2x/3 cos 4x=?	A. π B. 2π C. π/2 D. π/3
2808	The period of sin x/2 = Cos x/3 is	A. 2p B. 12p C. 13p D. 7p
		A. π/10

2809	The period of cot 8x is	B. 9π/7 C. π/9 D. π/8
2810	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
2811	A triangle has six	A. side B. elements C. angle D. tangents
2812	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□
2813	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
2814	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
2815	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[□]
2816	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
2817	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
2818	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
2819	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□
2820	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
2821	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
2822	The triangle that does not have a right angle is called.	A. Isosceles triangle B. right angle triangle C. equivalent triangle D. oblique triangle
2823	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
2824	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
2825	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
2826	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'

2827	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. haxagon
2828	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
2829	The principal value of sin-1√(3/2) is	A. -π/3 B. π/3 C. 2π/3 D. π/2
2830	The principal value of $\sin^{-1}$ (-1/2)	A. π/3 B. π/4 C. π/6 D. -π/6
2831	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
2832	x = $\sin^{-1}$ 3, then the value of sin x is	A. √(3/2) B. 3 C. Not possible D. -1
2833	In the interval 0≤ x ≤ π, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
2834	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>
2835	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
2836	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
2837	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
2838	sin ($\sin^{-1}$(1/2))=	A. 0 B. 2 C. ∞ D. 1/2
2839	Sin -1 x=	A. sin(π/2-x) B. Sin-1 (π/2-x) C. π/2-cos-1x D. π/2 + cos-1x
2840	sn (2sin-10.8)	A. 0.56 B. 0.69 C. -0.16 D. 0.96
2841	sin -1(sin2π/3) =	A. π/2 B. 2π/3 C. -3π/2 D. π/3
2842	Sin-1(-x)=	A. x B. -x C. -sin-1 x D. cos-1 x
2843	$\sin^{-1}$ x =	A. tan⁻¹ x B. Cosec⁻¹ x C. Cosec x D. cosec⁻¹(1/x)
		A. π/3

2844	What is the value of cos-1(1/2)?	B. π/4 C. 3π/2 D. π/6
2845	The value of cos(cos-1 1/2) is	A. 1/2 B. √3/2 C. -1/2 D. 1/√2
2846	What is the value of cos (cos-1 2) ?	A. √2 B. 1/2 C. undefine D. 0
2847	The exact degree value of the function sin-1(-√3/2) is	A. 70^o B. 50^o C. 90^o D. 60^o
2848	Cos (cos4π/3)=	A. π/2 B. π/3 C. 2π/3 D. -π/3
2849	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
2850	Ifπ≤x≤2π, then cos-1 (cos x)=	A. cos x B. -x C. 1/x D. -x
2851	Cos-1 (-x) =	A. -x B. 1/x C. tan-1 x D. π-cos-1 x
2852	Cos-1(x)=	A. cos x B. x C. tan-1(-x) D. Sec-1 (1/x)
2853	$cos^{-1}(cos\ x)$ =	A. x B. cos x C. x = 1/x D. cos⁻² x
2854	Cos^{-1} 12/13 =	A. tan⁻¹ 3/5 B. cot⁻¹ 13/12 C. Sec⁻¹ 13/12 D. sin⁻¹ 5/13
2855	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
2856	The exact value of cos^{-1} (-1) + cos^{-1} (1) =	A. π B. -π C. π/2 D. π/3
2857	The point where the axis meets the parabola is called	A. Directrix B. Foucu C. Chord D. Vertix
2858	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
2859	The vertex of the equation $y^2 = 4ax$ is:	A. (2, -2) B. (1,1) C. (0 , 0) D. (2 , 2)
2860	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
2861	ℓ is a	A. variable B. Positive constant C. Positive variable D. Directrix

2862	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
2863	A line joining two distinct points on a parabola is called a _____ of the parabola.	A. Chord B. Tangent C. Lust rectum D. directrix
2864	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
2865	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
2866	a chord passing through the focus of a parabola is called a:	A. Focal chord B. Latus rectum C. Tangent D. Directrix
2867	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
2868	If the vertex of the parabola is the origin and directrix is x+5 = 0 . then its latus rectum is:	A. 10 B. 5 C. 0 D. 20
2869	The conic is a parabola, when:	A. e > 1 B. e < 1 C. e = 1 D. e = 0
2870	What is the axis of the parabola $y^2 = 4ax$?	A. x = 0 B. y = 0 C. x = a D. y = 0
2871	The axis of the parabola $x^2 = 4ay$ is:	A. y = 0 B. x = 0 C. x = -a D. y = a
2872	The parabola y2 + 2y + x = 0 lie in _____ quadrant.	A. First B. Second C. Third D. Fourth
2873	The point which is closet to the focus of a parabola is:	A. vertex B. Chord C. Focus D. Directix
2874	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
2875	the latus rectum of the parabola $x^3 = -4ay$ is:	A. x = a B. y = -a C. x = -a D. y = 0
2876	If e> 1 , then the conic, is:	A. Ellipse B. Parabola C. Hyperbola D. None of these
2877	Latus rectum = 4 x _____	A. focal distance of the vertex B. Chord C. Focus D. 1/2
2878	Which shape of the following objects are approximately parabolic ares?	A. Light reflectors B. Force C. Weight of the pendul D. None of these
2879	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)
2880	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)
2881	The eccentricity of parabola is:	A. 1 B. 0 C. Greater than 1 D. Less than 1
2882	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
2883	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
2884	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
2885	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
2886	if the value of the sphere, $v = 4/3\pi r^2$, 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
2887	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
2888	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
2889	The domain of y =√(x^2-9) is	A. R B. (0 , +∞) C. (-∞ , -3) U (3 , +∞) D. (0 ,∞)
2890	In the function f: A□B, the elements of a are called	A. Images B. Pre-images C. ranges D. Parameters
2891	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
2892	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
2893	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}
2894	_____ 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
2895	Every relation, which can be represented by a linear equation in two variables, represents a	A. Relation B. Cartesian product C. Function D. Graph
2896	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
		A. y = f(x)

2897	If x is an image of y under the function f. This can be written as	B. f(x) = 0 C. x = f(y) D. f(y) =0
2898	What is range of the function g (x) =|x-3|?	A. [0 ,∞) B. (0 ,∞) C. (-∞ ,3] D. [0,∞)
2899	The largest possible domain of the function: $y=\sqrt{(x)}$ is:	A. (0 ,∞) B. 12 C. (3 , 12) D. (3 ,∞)
2900	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
2901	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
2902	If the function y=2x -3, what is the preimage of 11?	A. 11 B. 7 C. 5 D. 2
2903	if $f(x) = x^3 -3x^2 +5x -1$, then $f(-\sqrt{2})=$	A. $7+7\sqrt{2}$ B. $3+3\sqrt{2}$ C. $-7-7\sqrt{2}$ D. $-3-3\sqrt{2}$
2904	Express the perimeter P of square as a function of its area A?	A. $P = 4\sqrt{A}$ B. $P =\sqrt{A}$ C. P = 2A D. $P =\pi\sqrt{A}$
2905	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
2906	A function of the form p(x)/Q(x) is called:	A. Rational function B. Logarithmic function C. Exponential function D. Hyperbolic function
2907	xy= 2 is:	A. a constant function B. an identity function C. an improper function D. implicit function
2908	A function f is said to be an even if f(-x) =	A. 0 B. 1 C. f(x) D. -f(x)
2909	f(x) = sin x is:	A. an odd function B. an even function C. an implicit function D. an exponential function
2910	$f(x) = x^3$is:	A. an odd function B. an even function C. an implicit function D. a quadratic funtion
2911	$\cos h^2 x + \sin h^2 x$	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
2912	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
2913	$f(x) = 3x^4 -2x^2 + 7$ is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
2914	$f(x) = 3x/x^2 + 1$ is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd

2915	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
2916	Multiplying each side of an inequality by (-1) will:	A. Not effect B. Change the sign C. Become zero D. Not defined
2917	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
2918	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
2919	A _____ divides the plane into left and right half planes.	A. Vertical line B. Horizontal line C. Non vertical line D. Inequality
2920	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
2921	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)
2922	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 >
2923	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
2924	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)
2925	The corner point of the boundary lines, x- 2x x+2y=10 is:	A. (8,1) B. (1,8) C. (6,10) D. (3,5)
2926	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
2927	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx D. lnx
2928	$\int f(x)$ is known as:	A. Definite itegral B. Indefinite integral C. Fixed integral D. Multiple integral
2929	The integral of $3x^5 dx$ is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
2930	$\int Sec^2 (ax + b)\, dx$ is equal to:	A. tan² (ax + b) B. 1/a tan² (ax + b) C. 1/atan (ax +b) D. tan (ax + b)
2931	$\int \sin(ax+b)\, dx$ 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)
2932	$\int x \cos dx$ 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
2933	∫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
2934	∫x/Sin^2 x dx is equal to:	A. x cot x + ln|sin x| B. -x cot x - ln|sin x| C. x cot x - ln|sin x| D. x. tan x- ln|sec x|
2935	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
2936	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
2937	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
2938	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
2939	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
2940	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
2941	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
2942	Question Image	A. 0 B. -1-w²
2943	In following question, a number series is given with one term missing. choose the correct alternative that will same pattern and fill in the blank spaces.1 , 4, 9, 16, 25, x	A. 35 B. 36 C. 48 D. 49