ECAT Mathematics Online Test

Sr	Questions	Answers Choice
1	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
2	Question Image	
3	The sum even binomial coefficient of (3+2x)5 is _____term	A. 16 B. 30 C. 8 D. 32
4	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)
5	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
6	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
7	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
8	Question Image	
9	What is the value of cos (cos-1 2) ?	A. √2 B. 1/2 C. undefine D. 0
10	~ p is the	A. implication of p B. disjunction of p C. negation of p D. conjuction of p
11	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
12	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
13	Question Image	A. At B. -A C. A D. A-1
14	The quadrilateral with the vertices (-3,-2), (2,-1), (3,4) and (-2,3) is a:	A. Square B. Rectangle C. rhombus D. parallelogram
15	Period of tan 4x is _____	
16	A matrix whose determinant is zero is said to be	A. Inverse B. adjoint C. singular D. None-singular
17	The converse and Inverse are	A. Equivalent to each other B. Opposite to each other C. Equal to each other

		D. Not Equal to each other
18	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
19	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
20	The greater part of our knowledge, is based on	A. deduction B. induction C. conjunction D. disjunction
21	The set {-1,1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
22	What is the circular measure of the angle between the hands of a watch at 4 O'clock	
23	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
24	Question Image	
25	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
26	The graph of a quadratic function is	A. Circle B. Straight line C. Parabola D. Triangle
27	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
28	The condition for polynomial equation $ax^2 + bx + c = 0$ to be quadratic is	
29	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}
30	If A is singular then $\|A\|$ = _____	A. 1 B. 0 C. 2 D. None of these
31	A,G,H are in	A. A.P B. G.P C. H.P D. None of these
32	In natural logarithm the base is	A. 1 B. 0 C. 10 D. e
33	Matrices A = [aij] 2 x 3 and B =[bij] 3 x 2 are suitable for	A. BA B. A² C. AB D. B²
34	Question Image	A. A natural number B. A rational number C. An irrational number D. A whole number
35	_____ 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
36	Additive inverse of - a - b is	A. a B. -a + b C. a - b

		D. a + b
37	Question Image	A. Singleton set B. A set with two points C. Empty set D. None of these
38	$(51)^4$is equal to	A. 7065201 B. 8065201 C. 6765201 D. 6565201
39	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
40	Question Image	
41	The transpose of a zero matrix is a _____	A. Column matrix B. Zero matrix C. Row matrix D. Scalar matrix
42	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
43	The slope of the normal at (4,3) to the circle $x^2+y^2=25$ is	A. 3/4 B. -3/4 C. 4/3 D. -4/3
44	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
45	If Cosθ=0, thenθ= _____	A. nπ/2 B. (2n + 1)π/2 C. (2n - 1)π/2 D. (4n + 1)π/2
46	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°
47	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
48	Question Image	
49	Question Image	
50	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	
51	Question Image	
52	Question Image	A. Addition B. Subtraction C. Multiplication D. None of these
53	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
54	Question Image	
55	tan(3π/2 +θ)= :	A. tanθ B. cotθ

	( ) _____	C. -tanθ D. -cotθ
56	Two matrices A =|a|and B=|b_y|,and|by|are equal iff	A. a_{ij}=a_{ji} B. aij = bij C. aif = bij D. bij = bji
57	Sin 50°-sin 70°+sin 10° is equal to	A. 1 B. 0 C. 1/2 D. 2
58	The principal value of sin-1√(3/2) is	A. -π/3 B. π/3 C. 2π/3 D. π/2
59	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
60	Solving the eqution x2+(a+b) x +ab=0 for gives:	A. x = -a. x = b B. x = a, x =-b C. x=-a, x=-b D. x =a, x =b
61	The angle between the vectors u = [-3 , 5] and v = [6 , -2] is:	A. π/2 B. -3π/2 C. π D. None of these
62	A second degree equation in which coefficients of $x^2$and $y^2$are equal and there is no product term xy represents	A. a parabola B. a circle C. an ellipse D. a pair of lines
63	3x + 4 ≥ 0 is	A. equation B. inequality C. identity D. none of these
64	Period of cot x is _____	
65	Question Image	A. 1777 B. 223 C. 257
66	The distance of the point (-2 , -3) from x-axis is	A. 2 B. -3 C. 3 D. 5
67	The eccentricity e of an ellipse is always	A. Rational B. Real C. Irrational D. Integer
68	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
69	The general equation of circle $x^3 + y^3 + 2gx + 2fy + c = 0$, contains:	A. Three independent variables B. Two independent conntants C. Three indepentent parameters D. Three independent constants
70	If k2x2 +2hxy- 4y2 =0 represents two perpendicular lines then	A. k = 2 B. k = ±2 C. k = -2 D. k ≠0
71	If f(x) = tan x then f(0) is	A. 0 B. 1 C. 1/2
72	Question Image	
73	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
74	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
75	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
76	If $f(x) = x^2$ then f(2) is	A. -2 B. 2 C. 4 D. -4
77	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
78	The vertices of the ellipse $x^2 + 4y^2 = 16$ are	
79	√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
80	21.256^o	A. 21^o15'21" B. 21^o20'56" C. 21^o25'1" D. 21^o25'6"
81	Deduction is mostly used in	A. elementary mathematics B. natural science C. higher mathematics D. medicine
82	Question Image	
83	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
84	Second derivative of $y = x^9 + 10x^2 + 2x - 1$ at x = 0 is	A. 10 B. 20 C. 12 D. 1
85	Question Image	D. None of these
86	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
87	Such a function which is (1 -1) is called	A. surjective B. injuctive C. bijective D. into
88	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
89	Question Image	A. x³- x²+ x + c B. 6x - 2 + c C. x³- 2x + c
90	Question Image	A. quadratic function B. constant function C. trigonometric function D. linear function
91	Question Image	
92	Question Image	
93	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°
94	The extraction of cube root of a given number is a	A. Unary Operation B. Binary Operation C. Relation D. None of these
		A. π / 4

95	Question Image	B. π / 6 C. π / 3 D. 0
96	∛8.6 is approximately equal to	A. 2.488 B. 2.48 C. 2.0488 D. 2.05
97	Unit vector in the positive direction of x-axis is	
98	Question Image	A. The law of of sines B. The law of tangents C. The law of consines D. None of these
99	Question Image	A. 2 B. 4 C. 3 D. 16
100	Question Image	A. c = 0 B. c = -1 C. c = -2 D. c = 1
101	n!/(n-1)!=	A. n B. n! C. (n-1)! D. 0!
102	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
103	In one hour, the hour hand of a clock turns through	
104	Question Image	
105	If the cone is cut by a plane perpendicular to the axis of the conec, then the section is a:	A. Circle B. ellipse C. hyperbola D. parabola
106	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
107	2x + 3y > 4 is a linear inequality in	A. one variable B. two variables C. three variables D. none of these
108	The law of cosines reduces to a2 +c2 =b2 for	A. α = 90° B. β = 90° C. γ = 90° D. α +β +γ =180°
109	If w is a cube root of unity then 1 + w + w^2= _____	A. 1 B. 2 C. 0 D. -1
110	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
111	Question Image	
112	Question Image	
113	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
114	The derivative of√x at x =a is:	A. 1/2a B. 2 / √a C. 2√x D. 1 / 2√x
115	For the parabola the line through focus and perpendicular to the directrix is called	A. Tangent B. Vertex C. Axis

		D. None
116	The point _____ is in the solution of the inequality 2x + 3y < 5	A. (1,1) B. (2,2) C. (0,1) D. (0,2)
117	The term involving x^4 in the expansion of $(3 - 2x)^7$ is	A. 120 B. 1512 C. 1250 D. 15120
118	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
119	radian is the measure of the angle subtended oat the centre of the circle by an are, whose length is equal to the	A. radius of the circle B. circumference C. are length D. tangent of the circle E. none of these
120	Question Image	A. 2^x B. 2^xln x C. 2^xln 2
121	Question Image	D. none of these
122	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
123	Question Image	
124	Question Image	A. sin h x B. cos h x C. tan h x D. cot h x
125	Question Image	
126	Question Image	A. sin h x B. cos h x C. tan h x D. cot h x
127	The equation of the circle with centre at (5, -2) and radius 4 is	
128	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
129	(1+w)(1+w2)(1+w4)(1+w8)....50 factors	A. 0 B. -1 C. 1 D. 2
130	e-radii are denoted by	A. η B. r2 C. r3 D. All of these
131	Question Image	
132	If #n = (n-5)2 + 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
133	Question Image	
134	Question Image	A. 1 B. 0 C. 5 D. 2
135	ax+by+c = 0, represent a	A. circle B. parabola C. straight line D. quadratic circle
136	Question Image	A. A B. 0

136	Question Image	C. Unit vector D. None
137	Question Image	
138	Question Image	
139	Question Image	A. -1 B. 0 C. 1 D. Undefined
140	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
141	What is the probability of being born on Wednesday?	A. 1/7 B. 1/2 C. 1/3 D. 1/8
142	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
143	f(x) = ax + b will be a constant function if	A. a = 1 , b = 1 B. a = 1 , b = 0
144	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
145	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
146	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
147	The slope of the normal at (5 cos, 0, 5 sin 0) to the circle. x^2+y^2 = 25 is:	A. tan□ B. cos□ /sin□ C. -cot□ D. - tan□
148	If a≠ , b≠ 0 and|a=b|=|a-b|,then vectors a and b are:	A. Parallel to each other B. Perpendicular to each other C. Inclined at 60^o D. neither parallel nor perpendicular
149	Question Image	
150	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)
151	Question Image	
152	Question Image	A. 0 B. 1
153	A conditional is regarded as false only when the antecedent is true and consequent is	A. True B. False C. Known D. Unknown
154	Question Image	
155	Question Image	A. Free vector B. Null vector C. Unit vector D. None of these
156	The number of standard parabolic functions are is	A. 4 B. 2 C. 3

		D. 1
157	Question Image	
158	Question Image	
159	If f(x) = $(-x)^2$then f(-2) is	A. 0 B. 2 C. -4 D. 4
160	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
161	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
162	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
163	Roots of the equation x^2- x = 2 are	A. {2, -1} B. {1, 0} C. {2, 1} D. {-2, 1}
164	Question Image	
165	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
166	Cos-1(x)=	A. cos x B. x C. tan-1(-x) D. Sec-1 (1/x)
167	Question Image	
168	The conjunction of 3>5, and 5<9, is	A. false B. true C. unknown D. disjunction
169	Question Image	D. none of these
170	A non-terminating, non-recurring decimal represent	A. A natural number B. A rational number C. An irrational number D. A prime number
171	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
172	The unit vector along x-axis is	D. none of these
173	Question Image	A. 30° B. 45° C. 60° D. 90°
174	A = [3] is a/an	A. Square matrix B. Scalar matrix C. Diagonal matrix D. Identity matrix
175	In set builder notation the set {0, 1, 2, ..., 100} can be written as	
176	Question Image	A. 1 B. -1 C. 5 D. 2
177	3, 6, 12,.... is	A. A.P B. G.P. C. H.P. D. None of these

178	Question Image	
179	Question Image	
180	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
181	if tanθ = 8/15 and cosθ< 0 , then cscθ =	A. -8/15 B. 15/8 C. 3/15 D. -17/8
182	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
183	It is not possible to find the exact value of	A. π B. √9 C. ∛27 D. √1
184	If S is a sample space and event set E =Φ then P(E) is	A. >0 B. 1 C. <1 D. 0
185	The set of natural no. is closed under	A. multiplication B. subtraction C. difference D. division
186	1^0= _____	A. 360' B. 60" C. 60' D. 3600'
187	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
188	If x - 2 is a factor of ax2- 12x + a = 2a, then a = _____	A. -5 B. 5 C. 0 D. 1
189	Roots of the equation x^2+ 2x + 3 = 0 are	A. Real and equal B. Real and distinct C. Complex D. None of these
190	The line y = 2 x + c is a tangent to the parabola y^2= 16 x if c equals	A. -2 B. -1 C. 0 D. 2
191	$i^{-(4n+2)}$ = ----------	A. 1 B. i C. -1 D. -i
192	Question Image	D. both a & c
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	Which of the following statement, is true	A. Lahore is in Punjab and 5>7 B. Lahore is the capital of Pakistan and 3<23 C. Lahore is capital of Sindh and 2+2 = 7 D. Lahore is the capital of Sindh or 2+2=4
195	The symbol of irrational is	A. W B. N C. Q D. Q'
196	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
197	If x - 1 is a factor of x4 - 5x2 + 4 then other	A. (x + 2)2(x - 1) B. (x + 2)(x - 1)2

197	factor is	C. (x+2)(x2- x- 2) D. (x + 2)2(x - 1)2
198	Question Image	
199	Question Image	A. x =0, y =4 B. x = -1, y = 2 C. x = 2, y = 3 D. x = 3, y = 4
200	Question Image	A. 8 B. 1/8 C. 1/3 D. 2/3
201	Question Image	
202	The end points of the major axis of the ellipse are called its	A. Foci B. Vertices C. Co - vertices D. None of these
203	{1, 2, 3, 4,.....} is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
204	If $f(x) = 2x^3 + 1$ then $f^1(0)$ =	A. 0 B. 1 C. 6 D. None of these
205	Question Image	A. square root function B. identity function C. linear function D. quadratic function
206	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)
207	Question Image	D. none of these
208	The projection of -2i + 3j+7k on 2j + k is	A. 13/5 B. 13/4 C. 13/ square 5 D. 13
209	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
210	Question Image	D. none of these
211	Question Image	
212	(a-1)-1 =	A. a-1 B. a C. -a D. None of above
213	Question Image	
214	If D = {a} , the P(D) =	A. {a} B. <p class="MsoNormal"><!--[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></p> C. {∅,{a}} D. {∅,a}
215	If 3x + 4y +7 = 0 , then dy / dx =	A. -1/2 B. -4/3 C. 7/2 D. -3/4
216	Roots of the equation $2x^2$- 7x + 3 = 0 are	A. Rational B. Irrational C. Complex D. None of these
217	How many numbers are there between 103 and 750 which are divisible by 6	A. 125 B. 107 C. 108 D. 113
218	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
219	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
220	The area of sector with central angle of 1 radians in a circular region whose radius is 2 m is	
221	56^o=.....radians	A. 1.25 B. 2.56 C. 95 D. 0.98
222	Number of conics is	A. 1 B. 3 C. 2 D. 4
223	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)
224	In how many ways can 5 persons be seated at a round table	A. 5! B. 4! C. 3! D. 120
225	If A is any matrix, and r is a scalar, then (rA)'	A. r'A' B. r/A' C. 1/rA' D. rA'
226	45° = _____	
227	Find the next two terms of 7, 9, 12, 16,...	A. 18, 20 B. 19, 22 C. 20, 25 D. 21, 27
228	Question Image	
229	Question Image	A. Reflexive property B. Symmetric property C. Cancellations property w.r.t. addition D. Transitive property
230	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
231	Let A is a 3 x 3 matrix and B is its adjoint matrix. If |B| = 64, then |A| =	
232	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
233	Addition and subtraction of two matrices A+B and A-B requires that the matrices be	A. equal dimension B. rectangular C. square D. identity

		D. Identity
234	Domain of cos x is _____	
235	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
236	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
237	Question Image	A. 9/4 B. 4/9 C. 1 D. None of these
238	The process of finding a function whose derivative is given is called a	A. Differentiation B. Integration C. Differential D. None
239	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
240	Question Image	
241	A vector with magnitude one is called	A. constant vector B. unit vector C. zero vector D. null vector
242	The 31 term of the A.P 5,2,-1.....is	A. -82 B. 82 C. 85 D. -85
243	The distance between the points (0 , 0) and (2, 1) is	A. 5 C. 0 D. 3
244	Question Image	
245	Which of the following is a scalar	A. weight B. force C. speed D. momentum
246	The slope of the tangent of the circle $x^3 + y^3$ =25 at (4,3) is:	A. -4/5 B. 4/3 C. -25/4 D. 25/3
247	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
248	Projection of vector u along v is	A. |v| cosθ B. |u| cosθ C. |v| sinθ D. |u| sinθ
249	Question Image	
250	The graph of y < 2 is the	A. Left half plane B. upper half plane C. Right half plane D. Lower half plane
251	Question Image	A. cot x + c B. tan x + c C. -cot x + c D. -tan x + c
252	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
253	The distance between the points (0,0) and (x,y)	A. x²+ y² B. x

	is	C. y
254	lxn matrix of the form$[a_{i1},a_{12}.....a_{in}]$ is said to be a	A. null matrix B. Scalar matrix C. Equal matrix D. Row matrix
255	Question Image	
256	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
257	Question Image	A. 56 B. 7 C. 8 D. 8/7
258	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
259	For a square matrix A, if A = At, then A is called	A. Matrix B. Transpose C. Symmetric D. Non-symmetric
260	Question Image	
261	Question Image	
262	(a,0) x (c, 0) =	A. (0,ac) B. (ac, 0) C. (0,0) D. (a, c)
263	Question Image	A. Identity matrix B. Diagonal matrix C. Null matrix D. Hermitian matrix
264	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
265	Range of 2 tan x is _____	A. [-2, 2] B. -1 < x < 1 C. R D. None of these
266	A vector of magnitude zero is called	A. Position vector B. Null vector C. Free vector D. None of these
267	Give A and B are matrices of order 3, then (A+B)' =	A. A' + B' B. 1/A + 1 /B C. 1/a' +1/B' D. A⁻¹+ B⁻¹
268	Question Image	
269	If u =[3,-4],then modulus of uis:	A. 5 B. 5i C. -5 D. √5
270	Question Image	
271	Question Image	
272	The distance between the points (2,3) and (3,2) is	A. 5 C. 2 D. 10
273	Question Image	A. Polynomial B. Equation C. Improper rational fraction D. Proper rational fraction
274	Question Image	
275	Question Image	

276	Let A be a square matrix. Then, 1/2 (A-A') is	A. Skew-symmetric B. Symmetric C. Null D. None of the above
277	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
278	Two cards are drawn at random without replacement. the probability that the first is a king and second is not a king is	A. 48 / 663 B. 24 / 663 C. 12 / 663 D. None of these
279	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
280	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
281	Question Image	
282	Question Image	
283	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
284	Question Image	
285	Question Image	
286	Question Image	D. none of these
287	sin 540° =	A. 0 B. 1 C. 2 D. 3
288	Question Image	
289	If $\tan^{-1}3 + \tan^{-1}x = \tan^{-1}8$, then x=	A. 5 B. 1/5 C. 5/14 D. 14/5
290	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
291	If Z_1 = 1+ i, Z_2 = 2+3i , then $\|Z_1 - Z_2\|$ =?	A. √5 B. √7 C. -1-2i D. √3
292	Question Image	A. cos 2x + c B. - cos 2x + c C. tan 2x + c D. cot 2x + c
293	Question Image	
294	Which of the following diagrams represent into function?	
295	Question Image	
296	Question Image	
297	Question Image	A. additive property B. multiplicative property C. additive identity D. multiplicative identity
298	Matrices A = [aij] 2 x 3 and B = [bij] 3 x 2 are suitable for	A. BA B. A2 C. AB D. B2

299	Question Image	A. 0 B. abc C. 1/abc D. None of these
300	Question Image	A. x³⁹ B. 40x³⁹ C. 40x⁴¹ D. none of these
301	Question Image	A. A = C B. A = B C. B = C D. None of these
302	What is the conjugate of -6 -i?	A. -6 +i B. 6+i C. -6 -i D. 6 -i
303	If n is not natural number, then the expansion $(1 + x)^n$ is valid for	
304	Question Image	D. none of these
305	Roots of the equation $x^2 - 7x + 10 = 0$ are	A. {2, 5} B. {-2, 5} C. {2,5} D. {-2,-5}
306	Question Image	A. 0 B. 1 C. -1 D. undefined
307	The sum of all positive integral multiple of 5 less than 100 is	A. 950 B. 760 C. 1230 D. 875
308	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
309	arb mean	A. a is related to b B. b is related to a C. a is reciprocal of b D. a is not related to b
310	The distance of the points (3, 4, 5) from y-axis is	
311	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
312	Question Image	A. l3 B. rl3 C. r D. none
313	If points (-1 , h), (3,2) and (7,3) are collinear then h=	A. 3 B. 4 C. 0 D. None of these
314	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
315	Question Image	A. 1/x B. -x C. 2x D. 0.5 x
316	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
317	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
		A. 45°

318	The angle between lines xy =0 is	A. 45 B. 60° C. 90° D. 180°
319	Question Image	A. 0 B. 1 D. -1
320	Question Image	
321	Question Image	
322	Question Image	A. 1 / 2 B. 1 / 3 C. 1 / 4 D. None of these
323	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
324	Question Image	
325	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
326	Question Image	
327	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)
328	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
329	Question Image	
330	∀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
331	Total number of subsets that can be formed out of the set {a,b,c} is	A. 1 B. 4 C. 8 D. 12
332	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is	A. an ellipse B. a circle C. a parabola D. a hyperbola
333	Basic-principles of deductive logic were laid down by:	A. Euelid B. Leibniz C. Aristotle D. Newton
334	Question Image	
335	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
336	Question Image	A. 3x²+ 2 B. 3x²+ 2x + 3 C. x³+ x² D. none of these
337	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
338	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
		A. Additive inverse

339	Name the property used in 4.1 + (-4.1) = 0	B. Multiplication inverse C. Additive identity D. Multiplication identity
340	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
341	Question Image	
342	The two different parts of the hyperbola are called its	A. Vertices B. Directrices C. Nappes D. Branches
343	Question Image	A. 0 B. 1 C. 2 D. 1/2
344	Question Image	
345	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
346	Question Image	
347	The square of the distance between two points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
348	Question Image	
349	cos 6θ + cos 2 θ =_____;	A. -2sin 4θ sin 2θ B. 2cos4θ cos2θ C. 2sin4θ cos2θ D. 2cos4θ sin2θ
350	The inclination of a line parallel to x-axis is	
351	A circle passing through the vertices of any triangle is called _____	A. In circle B. Circum circle C. Escribed circle D. None of these
352	sin $(\alpha + \beta) =$	A. sinαcosβ- cosαsinβ B. sinαcosβ- cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα+ cosβsinβ
353	Question Image	
354	Question Image	
355	Question Image	A. A B. -A C. A^t D. A⁻
		A. 7

356	for n€ N, 3^{2n+7} is divisible by	A. 7 B. 8 C. 9 D. 10
357	Period of sin 3x is _____	
358	3/π=.....	A. 54.71^o B. 21^o C. 51^o D. 29^o
359	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)!
360	Question Image	
361	Question Image	
362	Question Image	
363	The medians of a triangle are:	A. Collinear B. Concurrent C. Perpendicular D. zero
364	The eccentricity of the parabola y^2= -8x is	A. -2 B. 2 C. -1 D. 1
365	The length of perpendicular from (3,1) to 4x +3y +20 =0 is	A. 6 B. 7 C. 3 D. 8
366	Question Image	A. x²+ 2 B. 3x + 2 C. 3x²+ 5 D. 3x²+ 2
367	Question Image	A. c = 0 B. c = -1 C. c = -2 D. c = 1
368	If m and n be two scalars, then (m+n) g =	A. 0 B. m+n<img width="9" height="20" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> C. m_a+n_a D. ma - m_a <!--[endif]--><o:p></o:p>
369	∀a,b,c∈R, a >b ∧ b>c ⇒ a >c is	A. Trichotomy property B. Transitive property C. Symmetric property D. Additive property
370	The two lines y = 2x and x =2y are	A. Parallel B. Perpendicular C. Equally inclined with axes D. Congruent
371	Question Image	A. 1 B. 2 C. 3
372	Question Image	
373	Question Image	A. n if n is even B. 0 for any natural number n C. 1 if in odd D. None of these
374	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
375	If points (5 , 5), (10 , x) and (-5 , 1) are collinear, x =	A. 5 B. 3 C. 9 D. 7
376	Question Image	
377	Question Image	

377	Question Image	
378	If G is the centroid of the triangle, then GA +GB+GC=	A. 0 B. 1 C. -1 D. 3
379	$\int f(x)$ is known as:	A. Definite itegral B. Indefinite integral C. Fixed integral D. Multiple integral
380	Through how many radians does the minute hand of a clock turn in one hour	
381	Question Image	
382	The law of sines is	
383	The domain of f(x) = log x is	A. [0,∞] B. (0,∞) C. [0,∞[D. [∞,∞]
384	The area of the circle centred at (1, 2) and passing through (4, 6) is	
385	Range of cosec$\theta$is	A. W - {y | -1 < y < 1} B. R - {y | -1 < y < 1} C. O - {y | -1 < y < 1} D. R
386	The general solution of tan 3x = 1 is	
387	The number of subsets of a set having three elements is	A. 4 B. 6 C. 8 D. none of these
388	If sin 6θ+ sin 4θ+ sin 2θ, thenθ=	
389	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
390	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
391	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
392	sin ($\sin^{-1}$(1/2))=	A. 0 B. 2 C. ∞ D. 1/2
393	f (x) = | x | is a/an	A. Injective function B. Bijective function C. Surjective function D. Implicit function
394	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
	The disjunction of two statements p and q, is	

395	The disjunction of two statements p and q, is denoted symbolically as	
396	Cos 60° = _____	A. 1 B. 2 C. 1/2 D. 3
397	Question Image	
398	Question Image	A. An expression B. Rational fraction C. Equation D. Identity
399	Probability of an impossible event is	A. 0 B. -1 C. 1 D. ∞
400	A statement which is already false is called	A. Tautology B. Contrapsitive C. Absurdity D. Universal quantifiers
401	Matrix multiplication is	A. Commutative B. Not commutative C. Not associative D. Not distributive
402	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
403	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
404	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
405	The axis of the parabola $x^2 = 4ay$ is:	A. y = 0 B. x = 0 C. x = -a D. y = a
406	Question Image	A. 2x B. 3x² C. 1 D. 0
407	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
408	(a,b) +(-a,-b) =	A. (0,0) B. (a,b) C. (-a,-b) D. (1,1)
409	If $3x^4 + 4x^3 + x - 5$ is divided by x + 1, then the reminder is	A. 0 B. 7 C. -7 D. 5
410	The distance from the point P(3,4) to the line y = 2x - 3 is:	A. √5 B. √3 C. 2√3 D. 1/√5
411	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
412	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)
413	Express cos 320^o between $0^o$and 45^o	A. cos 45^o B. cos 30^o C. -cos 40^o D. cos 40^o

414	Which of the following is surjective	
415	tan270° =_____;	A. 0 B. 1 C. -1 D. Undefined
416	Question Image	
417	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
418	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	
419	Derivative of x^3w.r.t x is	A. 0 B. 1 C. 3x² D. x³
420	The vertex of the standard position angles lies on	A. (0,0) B. (0,1) C. (1,0) D. (1,1)
421	If n(A) = n then n(P(A)) is	A. 2n B. n² C. n/2 D. 2ⁿ
422	The additive inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
423	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
424	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
425	The maximum value of 12 sinθ-9 sin$^2\theta$is x	A. 3 B. 4 C. 5 D. None of these
426	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
427	Question Image	D. none of these
428	Let A and B be two non-empty sets, then any subset of the cartesian product A x B called a	A. Function B. Domain C. Range D. Binary relation
429	Question Image	A. 0 B. 1 D. -1
430	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
431	In polar form of complex number r =	
432	The set of complex numbers forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Subtraction
433	Express cos 320^o between 0^{o}and 45^o	A. cos 45^o B. cos 30^o C. -cos 40^o

		D. cos 40^o
434	Question Image	
435	Question Image	
436	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
437	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
438	Which term of the A.P 5,8,11,24.....is 320	A. 104th B. 106th C. 105th D. 64th
439	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
440	If A is a matrix of order 3x3 and I is an identity matrix of order 3x3 , then AI=	A. A B. I C. Not possible D. A^(-1)
441	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	
442	The multiplicative inverse of (a,b) is	
443	For a square matrix A, if $A = A^t$, then A is called	A. matrix B. Transpose C. Symmetric D. Non-symmetric
444	Question Image	A. similar images B. distinct images C. similar range D. option a and c
445	Question Image	
446	The distance of the point (2,-3) from y-axis is	A. 2 B. -3 C. 1 D. 5
447	If a,b = 0 then	A. a |b B. a||b C. a = b D. None
448	Question Image	
449	If the elevation of the sun is 30°, then the length of the shadow cast by a tower of 150 ft height is	
450	Every identity matrix is	A. Row-vector B. Scalar C. Column-vector D. All
451	3/2 is	A. An irrational number B. Whole number C. A positive integer D. A rational number
452	Question Image	
453	The set {E,0}, is closed under (ordinary)	A. multiplication B. addition C. subtraction D. division
454	w^{73}= _____	A. 0 B. 1 C. w D. w²

455	Question Image	A. 0 B. 3 C. 9 D. -3
456	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
457	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
458	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
459	Question Image	
460	The value of 289^o in radians is	A. 4.05 B. 3.02 C. <!--[if gte msEquation 12]><m:oMathPara><m:oMath><m:r>o</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:6pt; 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="8" 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;"><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;">π/2<!--[endif]--><!--[endif]--><o:p></o:p> <!--[endif]--><o:p></o:p> D. 5.04
461	The distance of the point (-2 , -3) from y-axis is	A. 2 B. -2 C. 3 D. -3
462	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
463	Question Image	A. Only one real solution B. Exactly three real solution C. Exactly one rational solution D. Non-real roots
464	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
465	Question Image	A. 0 B. 1 C. -A D. -1
466	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
467	Question Image	
468	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

469	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
470	2x = 3 is a conditional equation it is true for	A. 2 B. 3 C. 3/2 D. 2/3
471	Question Image	
472	$x^3 + 2x^2 - 3x + 5$ is _____	A. An equation B. A polynomial C. Proper rational fractions D. Improper rational fractions
473	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
474	If 2x +y + λ =0 is normal to parabola y2 =-8x,λ= _____	A. 12 B. 8 C. 24 D. -24
475	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
476	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>
477	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
478	Question Image	
479	Question Image	A. 1 B. 5 C. 7 D. 9
480	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
481	Question Image	A. parallel vectors B. perpendicular vectors C. concurrent vectors D. collinear vectors
482	Question Image	A. y/x B. x/y C. y/z D. None
483	Question Image	
484	Z is a group under	A. Subtraction B. Multiplication C. Addition D. None of these
485	The in-centre of triangle whose vertices are (0,0), (5,12) and (16,12) is:	A. (9,7) B. (2,7) C. (9,2) D. (7,9)
486	Question Image	
487	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)
488	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these

489	The additive identity of real number is	A. 1 B. 2 C. 1/2 D. 0
490	Question Image	D. none of these
491	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
492	Question Image	A. -a -b -c B. 1 C. 0 D. -1
493	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
494	Question Image	
495	If f(√x)=sin x , then f′(x) =_____;	A. 2xcosx2 B. cosx2 C. cos√x D. None of these
496	Question Image	B. 1 C. -1
497	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
498	Question Image	
499	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
500	f(x) = $x^3$is:	A. an odd function B. an even function C. an implicit function D. a quadratic funtion
501	A sequence having no last term is called	A. arithmetic sequence B. Geometric sequence C. Finite sequence D. Infinite sequence
502	Sine is a periodic function and its period is _____	A. π B. s C. 2π D. 4π
503	The domain of y = cos-1 x is	A. -∞ < x < ∞ B. -1≤ x≤ 1 C. x≤ -1 or x ≥ 1 D. None of these
504	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
505	Question Image	A. Scalar matrix B. Identity matrix C. Null matrix D. Symmetric matrix
506	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
507	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
508	Question Image	
509	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 1 C. Polynomial of degree 2 D. Polynomial of degree n
510	If y=f(x) is a function then x is called	A. dependent variable B. independent variable C. constant D. none of these
511	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
512	Question Image	
513	One minute is denoted by	A. 1⁰ B. 1' C. 1" D. None of these
514	If S is a sample space and event set E = S then P(E) is	A. >0 B. 1 C. <1 D. 0
515	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
516	Question Image	
517	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
518	Question Image	
519	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
520	A circle passing through the vertices of any triangle is called	A. Circumcirle B. Incircle C. Escribed circle D. Unit circle
521	Question Image	A. -2x B. x⁻³ D. -2x³
522	O is _____	A. A positive integer B. A negative integer C. A natural number D. An integer
523	Question Image	A. ¹⁰C₆ B. ¹⁰C₅ C. ¹⁰C₄ D. None
524	A line joining two distinct points on a parabola is called	A. Axis B. Directrix C. Chord D. Tangent
525	Basic principles of deductive logic were laid down by	A. Euclid B. Leibniz C. Newton D. Aristotle
526	Question Image	
527	The line l is horizontal if	A. m is undefined B. m=0 C. m=1 D. m=0-1
528	Question Image	

529	Question Image	A. real number B. complex number C. rational number D. irrational number
530	Question Image	
531	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
532	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
533	Question Image	
534	Question Image	A. 1 B. 0 C. 3 D. -3
535	Question Image	A. A B. A' C. U D. U'
536	The sum of coefficients in the binomial expansion equals to	A. 2 B. 2ⁿ⁺¹ C. 2ⁿ⁻¹ D. 2ⁿ
537	The roots of the equation x2 +6x-7=0,are	A. 1 B. 2 C. 1 and -7 D. -7
538	The law of consines is	
539	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
540	The product of cube roots of unity is	A. Zero B. 1 C. -1 D. None of these
541	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
542	Question Image	
543	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
544	The set of second elements of the ordered pairs forming a relation is called a	A. Domain B. range C. function D. relation
545	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
546	The multiplicative inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
547	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
548	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

549	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
550	Question Image	A. 0 B. 20 C. 90 D. 80
551	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
552	4/√49 is a	A. Irrational Number B. Prime Number C. Rational number D. Whole number
553	Which of the following is a vector	A. length B. momentum C. volume D. speed
554	∀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
555	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
556	The centre of the conic x2 +16x +4y2 -16y +76 =0 is	A. (0,10) B. (-8,4) C. (-8,-2) D. (1,1)
557	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).	
558	The distance between the parallel lines 3x - 4y + 3 =0 and 3x -4y + 7 = 0 is:	A. 2/3 B. 9/13 C. 4/5 D. 7/12
559	The set of second elements of the ordered pairs forming a relation called a	A. Domain B. Range C. Function D. Relation
560	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
561	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
562	The transport of a null matrix is	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
563	∀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
564	Question Image	
565	Question Image	A. 45° B. 30° C. 75° D. 60°
566	2cos2 a/2 =_____;	A. 1+sina B. 1-sina C. 1+cosa

		D. 1-cosa
567	If sin x + $\sin^2 x$ = 1, then the value of $\cos^{12} x$ + $3\cos^{10} x$ + $3\cos^8 x$ + $\cos^6 x$ + 2 $\cos^4 x$ + $\cos^2$ x-2 is equal to	A. 0 B. 1 C. 2 D. sin²x
568	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
569	If (0, 0) and (1, 0) are the end points of a diameter, then the equation of the circle is	
570	Question Image	
571	H_1, H_2, H_3, ... $H_n$are called n harmonic means between a and b if a, H_1, H_2, H_3, ... H_nb are in	A. H.P. B. G.P. C. A.P. D. None of these
572	A = B if	D. A is equivalent to B
573	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
574	Question Image	
575	The statements of the form "If p then q" are called	A. hypothesis B. conditional C. disjunction D. conjunction
576	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
577	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
578	If (0, 0) and (0, -1) are end points of a diameter, then the equation of the circle is	
579	Question Image	D. None of these
580	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
581	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	
582	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
583	Differentiating the equation $(x-1)(x-2)^3$ with respect to x gives.	A. 2x(x+2) B. 2(x-1) C. 2(x-1)(x+2) D. 3x(x+2)
584	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
585	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
586	Question Image	

587	Question Image	D. none of these
588	The value of $\sin^2 20° + \sin^2 70°$ is equal to	A. 1 B. 2 C. -1 D. 1/2
589	Question Image	A. f(x) = x² B. f(x²) = x C. f(x) = x D. none of these
590	(x-1) is a factor of	A. 2x³-3x²+9 B. 2x³-5x-8 C. 48x²⁻46x-9 D. x⁹-1
591	Question Image	A. x-axis B. y-axis C. z-axis D. None of these
592	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 D. none of these
593	If a = [1,4,3] and B= [2,-1,5] athen the mid point M of AB is:	A. [1,1,1.5] B. [2,2,1.5] C. [1.5,1.5,4] D. None of these
594	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
595	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
596	Question Image	
597	Question Image	
598	The set R is .....w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
599	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
600	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
601	If the pth, qth, and rth terms of an A.P. are in G.P:., then the common ratio of the G.P. is	
602	Question Image	A. The law of consines B. The law of sines C. The law of tangents D. None of these
603	Question Image	D. none of these
604	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
605	$d/dx(x^3 + 2x + 3)$=	A. x²+ 2 B. 3x + 2 C. 3x²+ 5 D. 3x2 + 2
606	Question Image	C. x²+ 2x + c D. (x²+ 2x -1)⁴+ c
607	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
608	Question Image	A. Rational B. Irrational C. Non-real D. Zero
609	Question Image	
610	The sum of even coefficient in the binomial expansion is	A. 2ⁿ⁺¹ B. 2ⁿ C. 2ⁿ⁻¹ D. 2n
611	$(x + 2)^2 = x^2 + 4x + 4$ is	A. A linear equation B. A cubic equation C. A quadratic equation D. None
612	Product of any n consecutive positive integers is divisible by	A. n B. √n C. n! D. None
613	If the intersecting plane is parallel to a generator of the cone, but intersects its one nappe only, the curve obtained is	A. an ellipse B. a hyperbola C. a circle D. a parabola
614	In a diagonal matrix, all entries except in diagonal are	A. similar B. Zero C. One D. Real
615	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
616	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	
617	1.4142135... is _____	A. A natural number B. A rational number C. A prime number D. An irrational number
618	The period of tan [x/3] is _____	A. 2π B. 4π C. 3π D. 5π
619	Question Image	
620	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°
621	Question Image	A. -1 B. 0 C. 1 D. undefined
622	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	
623	If 4 - x >5, then	A. x > 1 B. x > -1 C. x < 1 D. x < -1
624	I f a =5i + 2j, then|a| =	A. √13 B. √7 C. 1/√13 D. √29
625	QUQ'	

626	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
627	When rational fraction is separated into partial fractions, the result is	A. an identity B. A fraction C. A partial sum D. Improper fraction
628	Question Image	A. 1 B. 0 C. cx D. c
629	Sin 45° = _____	
630	The function $f\{(x, y) \mid y = ax^2 + bx + c\}$ is	A. One-one function B. Constant function C. Onto function D. Quadratic function
631	A function which is to be maximized or minimized is called an	A. Explicit function B. Implicit function C. Objective function D. None
632	The direction cosines of a line equally inclined with co-ordinate axes are	
633	The conditional statement "If p then q" is logically equivalent to the statement.	A. Not p or Not q B. Not p and Not q C. Not p or q D. p or q
634	A function from X to Y is written as	B. f : X to Y D. f : Y to Y
635	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
636	Question Image	A. A rational number B. An irrational number C. An odd number D. A prime number
637	Question Image	
638	Which of the following is not a quadrantal angle	A. 90° B. 100° C. 180° D. 270°
639	Question Image	
640	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
641	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
642	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
643	Question Image	A. 0 B. -1 C. 1
644	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)
645	Question Image	D. None of these
646	If $f(x) = x^3 - 2x^2 + 4x - 1$ then f(0) is	A. 0 B. 1 C. -1 D. none of these

647	Question Image	A. 0 B. 1
648	An event having more than one sample point is called	A. Certain event B. Compound event C. Simple event D. None
649	d/dx (cosec x)	A. -sec x tan x B. sin x cos x C. -csc x cot x D. 2sin x cos x
650	A polynomial P(x)has a factor (x-a)if P(a) =	A. a B. x C. 1 D. 0
651	In one hour the minute hand of a clock turns through	
652	What is range of the function g (x) =|x-3|?	A. [0 ,∞) B. (0 ,∞) C. (-∞ ,3] D. [0,∞)
653	Question Image	A. A B. B C. A' D. None of these
654	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
655	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)
656	Question Image	
657	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
658	No term of a harmonic sequence can be	A. 0 B. 1 C. 2 D. 3
659	Which of the following has the same value as $¡^{113}$?	A. i B. -1 C. -i D. 1
660	Question Image	A. 0 B. 1 C. 2
661	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
662	Question Image	A. 3 B. 1 C. 2 D. 4
663	Question Image	A. Improper rational fraction B. Proper rational fraction C. Polynomial D. Equation
664	If f(x) = x^2then f(-2) is	A. -2 B. 2 C. 4 D. -4
665	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

666	Two matrices a and B are said to be conformable for multiplication AB if the number of columns of A is equal to the numbers of	A. Columns of B B. Rows of B C. Columns of AB D. Rows of AB
667	Question Image	A. Orthogonal B. Involutary C. Idempotent D. Nilpotent
668	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
669	Question Image	C. 16 D. None of these
670	w^{-1}= _____	A. 0 B. 1 C. w D. w²
671	Period of sin x is	
672	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
673	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
674	Question Image	A. (x³- 3x²)⁸+ c D. 3x²- 6x + c
675	Question Image	A. a^x B. a^xln a
676	The maximum value of the quadratic function f(x) = -2x2+20x,is	A. 4 B. 3 C. 50 D. 7
677	If 0 = R, thenthe additive inverse of a is	A. 1/9 B. ^{1/-9} C. a D. -a
678	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
679	If the function y=2x -3, what is the preimage of 11?	A. 11 B. 7 C. 5 D. 2
680	Question Image	
681	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
682	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
683	Question Image	
684	Question Image	
685	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)
686	If a, b, c are the measures of the sides of a triangle then	
687	u,v,wand u x (v.w) are	A. Equal B. Parallel C. Additive immense of each other

		C. Additive inverse of each other D. Meaningless
688	Question Image	A. 6 C. 20 D. 0
689	The set of rationals numbers between 0 and I is	A. Finite B. Null set C. Infinite D. None of these
690	The number of the diagonals of a 6 sided figure is	A. 15 B. 21 C. 9 D. 6
691	Range of $\sin\theta$ is	
692	Question Image	
693	Question Image	
694	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
695	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
696	Question Image	
697	If a matrix has m rows and n columns, then mxn is called the	A. dimension B. determinants C. symmetric D. Column matrix
698	If n is any positive integer then $n! > n^2$ for	
699	Which is the proper rational function	
700	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
701	If $2x^{1/3} + 2x^{-1/3} = 5$, then x is equal to	A. 1 or -1 B. 2 or 1/2 C. 8 or 1/8 D. 4 or 1/4
702	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
703	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
704	3/4 is _____	A. An odd number B. An even number C. A natural number D. A rational number
705	There is no element common in	A. N and W B. E and W C. N and O D. Q and Q'
706	Question Image	A. a²b²c² B. 4a²b²c² C. 4abc D. None
707	$x^2 + x - 6 = 0$ is	A. An equation B. An identity C. A polynomial D. None of these
708	$(1 - x)^3$ = _____	A. 1 + 3x + 3x²+ x³ B. 1 + x + x²+ x³ C. 1 - x + x²- x³ D. 1 - 3x + 3x²- x³

709	The domain of a finite sequence is a	A. Set of natural numbers B. R C. Subset of N D. Proper subset of N
710	∫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
711	The maximum value of 12 sinθ-9 sin$^2\theta$is x	A. 3 B. 4 C. 5 D. None of these
712	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
713	The multiplicative inverse ofx^(-1) is	A. x B. a-2 C. 0 D. 1
714	The modulus of a vector i-j+ k is:	A. √3 B. 1 C. √2 D. ∞
715	If a = 2i +2j, b= 3i -j and c=4i +5j, the 3b -a-2c =	A. -i -15j B. i-15j C. i-3j D. None of these
716	cos^{-1}(cos x) =	A. x B. cos x C. x = 1/x D. cos⁻² x
717	The matrix A = [aij]mxn with m ≠n is always	A. Symmetric B. Hermition C. Skew-symmetric D. None
718	If u = 2ai +j - k and v = j +ai + 4k are perpendicular then a =	A. 4 B. 1/2 C. 3 D. 4/3
719	∫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)
720	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	
721	Question Image	
722	Question Image	
723	A triangle has ____ elements	A. 3 B. 4 C. 5 D. 6
724	Question Image	
725	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
726	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
727	All men are mortal, We are men, there fore, we are also mortal. This is a useful example of	A. Deduction B. Induction C. Conjuction D. disjunction
	If circumference of circle is divided into 360	A. 1 degree

728	If circumference of circle is divided into 360 congruent parts the angle subtended by one part at the centre of circle is	B. 1 second C. 1 minute D. 1 radian
729	Question Image	
730	The identity element with respect to subtraction is	A. 0 B. -1 C. 0 and 1 D. None of thes
731	Question Image	
732	Question Image	
733	The third term in the expansion of (1+2x) is	A. -2x2 B. -4x2 C. 2x2 D. 4x2
734	Question Image	A. Set of whole number B. Rational Numbers C. Complex numbers D. Whole numbers
735	Question Image	D. none of these
736	What is the period of cos 6x =?	A. π/2 B. π/3 C. π/4 D. π
737	Question Image	C. ln f(x) + c D. f(x) - c
738	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
739	Question Image	A. 2s² B. 2s³ C. s³ D. 3s³
740	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
741	Question Image	A. (3, 1, -2) B. (3, -2, 1) C. (2, -1, 3) D. (-1, -2, -3)
742	Question Image	
743	The distance of the point (a, b) from x-axis is	A. a B. b C. a + b
744	A quadratic equation has two	A. roots B. degree C. variables D. constants
745	A circle drawn inside a triangle and touching its sides is called _____;	A. Circumcirle B. Incircle C. Escribed circle D. unit circle
746	The positive real number which is the measure of the length of a vector is called the	A. Unit vector B. Modulus C. Inverse D. None of these
747	The unit vector along z-axis is	D. none of these
748	On simplifying the equation 1+cosx/1+sec x' the result is.	A. Sin x B. Cosec x C. Cos x D. Sec x

749	w^{-12}= _____	A. 0 B. 1 C. w D. w²
750	Question Image	
751	Question Image	
752	Question Image	A. Conclusion B. Implication C. Antecedent D. Hypothesis
753	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
754	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
755	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
756	Vector $\underline{i}$ =	A. [1,0] B. [0,1,0] C. [0,0,1] D. None of these
757	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
758	Question Image	
759	Question Image	D. none of these
760	Question Image	A. 25 B. 16 C. 5 D. 0
761	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}
762	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
763	To draw conclusions from some expreiments or few contacts only is called	A. deduction B. implication C. conjunction D. induction
764	Question Image	
765	Question Image	A. 15 B. 9 C. 7 D. 8
766	An indicated sum of terms of a sequence is represented by	A. Sn B. an C. S(n) D. {Sn}
767	Every relation, which can be represented by a linear equation in two variables, represents a	A. Relation B. Cartesian product C. Function D. Graph
768	Tangent is a periodic function and its period is	A. 2π B. 3π

	_____	C. π D. 4π
769	The identity elements with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
770	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
771	For all positive integral value of n,3^n< n! , when	A. n> 6 B. n< 6 C. n<11 D. n>11
772	Question Image	
773	Question Image	
774	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
775	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
776	Question Image	
777	Question Image	
778	An equation which hold good for all values of the variables is called	A. Identity B. fraction C. mixed form D. Partial equation
779	Cosec 60° = _____	
780	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
781	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
782	Ifθ= 60° then	A. sinθ= 1/2 B. tanθ= cot 30° C. θ=π/4 D. secθ= 4
783	The eccentricity of parabola is:	A. 1 B. 0 C. Greater than 1 D. Less than 1
784	Question Image	
785	An even function is symmetric about the line	A. y = x B. x = 0 C. y = -x D. y = 0
786	The range of the principal sine function is	
787	The proposition S(n) is true$\forall$ n$\in$N,S(k+1) true	A. S(1) B. Both a & c

	when _____is true	C. S(k) D. None
788	(7, 9) + (3, -5) =	A. (4, 4) B. (10, 4) C. (9, -5) D. (7, 3)
789	The coefficient of x^{10}in the expansion $(x^3+3/x^2)^{10}$is	A. 1700 B. 17023 C. 17027 D. 17010
790	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
791	If |αi + (α+1)j +2k| =3 then value of α is	A. 1,2 B. -1,-2 C. 1,-2 D. -1,2
792	Question Image	
793	Tan 2$\theta=$	
794	Question Image	
795	Question Image	
796	Question Image	A. A,. B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
797	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
798	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)
799	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
800	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
801	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
802	Question Image	
803	If one end of the diameter of the circle x^2 + y^2- 5x = 3y -22 = 0 is (3,4) the other end is:	A. (2,7) B. (-2,-7) C. (-2,7) D. (2,-7)
804	Question Image	
805	Question Image	
806	If l=1.5 cm and r=2.5 cm, then 0=	A. .3 radians B. .20 radians C. .5 radians D. .6 radians
807	Question Image	A. Closure law of addition B. Associative law of addition C. Commutative law of multiplication D. Associative law of multiplication
808	Which one the valid rood of $3x^3$ - $8x^2$- 5x + 8 =?	A. 4 B. 3 C. 8 D. A and B both

		D. A and B both
809	In common logarithm the base is	A. 1 B. 0 C. 10 D. e
810	Question Image	A. z is purely imaginary B. a is any complex number C. z is real D. None of these
811	Multiplicative inverse of 0 is	A. 0 B. 1 C. +-1 D. Does not exist
812	$\sin^{-1}[-1/2]$ = _____	
813	Question Image	A. A onto B B. both a & c C. A into B D. none of these
814	Number of lines passing through three non-collinear points is	A. 2 B. 3 C. 1 D. 0 E. ∞
815	Question Image	A. 0 B. U C. u/2 D. log u
816	The function denoted by 1/f called the	A. Reciprocal function B. Inverse function C. Constant function D. Reverse function
817	The equation of vertical asymptotes of y = cos ecx is	A. x = 0 B. y = 0 C. x =∞ D. y =∞
818	The middle term of $[1/x-x]^{10}$ is	A. -152 B. -252 C. 371 D. -421
819	Question Image	
820	Question Image	A. I B. 14 I C. 0 D. None of these
821	Question Image	A. 2 B. 1 C. 5 D. 0
822	The set {Z\{0}} is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
823	The distance between two points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
824	*i* is equal	A. (1 , 0) B. (0 , 1) C. (1 , 1) D. (0 , 0)
825	What is the axis of the parabola $y^2 = 4ax$?	A. x = 0 B. y = 0 C. x = a D. y = 0
826	The complement of set A relative to universal set U is the set	
827	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None

828	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
829	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
830	Question Image	
831	tan(π-θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
832	Question Image	A. Principle of equality of fractions B. Rule for product of fraction C. Rule for quotient of fraction
833	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
834	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
835	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
836	The net of cartesian product AxB consists of	A. domain B. range C. binary relation D. ordered pair
837	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
838	What is the number of elements of the power set of { }	A. 0 B. 1 C. 2 D. 3
839	The synthetic division method is only used to divide a polynomial by	A. quadratic equation B. binomial C. linear equation D. monomial
840	A function from X to X is denoted as	B. f : X to Y D. f : Y to Y
841	Question Image	
842	Question Image	
843	The set { {a, b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set
844	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
845	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
846	The graph of linear equation 2x + 3y = 10	A. Parabola B. Circle C. Hyperbola D. Straight line
847	Question Image	
848	Question Image	A. Additive property in R B. Multiplication property in R

		C. Cancellation property in R D. Distribution property in R
849	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
850	Question Image	
851	Question Image	B. a f(x) + c C. f(x) + a
852	If A is any matrix then its additive inverse is	A. A B. A⁻¹ C. A^t D. -A
853	A diagonal matrix is always	A. Identity B. Triangular C. Scalar D. Non-singular
854	Gooch crucible is made of :	A. Brass. B. Porcelain. C. Bronze. D. Gold.
855	$\int x/Sin^2 x\,dx$ 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|
856	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
857	The many subset can be formed from the set {a,b,c,d}	A. 8 B. 4 C. 12 D. 16
858	30° = _____	
859	Question Image	
860	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
861	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
862	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
863	Question Image	
864	If n∈Z+ then(a+x)n is a/an	A. Finite series B. Convergent series C. Infinite series D. Divergent series
865	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
866	Number of ways of writing the letters of WORD taken all at a time is	A. 24 B. 4 C. 12 D. 6
867	Question Image	
868	Question Image	A. 1 + tan²x + c B. tan x + c C. -tan x + c D. cot x + c
	The points A, B and C are said to be collinear if	A. be on same line B. have same slope

869	they:	C. Lie on a same plane D. options a & b
870	Find the sum of the infinite geometric series 2 + 1 + 0.5 + ...	A. 3.5 B. 3 C. 4 D. None of these
871	Domain of $\sin\theta$ is	A. Set of real numbers B. Set of complex numbers C. Set of natural numbers D. Set of even numbers
872	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
873	Question Image	
874	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
875	Which of the following integrals can be evaluated	
876	Sum of first n terms of an arithmetic series is	
877	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
878	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
879	Which one represents a sequence	A. an B. Sn C. a(n) D. {an}
880	Question Image	A. 1 B. -1 C. 0 D. I
881	Question Image	A. 0 B. -1 C. 1 D. 2
882	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
883	Question Image	A. 1.5 B. 1.2 C. 8 D. None of these
884	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
885	If p is false, -p is	A. True B. Not true C. Equal to p D. Conjunction
886	Question Image	
887	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	
888	The period of cos(7x-5) is	A. π/7 B. 7π/2 C. π/2 D. 2π/7

889	Question Image	A. 3 sec²x B. 3 sec²3x C. sec²3x D. sec²x
890	Question Image	
891	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
892	Question Image	
893	Question Image	
894	1^0= _____	A. 1.5 rad B. 0.5 rad C. 0.175 rad D. None of these
895	Question Image	
896	In R, the additive identity is	A. 0 B. 1 C. -1 D. None
897	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
898	Question Image	A. N B. r C. 2r D. π
899	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
900	Φset is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection
901	tan 294° =_____;	A. tan 24° B. -tan 24° C. cot 24° D. -cot 24°
902	(7,9) +(3,-5) =	A. (4,4) B. (10,4) C. (9,-5) D. (7,3)
903	Question Image	
904	[i,j,k]	A. 0 B. 2 C. 1 D. -2
905	For any integer k, w^n= _____ when n = 3k	A. 1 B. 2 C. 0 D. -4
906	(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
907	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
908	E-radius corresponding to < A is	
909	Question Image	
	At a point 15 meters away from the base of a	A. 90°

910	15 meters high house, the angle of elevation of the top is	B. 60° C. 30° D. 45°
911	Optimize means _____ a quantity under certain constraints	A. Minimize B. Maximize C. Maximize or minimize D. None of these
912	Question Image	
913	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
914	x = _____ is in the solution of 2x + 3 < 0	A. 0 B. 2 C. -1 D. -2
915	Question Image	
916	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
917	Question Image	
918	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
919	A non-terminating non_recurring decimal represents an	A. Irrational no B. Both a & c C. Rational no D. None of these
920	Question Image	A. A positive integer B. A negative integer C. A natural number D. An irrational number
921	If p is false, ~ p is	A. true B. not true C. equal to p D. conjuction
922	Question Image	B. xⁿ⁻¹
923	What is the conjugate of -7 -2i?	A. -7 + 2i B. 7 + 2i C. 7 -2i D. None of these
924	Domain of $\cot\theta$ is	
925	Question Image	
926	Question Image	D. none of these
927	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
928	x^2+ x - 5 = 0 is	A. A polynomial B. An inequality C. An identity D. None
929	Question Image	
930	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
		A. cos4θ B. cos2<span style="color: rgb(34, 34, 34); font-family: "Times New

931	$\cos^4\theta - \sin^4\theta =$	Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);">θ C. -sinθ D. sin2θ
932	The no of term is the expansion of (a+x)n-1 is	A. n+1 B. n-1 C. n D. n-2
933	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
934	Question Image	
935	Question Image	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
936	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
937	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
938	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
939	The number of words that can be formed out of the letters of the word ASSASSINATION is	
940	The principal value of $\sin^{-1}(-1/2)$	A. π/3 B. π/4 C. π/6 D. -π/6
941	Which is a proper rational fraction	
942	Question Image	
943	Which of the following is a vector.	A. distance B. temperature C. energy D. acceleration
944	The radius of the circle $x^2 + y^2 - 6x + 4y + 13 = 0$, is	A. 1 B. 2 C. 0 D. None of these
945	1,1/3,1/5,1/7,1/9..... is a	A. geometric sequence B. finite sequence C. infinite sequence D. arithmetic series
946	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
947	The range of y = sin x is _____	A. [1, -1] B. [-1, 1] C. [0, -1] D. [-∞+∞]
948	Let A and B be two sets. If every element of A is also an element of B then	
949	Which of the vectors have opposite direction?	
		A. n≤ 3

950	If nis positive integers, then 2^n>2n+1, only when	B. n≥ 3 C. n≤ 2 D. n≤ 1
951	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
952	Question Image	A. 2 B. 7 C. 8 D. 12
953	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
954	Question Image	A. quadratic function B. constant function C. linear function D. exponential function
955	Name the property used in 1000 x 1 = 1000	A. additive inverse B. multiplicative inverse C. additive identity D. multiplicative identity
956	Question Image	A. a B. 2a C. 3a D. 4a
957	Question Image	A. 1 B. 0 C. 3 D. -1
958	Question Image	
959	Number of terms in the expansion of $(a+x)^n$is	A. n - 1 B. n + 1 C. n + 2 D. n + 3
960	9. 8. 7. 6= _____	
961	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
962	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
963	A conditional "if p then q" is denoted by	
964	Question Image	
965	The are of sector of a circular region of radius r is	A. 2π r B. π r² C. 1/2π r² D. 1/2 r²0
966	The roots of px2 - (p-q)x-q=0 are	A. equal B. Irrational C. Rational D. Imaginary
967	The area of a sector of a circular region of radius r is	A. 2π r B. π r² C. 1/2πr² D. π/6
968	Which conjunction is not true ?	
969	What is the period of 5 cot x=?	A. π B. -π C. π/2 D. 2π
970	The period of sin x/2 = Cos x/3 is	A. 2p B. 12p C. 13p D. 7p

		D. 7p
971	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
972	Question Image	
973	If$\pi \leq x \leq 2\pi$, then cos-1 (cos x)=	A. cos x B. -x C. 1/x D. -x
974	The probability to get an odd number in a dice thrown once is	A. 6 B. 1 C. 1/6 D. 1/2
975	Question Image	
976	Question Image	
977	Question Image	
978	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
979	If p and q are two statements then their biconditional 'p if q' is denoted by	
980	Question Image	A. Closure law of addition B. Associative law of addition C. Additive inverse D. Additive identity
981	The area of a sector with central angle of 0.5 radians in a circular region whose radius is 2m is	
982	Which one is a pair of allied angles	A. (180° -θ) B. (180° -θ,180° +θ) C. (180° +θ) D. None of these
983	The distance from the point P(6,-1) to the line 6x - 4x + 9 = 0 is:	A. 5/7 B. √52/7 C. 2/48 D. 49 /√52
984	Question Image	A. a cosec(ax + b) + c B. - a cosec(ax + b) + c
985	Question Image	D. none of these
986	The value of cos(cos-1 1/2) is	A. 1/2 B. √3/2 C. -1/2 D. 1/√2
987	Question Image	A. Even B. Odd C. Prime D. None of these
988	Question Image	A. 1 B. -1 C. -1/2 D. 1/2
989	f(x) = ax + b will be an identity function if	A. a = 1 , b = 1 B. a = 1 , b = 0
990	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

991	Question Image	A. 0 B. 1 C. -1 D. 2
992	cotθ= sin 2θifθ=	
993	Question Image	
994	Question Image	
995	Question Image	A. A B. A' C. U D. A A'
996	∀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
997	Number of combination of zero or more things out of n different things	A. nPn B. nPr C. nCr D. 2n
998	Any two propositions which is combined by the word "and" and form a compound proposition is called	A. conditional of the original proposition B. consequent of the original proposition C. disjunction of the original proposition D. conjunction of the original propositoin
999	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
1000	Question Image	A. Rational fraction B. Proper fraction C. Improper rational fraction D. None of these
1001	d / dx (cot x) =	A. Sec x tan x B. -csc² x C. Sec² x D. 1/cot² x
1002	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
1003	i^2 =	A. 1 B. 2 C. -1 D. 0
1004	f(x) = 1 is	A. identity function B. constant function C. linear function D. quadratic function
1005	Question Image	D. none of these
1006	The differential equation representing the family of curves y = A cos (x + B), where A, B are parameters, is	
1007	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
1008	Question Image	
1009	Function is a special type of	A. relation B. ordered pairs C. Cartesian product D. Set
1010	Question Image	B. sin 2x + c C. -sin 2x + c
1011	Question Image	
		A. Reciprocal equation B. Exponential equation

1012	Question Image	B. Exponential equation C. Radical equation D. None of these
1013	Question Image	
1014	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
1015	$3x + 4 \leq 0$ is	A. not inequality B. equation C. identity D. inequality
1016	The third term of the sequence $a_n = (-1)^{n-1}(n-7)$ is _____	A. 8 B. 4 C. -4 D. 8
1017	Question Image	A. 0 B. -1 C. 1 D. not defined
1018	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. -2 -a D. None of these
1019	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
1020	Question Image	B. x⁻²+ c D. not possible
1021	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}
1022	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
1023	If f(α) = b2 and g (c) =d where c=b2 then (gof) (a) is	A. α B. c C. b D. d
1024	Question Image	
1025	∫ 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
1026	Question Image	A. Linear equation B. Quadratic equation C. Cubic equation D. None of these
1027	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
1028	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
1029	√x = _____ if is a prime number	A. Rational no B. Natural no C. Irrational no D. Complex no
1030	1+3x+6x2 +10x3 +....=	A. (1+x)-3 B. (1-x)-2 C. (1-x)-3 D. (1+x)-2

		D. (1+x)-2
1031	The equation $ax^2+ 2hxy + by^2 +2gx + 2fy + c =0$ represents an ellipse if	
1032	The graph of a linear function is	A. a circle B. triangle C. a straight line D. none of these
1033	sin (α+β) + sin (α-β)	A. 2 sinαcosβ B. sin (2αβ) C. sinαcosα D. None of these
1034	Question Image	
1035	The study conics, pappus used the method of:	A. analytic geometry Euclidean B. solid geometry C. Greek mathmaticians D. None of these
1036	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
1037	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. haxagon
1038	Question Image	
1039	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
1040	The equation |x +4| = x has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
1041	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
1042	Question Image	A. a sec(ax + b) + c B. - a sec(ax + b) + c
1043	Question Image	
1044	Question Image	A. 0 B. -1 C. 1 D. not defined
1045	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
1046	Question Image	
1047	The set of cartesian product A x B consists of	A. Domain B. Range C. Binary relation D. Ordered pair
1048	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 angleβat P. If AP : AB = 2 : 1 thenβ=	
1049	The points (0,-1), (2,1),(0,3) and (-2,1) are the corner of:	A. Square B. rhombus C. Parallelogram D. rectangel

		D. rectangel
1050	Question Image	
1051	*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
1052	Question Image	
1053	In R the number of identity elements w.r.t.'.' is	A. One B. Two C. Three D. Four
1054	The sum of the focal distance from any point on the ellipse 9x2 +16y2 =144 is	A. 32 B. 16 C. 18 D. 8
1055	Let∫ be real valued function continuous in the interval (x,x_1)⊆ D∫ (the domain of∫), then∱(x_1) -∱ (x)/x_1-x represents:	A. Instantaneous rate B. Average rate of change C. Differential coefficient D. None of these
1056	tanθ/2	
1057	Question Image	
1058	Question Image	A. 6 B. 360 C. 120 D. 24
1059	Question Image	A. Cos 2x = sin 4y B. Cos 4y = cos 2x C. Cos 3y = sin 4x D. None of these
1060	If $(1+x)^n=C_0+ C_1x +C_2x^2+ .....+C_nx^1$then $C_0C_2+ C_1C_3+ C_2C_4+ .....+C_{n-2}C_n=$	
1061	√11 is	A. an irrational number B. Rational number C. odd number D. Negative number
1062	The magnitude of vector a=i-3j+5k is:	A. 3 B. √35 C. √17 D. √35
1063	a _____quantity is one that possesses both magnitude and direction.	A. Scalar B. Vector C. Segment D. None of these
1064	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
1065	The middle term(s) of (a+x)11 is	A. 6th term B. 6thor 7th C. 7th term D. 6thand7th
1066	The area of circle of unit radius =	A. 0 B. 1 C. 4 D. π
1067	If in a square matrix a, two rows or two columns are interchanged the determinant of the resulting matrix is	A. |A| B. |1/|A| | C. A⁻¹ D. -|A|
1068	Question Image	A. A = x, B = 1 B. A = 0, B = 2 C. A = -1, B = 1 D. A = x-1, B = x+1
1069	Addition is not operation on	A. Natural numbers B. Even numbers C. odd numbers

		D. set of integers
1070	The solution set of the equation 4 $\cos^2 x$ - 3 + 0 is	D. none of these
1071	Cos (cos4π/3)=	A. π/2 B. π/3 C. 2π/3 D. -π/3
1072	Question Image	A. 0 B. 8 C. 5 D. 9
1073	The square roots of negative numbers is called	A. Real no B. Complex no C. Positive no D. Negative no
1074	Inverse of the function y-10x is	A. y=logx B. y=lnx C. x=10y D. x=10y
1075	The positive integer just greater than $(1+0.0001)^{10000}$is	A. 4 B. 5 C. 2 D. 3
1076	Question Image	D. none of these
1077	cos(π/2-θ) = _____;	A. cosθ B. sinθ C. -cosθ D. -sinθ
1078	Question Image	
1079	The directrix of y2 =-4ax is	A. y =-a B. y = a C. x = a D. x = -a
1080	In one hour, the hour hand of a clock turns through	
1081	$Sec^{-1}x$ =	A. Cos⁻¹1/x B. cosec⁻¹1/x C. Cos⁻¹(-x) D. Tan⁻¹x
1082	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplicative identity C. Associative law of multiplication D. Multiplicative inverse
1083	The sample space for tossing a coin once is	A. {T, T} B. {H, H} C. {H, T} D. None of these
1084	The set of rational number is represented by	A. W B. R C. Q' D. Q
1085	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
1086	3x + 4 > 0 is	A. equation B. identity C. inequality D. none of these
1087	For any real numbers x,y,xy=o ⇒	A. $x \neq 0 \wedge y \neq 0$ B. x = 0 ∨ y = 0 C. x = 0 D. y = 0
1088	Question Image	
1089	10 is a even number or 0 is a natural number, then truth value of this disjunction is	A. false B. true C. not discussed D. negation of first

		D. negation of first
1090	For non-trival solution |A| is	A. A = 0 B. A^t= 0 C. |A| = 0 D. None of these
1091	a >b ⇒a +c >b +c is known as	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
1092	For each real number, there is a number which is its	A. Negative B. Possitive C. Opposite D. Similar
1093	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
1094	Question Image	
1095	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
1096	The numbers used in rows or columns are said to be entries or	A. Columns B. Rows C. Element D. Determinants E. Matrix
1097	Question Image	A. (1, 3) B. (-1, -3) C. (1, -3) D. (-1, 3)
1098	$2\pi+\theta$will have terminal side in Quad	A. I B. II C. III D. IV
1099	Question Image	
1100	sin h x = _____	
1101	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)
1102	Question Image	
1103	The area bounded by y = x (x2 - 4) and below x - axis is	A. 4 B. 0 C. -4 D. 8
1104	(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
1105	Zero is	A. An irrational number B. A rational number C. A negative integer D. A positive number
1106	Question Image	A. 3/8 B. 7/8 C. 1/8 D. None
1107	Domain of cot x is _____	
1108	If A is skew Hermitian Matrix then which of the following is not skew Hermitian matrix	A. A2 B. A5 C. A3 D. A7
1109	Question Image	
1110	Question Image	A. Singular B. Non-singular C. Adjoint D. None of above

		D. None of above
1111	The sum of the odd coefficients in the expansion of $(a + x)^4$is	A. 14 B. 12 C. 8 D. 4
1112	Question Image	
1113	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
1114	If sinθ = 12/13, and sinθ > 0, then tan θ =	A. 2/5 B. 12/13 C. 13/5 D. 12/5
1115	Every recurring decimal represents	A. A natural number B. A rational number C. An irrational number D. A whole number
1116	If the intersecting plane is parallel to a generator of the cone, but intersects its one nappe only, the curve of intersection is	A. a circle B. an ellipse C. a parabola D. a hyperbola
1117	Question Image	
1118	nCn-r is equal to	A. n! B. n-1Cr C. nCr D. None of these
1119	A function from A to B is called on-to function, if its range is	A. A B. B C. A and B D. neither A nor B
1120	Question Image	
1121	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
1122	Question Image	A. 2x cos x2 B. -2xcosxsinx C. 2x Sin x2 D. -Sin x2
1123	Question Image	
1124	The general term of a sequence is denoted by	A. a₁ B. a_n C. n D. s_n
1125	Question Image	A. n! B. 0! C. 1 D. None of these
1126	tan (π-θ) = _____	A. - sinθ B. - tanθ C. - cosθ D. - cotθ
1127	Range if y = cos x is	A. -1≤ y≤ 1 B. -1 < y < 1 C. -∞ < x < +∞ D. None of these
1128	Question Image	
1129	Question Image	A. b = c B. a = c C. a = c

		D. b = 0
1130	If A,B and C are three matrices of same order, and (A+B)D=AD+BD, what is this property called?	A. right distributive property B. Left distributive property C. Associative property D. Lest associative property
1131	Multiplication of a row vector A by a column vector B requires as a precondition that each vector have	A. Same order B. Same number of elements C. Equal elements D. Transpose
1132	Question Image	A. Improper rational fraction B. Rational fraction C. Proper rational fraction D. None of above
1133	The transpose of a square matrix is a	A. Column matrix B. row matrix C. Inverse matrix D. None of these
1134	Question Image	
1135	The point of concurrency of the angle bisectors of a triangle is called	A. incentre B. circumcentre C. e-centre D. centroid
1136	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
1137	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)
1138	Question Image	A. an A.P. B. a G.P. C. a H.P. D. None of these
1139	The conic is a parabola, when:	A. ϱ > 1 B. ϱ < 1 C. ϱ = 1 D. ϱ = 0
1140	Question Image	
1141	If n is any positive integer then 2^n> 2(n + 1) is true for all	
1142	E-radius corresponding to < B is	
1143	Question Image	
1144	If p and q are two statements then their conjunction is denoted by	
1145	(a, b) + (-a, -b) =	A. (0,0) B. (a, b) C. (-a, -b) D. (1, 1)
1146	The set of first elements of the ordered pairs forming the relation is called is	A. Domain B. Range C. Ordered paris D. Relation
1147	Which one is not defined $\forall n \in Z+$	A. -n! B. n! C. (-n)! D. n!+0!=n!+1
1148	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
1149	If $\forall a,b \varepsilon R$,then $a+b \varepsilon R$ is a property	A. Closure law of addition B. Associative law of addition C. Additive inverse D. Additive identity
1150	Question Image	

1151	The mid point of the line joining the points P(x_1, y_1) and Q(x_2, y_2) is	
1152	For non-trival solution |A| is	A. non zero B. A = 0 C. |A| = 0 D. At = 0
1153	Question Image	A. 2 b B. 2 a C. 2 ab D. a + b
1154	Question Image	
1155	Question Image	A. -2 B. -1 C. 1 D. 2
1156	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
1157	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
1158	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)
1159	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
1160	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
1161	If A and B are two matrices of order 2 x 3 and 3 x1, respectively, then A+B =	A. B+A B. AB C. Not Possible D. 0
1162	The value of 7π/9 in terms of degree is	A. 140^o B. 130^o C. 120^o D. 45^o
1163	Question Image	A. A rational number B. A irrational number C. An even integer D. A factor of 36
1164	A matrix whose determinant is not zero is said to be	A. Singular B. Non-singular C. Adjoint D. Symmetric
1165	If $f(x) = c$ then f^1 (x0 equals:	A. 1 B. 0 C. cx D. c
1166	Question Image	
1167	The equation of the plane which bisects the line joining (2, 3, 4) and (6, 7, 8) is	A. x + y + z - 15 = 0 B. x - y + z - 15 = 0 C. x - y - z - 15 = 0 D. x + y + z + 15 = 0
1168	The three noncollinear points through which a circle passe are known, then we can find the:	A. Variables x and y B. Value of x and c C. three constants f,g and c D. inverse of the circle
1169	cos(3π/2 +θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
1170	Question Image	

1170	Question Image	
1171	Question Image	A. 3, -3, 11 B. 3, 3, 11 C. -3, 3, -11 D. -3, -3, 11
1172	Question Image	A. 2x + 2y B. 4 - x² C. -x/y D. x/y
1173	6 is	A. A prime integer B. An irrational number C. A rational number D. An odd integer
1174	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
1175	The square matrix A is skew-symmetric when At =	A. -B B. -C C. -A D. -D
1176	The 6th term of the sequence 7,9,12,16.....is	A. 27 B. 32 C. 20 D. 19
1177	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
1178	Question Image	
1179	The set of points {(x,y)|y = f(x), ∀ x∈} is called	A. Relation B. Graph of f C. Function D. All are correct
1180	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
1181	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
1182	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
1183	The angle between the vectors 3i + j - k and 2i - j + k is	
1184	56^o=.....radians	A. 1.25 B. 2.56 C. 95 D. 0.98
1185	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
1186	Question Image	
1187	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of above
1188	Question Image	
1189	Question Image	A. a = -1/2, b = -1 B. a = 1, b = 2 C. a = 2, b = 3 D. None of above
1190	The identity element with respect to subtraction	A. 0 B. 1

	is	C. -1 D. Does not exist
1191	The domain of y =√(x^2-9) is	A. R B. (0 , +∞) C. (-∞ , -3) U (3 , +∞) D. (0 ,∞)
1192	Question Image	A. Commutative law of multiplication B. Closure law of multiplication C. Associative law of multiplication D. Multiplication identity
1193	If | x | < 1, then the first two terms of (1 - x)$^{1/2}$are	
1194	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
1195	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
1196	cos 3a =_____;	A. 3sin a - 4sin3 a B. 4sin a - 3sin3 a C. 3cos3 a - 4cos a D. 4cos3a - 3cos a
1197	Question Image	
1198	Question Image	
1199	The distance between lines 3x + 4y = 9 and 6x +8y = 15 is:	A. 2/3 B. 3/10 C. 8 D. 6/5
1200	Question Image	
1201	Power set of difference set N-W is	A. Empty set B. Infinite set C. Singleton set D. {0,∅}
1202	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
1203	Sin^{-1}(-x)=	A. Cos⁻¹1/x B. - Sin⁻¹X C. Cot⁻¹X D. None of these
1204	Question Image	A. Symmetric property B. Cancellation property w.r.t. multiplication C. Reflexive property D. Transitive property
1205	The different of tan x is	A. sec2 x B. ln |sec x| C. sec2 xdx D. -cos ec2 x
1206	Question Image	A. l²+ m²+ n²= 0 B. l²- m²+ n²= 1 C. l²+ m²+ n²= 1 D. l²+ m²- n²= 0
1207	Which of the following is the subset of all sets?	
1208	The range of inequality x + 2 > 4 is	A. (-1, 2) B. (-2, 2) C. (1,∞) D. None
1209	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
1210	Which of the following is a scalar.	A. force B. frequency C. weight

		D. acceleration
1211	Question Image	
1212	In the interval 0≤ x ≤ π, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
1213	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
1214	Which of the following represents a vector	D. (x, y)
1215	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
1216	The value of 2π/3 in degree is	A. 120^o B. 160^o C. 150^o D. 60^o
1217	$Tan^{-1}1/x =$ _____	A. sin x B. sec⁻¹X C. cot⁻¹X D. None of these
1218	Question Image	A. sin x + c B. -sin x + c C. cos x + c D. -cos x + c
1219	Question Image	
1220	For n€ N,$2^{n>2}$ > n is to only when	A. n<2 B. n≤ 4 C. n≥ 4
1221	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
1222	Question Image	
1223	Question Image	
1224	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
1225	Question Image	
1226	Question Image	A. Associative law of multiplication B. Commutative law of addition C. Commutative law of multiplication D. Associative law of addition
1227	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
1228	The general equation of a circle is	
1229	If A = {x / x ∈ R ∧ x^2 - 16 = 0} then A =	A. - x B. Infinite set C. Φ D. {-4,4}
1230	ax+by+c = 0 , represents a	A. Circle B. Parabola C. Straight line D. Quadratic circle
1231	Question Image	A. -10 B. 10/7 C. -10/7 D. -7/10
1232	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
1233	The two lines x + y = 0 and 2x - y + 3 = 0 intersect at the point:	A. (-1,1) B. (2,3) C. (1,3) D. (-1,2)
1234	Question Image	
1235	The generators of a cone are also called	A. rulings B. apex C. nappes D. ellipse
1236	To draw conclusions front premises believed to be true, this way of reasoning is called	A. deduction B. induction C. implication D. disjunction
1237	x = r2, y = 1 are the parametric equation of	A. Circle B. Hyperbola C. Ellipse D. Parabola
1238	Question Image	A. 0 C. 1
1239	Question Image	
1240	Question Image	A. 8th B. 10th C. 7th D. 3rd
1241	Question Image	
1242	The second degree equation 2x2 -xy+ 5x -2y +2 =0 represents	A. Circle B. Hyperbola C. Ellipse D. Pair of straight lines
1243	6! = _____	A. 360 B. 720 C. 6.5.4 D. None of these
1244	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
1245	(n + 2) (n + 1)n in factorial form is	
1246	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
1247	Question Image	D. all are correct
1248	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
1249	Question Image	
1250	Question Image	
1251	Which of the following is a vector.	A. energy B. force C. work D. power
1252	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
1253	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
1254	Domain of tan x is _____	

1255	Question Image	
1256	The law of tangents is _____	
1257	A function f will have an inverse function if and only if it is a	A. onto function B. into function C. Constant D. one-one function
1258	The ellipse and hyperbola are called	A. Concentric conics B. Central conics C. Both a b D. None
1259	Question Image	A. 4 B. 3 C. 2 D. 1
1260	Question Image	
1261	Cos-1 (-x) =	A. -x B. 1/x C. tan-1 x D. π-cos-1 x
1262	The middle term in the expansion of $(a+x)^{12}$ is	A. 7th B. 8th C. 9th D. 6th
1263	f(x) = log x + 3 is a	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
1264	Question Image	
1265	The domain of the principal tan function is	
1266	The equation of the line through (-8, 5) having slope undefined is:	A. y + 8 = 0 B. y = 8 C. y = x + 8 D. x + 8 = 0
1267	Question Image	A. 0 B. 1 C. 2 D. 3
1268	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
1269	Question Image	C. 1 D. 0
1270	A daclarative statement which may be true or false but not both is called a	A. hypothesis B. proposition C. implication D. conjuction
1271	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
1272	The solution set of $x^2 - 5x + 6 = 0$ is	A. {1, 3} B. {2, 3} C. {1, 2} D. None of these
1273	10 is a even number or 0 is a natural number, then truth value of this disjunction is	A. False B. True C. Not discussed D. negation of first
1274	The sum of complex number (a,b) and (c,d) is	
1275	Question Image	
1276	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

1277	Question Image	
1278	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
1279	Question Image	
1280	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
1281	The seventh term of an A.P whose first term is P and common difference is q. is	A. P-6q B. P+6q C. P-4q D. P-nq
1282	Given matrices A =|a_y|and B=|b_y|,and b and c are real number,then (b+c)A=	A. bB+cB B. bA+cB C. bB+cA D. bd+cd
1283	Question Image	A. additive property B. multiplicative property C. additive inverse D. additive identity
1284	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
1285	Question Image	
1286	Number of selections of n different things out of n	A. 1 B. nPr C. n! D. nPr
1287	The number of solution of the equation tan x + sec x = 2 cos x lying in the interval [0, 2π] is	A. 0 B. 1 C. 2 D. 3
1288	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
1289	If 4 $\sin^2\theta$=1, then values of$\theta$are	
1290	Question Image	A. -152 B. -252 C. 371 D. -421
1291	Question Image	
1292	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
1293	Question Image	
1294	Question Image	A. 1 B. 2 C. 3/2 D. 5/2
1295	The derivative of $1/x^m$ is:	A. x^{m+1}/ m B. m(x)^{m-1} C. (m-1) x^{-m} D. m/x^{m+1}
1296	The distance of the point (2.3) from x-axis is	A. 2 B. 3 C. 5
1297	Domain of cosec$\theta$is	
1298	A joint equation of the lines through the origin and perpendicular to the lines $ax^2+2hxy+by^2$	A. h2 = ab B. a + b =0 C. a = b

1298	and perpendicular to the lines ax2 +2hxy +by2 =0 is indentical is ax2 +2hxy +by2 =0 if	C. a = b D. a≠ b E. a = b = 0
1299	The greatest integer which divides the number 101^{100}- 1 is	A. 100 B. 1000 C. 10000 D. 100000
1300	Question Image	
1301	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
1302	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
1303	∀ z ∈ C, multipliucative is	A. (1,1) B. (1,0) C. (0,1) D. None of these
1304	The equation x^2+ y^2= 0 represents	A. A circle B. A degenerate circle C. An empty set D. A st. line
1305	Question Image	A. perpendicular vectors B. parallel vectors C. concurrent vectors D. none of these
1306	The geometrical representation of a linear function is	A. Circle B. Parabola C. Straight lie D. None of these
1307	Range of 3 cot x is _____	A. [-1, 1] B. [-3, 3] C. R D. None of these
1308	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is	A. an ellipse B. a circle C. a parabola D. a hyperbola
1309	Question Image	
1310	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'
1311	The y intercepts and the slpe of the line expressed by line expressed by 3x - 2y + 6 = 0 is	A. 3/2, -3 B. -3/3 , -3/2 C. -3,-3/2 D. -3,-3
1312	(A∪B)∪C= ----------	A. A∩B(B∪C) B. A∪(B∪C) C. A∪(B∩C) D. None of these
1313	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
1314	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
1315	Which of the following notation defines AxB	
1316	Question Image	A. A B. A' C. U D. None of these
1317	Question Image	
1318	Question Image	

1319	Question Image	A. 2 B. -3/2 C. 1 D. 0
1320	The surface generated by lines, consists of two parts, called:	A. vertex B. apex C. nappes D. axis
1321	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_2 - Z_1\|$ = ?	
1322	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
1323	Question Image	A. n(A) B. n(B) C. 0 D. 1
1324	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
1325	$(1 + 2x)^4$= _____	A. 1 + 4x + 6x²+ 4x³+ x⁴ B. 1 - 4x + 6x²- 4x³+ x⁴ C. 1 - 8x + 24x²- 32x³+ 16x⁴ D. 1 + 8x+ 24x²+ 32x³+ 16x⁴
1326	There will be no inverse if the function is	A. one -to - one B. One to many C. onto D. into
1327	The term independent of x is the expansion $(x^3+1/x)^{12}$	A. 295 B. 495 C. 395 D. 722
1328	Area of inscribed circle is	A. π R2 B. π η2 C. π r22 D. π r2
1329	The number of terms in the expansion of $(a + x)^{12}$is	A. 13 B. 12 C. 11 D. 10
1330	The additive inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 0
1331	(ABC)' =	A. CBA' B. CBA C. C'B'A D. C'B'A'
1332	Question Image	D. None of these
1333	PQ is a post of given height a, and AB is a tower at some distance;$\alpha$and$\beta$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	
1334	In a triangle if a > 45°,β > 30° then y cannot be	A. 90° B. 100° C. 10° D. 120°
1335	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
1336	Question Image	
1337	Question Image	D. none of these
		A. 1 - 2 sin²α+ cos²<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size:

1338	cos 2α=	style= color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">β C. sin²α- cos²β D. None of these
1339	$5x^3$+ 3x - is a _____	A. Polynomial of degree 3 B. Polynomial of degree 2 C. Polynomial of degree 1 D. Polynomial of degree 0
1340	Question Image	A. hypothesis B. implication C. consequent D. conditional
1341	If the trace of matrix A is 5, then the trace of the matrix 3A is	A. 3/5 B. 5/3 C. 8 D. 15
1342	A cone is generated by all lines through a fixed point and the circumference of	A. a Circle B. an ellipse C. a Hyperbola D. None of these
1343	Every set is an improper subset of	A. Empty set B. Equivalent set C. Itself D. Singleton set
1344	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]
1345	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
1346	Question Image	
1347	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
1348	Question Image	A. 2x + 3 B. x²+ 3 + c
1349	The length of the tangent from (2, 1) to the circle x^2+ y^2+ 4y + 3 = 0 is	
1350	A line segment whose end points lie on a circle is called the	A. Arc of the circle B. Centre of circle C. Chord of circle D. Radius of circle
1351	If f(x) = cos x then f(0) is	A. 0 B. 1 C. 1/2
1352	sin(3π/2 -θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
1353	x = 0 is in the solution of the inequality	A. x > 0 B. 3x + 4 < 0 C. x + 3 < 0 D. x - 2 < 0
1354	The distance of the point (a,b) from y-axis is	A. a B. b C. a + b
1355	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
1356	(2.02)4 s equal to	A. 16 B. 16.6496 C. 17 D. 18
		A. 1

1357	$p(x) = 2x^4 - 3x^3 + 2x - 1$ is polynomial of degree	A. 1 B. 2 C. 3 D. 4
1358	sec (-360°) = _____	A. 0 B. 1 C. 2 D. 3
1359	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)
1360	If the angle between two vectors with magnitude 2 and 15 is 30°then their scalar product is	B. 15 C. 30
1361	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
1362	Question Image	D. none of these
1363	The function {f(x,y)|y = ax2 +bx +c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function
1364	The position vector of any point in space is	
1365	Question Image	A. 3K B. K2 C. K3 D. K
1366	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
1367	Question Image	
1368	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
1369	3j . k x i	A. 0 B. 1 C. 3 D. 9
1370	The point of concurrency of the medians of the ΔABC is called its	A. Orthocenter B. Centriod C. Circumcentre D. Incentre
1371	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
1372	Question Image	
1373	$\sin[\cot^{-1}\{\cos(\tan^{-1}x)\}]=$	
1374	Express the perimeter P of square as a function of its area A?	A. P = 4√A B. P =√A C. P = 2A D. P =π√A
1375	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
1376	Range of tan x is _____	A. [-1, -] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
1377	The solution set of sin x + cos x = 0 is	

1378	Domain of sin x is _____	
1379	Question Image	A. xa^{x-1} B. a^x C. x in a D. a^xln a
1380	Question Image	
1381	0.25 is _____	A. An irrational number B. A natural number C. A prime number D. A rational number
1382	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
1383	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
1384	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
1385	Question Image	A. 1, 1/2, 0 B. 1, 2, 1 C. 1, 2, 3 D. 1, 2, 0
1386	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
1387	Question Image	
1388	Function is a special type of	A. relation B. ordered pairs C. cartesian product D. sets
1389	Question Image	
1390	Question Image	A. -35 B. -28 C. 41 D. 72
1391	The gradient of a curve Y = ax+b/x2 at (2,5) is 2. The value of a and b are.	A. 7,4 B. 7/3,4/3 C. 7,2 D. 7/3,2/3
1392	If for the matrix A,A5 = 1,then A-1=	A. A2 B. A3 C. A D. None of above
1393	The set {x|x∈N∧x-4=0} in tabular form is	A. {-4} B. {0} C. {} D. None of these
1394	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
1395	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)
1396	If $z_1 = 1 + 2i$, $z_2 = 3 + 4i$ then	A. z₁ > z₂ B. z₁ = z₂ C. z₁ < z₂ D. None of these
1397	π is _____	A. A complex number B. A rational number C. A natural number D. An irrational number

1398	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)
1399	The value of 63^{o}in term ofπ is	A. 5π/2<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> B. 5π/3 C. 7π/20 D. 7π/3
1400	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
1401	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
1402	Question Image	
1403	What is the value of cos-1(1/2)?	A. π/3 B. π/4 C. 3π/2 D. π/6
1404	Write the first four terms of the arithmetic sequence 5, 2, -1, ... is	A. 3 B. -4 C. 7 D. 1
1405	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
1406	Question Image	D. none of these
1407	Question Image	
1408	Question Image	A. a = 4, b = 1 B. a = 1, b = -4 C. a = 0, b = 4 D. a = 2, b = 4
1409	Two circle $x^2 + y^2$+2x - 8 = 0 and $x^2 + y^2$ -6 + 6x -46 =0:	A. touch internally B. do not intersect C. touch externally D. None of these
1410	Express as a sum or difference: 2 sin $5\theta\cos\theta$	A. cos 4θ- cos 2θ B. sin 4θ+ sin 2θ C. cos 4θ+ cos 2θ D. sin 4θ- sin 2θ
1411	Find the set of value of m for which expression $2x^2$ -mx = 2 = 0 have real roots?	A. m< -4 B. m> 4 C. -4 < m> 4 D. None
1412	$\sin(180° -\theta) =$	A. cosθ B. -cosθ C. Tan<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255,

		248);">θ D. Sinθ
1413	If A = {2m/m^3= 8 , m€ Z} then A =	A. {1,8,27} B. {4} C. (2,4,6} D. {2,16,54}
1414	The real number system contains.	A. Positive Numbers B. Negative numbers C. Zero D. (option a, b and c)
1415	Question Image	A. sin h x B. cos h x C. sec h x D. cosec h x
1416	Question Image	
1417	If A is a non singular matrix then A^{-1}= _____	
1418	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
1419	The sum of an infinite geometric series exist if	A. | r | < 1 B. | r | > 1 C. r = 1 D. r = -1
1420	Question Image	
1421	The radius of the circle $(x - 1)^2$+ $(y + 3)^2$= 61 is	A. 8 B. 4 C. 64 D. None of these
1422	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
1423	The solution of the equation 3 $\tan^2 x$ = 1 is _____	D. none of these
1424	2.333....is a	A. Irrational no B. Complex no C. Rational no D. None of these
1425	Three right angles is the angle of measure	A. 270° B. 180° C. 90° D. 270'
1426	Question Image	
1427	Question Image	
1428	Question Image	A. 100 B. 99 C. 0 D. none of these
1429	Question Image	
1430	Question Image	
1431	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	
1432	If t is the parameter for one end of a focal chord of the parabola y^2= 4ax, then its length is	
1433	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
		A. Recurring B. Terminating

1434	1/3 is a decimal	B. Terminating C. Non-terminating D. None of the above
1435	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	
1436	The distance between the points A(-8,3) and B(2,-1) is	B. 116 D. none of these
1437	Question Image	
1438	Question Image	
1439	Question Image	
1440	Question Image	A. c/a B. -c/a C. b/a D. -b/a
1441	Question Image	
1442	sin(π/2+θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
1443	Question Image	A. 2 and 9 B. 3 and 2 C. 2/3 and 9 D. 3/2 and 6
1444	Two circles are said to be concentric if they have	A. same radius B. same chord C. same centre D. same diameter
1445	Question Image	A. π B. π / 2 C. π / 3 D. π / 4
1446	Question Image	A. K/6 B. 2K C. 3K D. 6K
1447	Question Image	
1448	Sin-1(-x)=	A. x B. -x C. -sin-1 x D. cos-1 x
1449	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
1450	Question Image	D. none of these
1451	Question Image	A. zero at x B. differentiable at x C. continuous at x D. none of these
1452	Question Image	A. 1 B. 3 C. 2-i D. -1
1453	If $f(x) = x^3 - 2x^2 + 4x - 1$, then f(-2) = ?	A. 0 B. -25 C. 5 D. 45
1454	The solution of the quadratic equation x2 -7x + 10=0, is	A. 2 B. 5 C. 2,5 D. 7
1455	Question Image	
1456	The central angle of an arc of a circle whose length is equal to the radius of the circle is	A. degree B. radian

1456	length is equal to the radius of the circle is called the	C. minute D. second
1457	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
1458	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
1459	The slope of the line from B (2,-3) through A (0,3) is:	A. -3 B. 1/3 C. 0 D. undefined
1460	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
1461	What is the conjugate of -7 -2i ?	A. -7 + 2i B. 7 +2i C. 7 -2i D. √53
1462	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
1463	Associative law of multiplication	A. ab = ba B. a(bc) = (ab) c C. a(b+c) = ab + ac D. (a + b)c = ac + bc
1464	How many arrangements of the letters of the word MATHEMATICS can be made	
1465	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
1466	The center of the sphore which passes thro' (a, 0, 0), (0, b, 0), (0, 0, c) and (0, 0, 0) is	
1467	Question Image	
1468	Question Image	
1469	Question Image	
1470	Question Image	
1471	22.5°=_____	
1472	If y is an image of x under the function f, then we write	A. y = f(x) B. x = f(y) C. y = x D. none of these
1473	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	
1474	Identity element, if it exists, is	A. inverse B. unique C. commutative D. associative
1475	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
1476	The greatest term in the expansion of $(3+2x)^9$, when x=1 is	A. 4th B. 4th and 5th C. 5th D. 6th
1477	Question Image	A. y : x B. x : y C. -y : x D. -x : y

		B. x . y
1478	For two vector a and b, a+b = _____	A. a b B. b+a C. b-a D. None
1479	Question Image	
1480	(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
1481	n(n - 1) (n - 2) .... (n - r + 1) = _____	
1482	Question Image	A. Associative property of addition B. Associative property of multiplication C. Commutative property of addition D. Commutative property of multiplication
1483	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	
1484	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	
1485	x = _____ is in the solution of 2x - 5 > 0	A. 0 B. 2 C. -2 D. 3
1486	A statement which is already false is called	A. Tautology B. Contrapsitive C. Absurdity D. Universal quantifiers
1487	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
1488	Question Image	
1489	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	
1490	Question Image	
1491	Range of 3 sin x is _____	A. [-3, 3] B. [-1, 1] C. R D. None of these
1492	If P is a proposition then its negative is denoted by	
1493	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
1494	Apollonius was a:	A. Rocket B. Muslims scientist C. Greek mathematicians D. Method of finding conics
1495	Group of none-singular matrices under multiplication is	A. None-Abelian group B. Semi group C. Abelian group D. None of these
1496	The points (a ,0),(0,b) and (3a , -2b) are:	A. Collinear B. Vertices of isosceles triangle C. corner of a right-angled triangle D. None of these
1497	$^nC_2$= exists when n is _____	
		A. k3 B. 0

1498	Question Image	B. 0 C. 3k D. k6
1499	Question Image	
1500	*i* =	A. √1 B. √2 C. √-2 D. √-1
1501	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
1502	Question Image	A. A B. B C. U D. None of these
1503	n! > 2^n-1 is true when	A. n≤ 3 B. n≤ 6 C. n≥ 4 D. n≤ 6
1504	Question Image	A. Associative law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
1505	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
1506	Question Image	A. 120 B. 5 C. 4 D. 6
1507	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!
1508	Every real number is	A. A complex number B. A rational number C. A natural number D. A prime number
1509	Question Image	
1510	The angle between the vectors $\underline{u}$ =2$\underline{i}$ - $\underline{i}$ + $\underline{k}$ and $\underline{v}$ = -$\underline{i}$ + $\underline{i}$ is:	A. 3π/2 B. 2π/3 C. 5π/6 D. π/3
1511	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
1512	The factorial of a positive integers is a (an)	A. Rational number B. Positive integer C. Real number D. None
1513	A matrix with a single row is called a	A. Column matrix B. Row matrix C. Null matrix D. Identity matrix
1514	If A is a matrix of order mxl , then matrix A is called	A. singular matrix B. Column matrix C. Row matrix D. Identity matrix
1515	Question Image	
1516	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

1517	Question Image	
1518	Question Image	
1519	Question Image	A. cos x B. - sin x C. - cos x D. tan x
1520	Question Image	
1521	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
1522	Question Image	
1523	The minimum value of the function f(x) = x^2 - x - 2 is.	A. -9/2 B. -1 C. -9/4 D. 0
1524	Question Image	
1525	Question Image	
1526	Question Image	
1527	If uv= Projuv then	A. Uandvare parallel B. vis a unit vector C. Uis a unit vector D. Both b and c
1528	Question Image	
1529	The solution set of x < 4 is	A. -∞< x < 4 B. -∞> x > 4 C. -∞< x < 2 D. -∞> x > 2
1530	ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
1531	∀x∈(a,b),f(x) is increasing if	A. f′(x) >0 B. f′(x) <0 C. f′′(x) >0 D. f′′(x) =0
1532	Question Image	A. a cos(ax + b) + c B. - a cos(ax + b) + c
1533	Question Image	A. 4x + 1 B. 4x C. 2x³ D. none of these
1534	In the function f: A□B, the elements of a are called	A. Images B. Pre-images C. ranges D. Parameters
1535	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
1536	Question Image	
1537	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
		A. Finite group B. A group w.r.t addition

1538	The set of integer is	B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group
1539	Question Image	A. 0 B. -4 D. none of these
1540	Question Image	
1541	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
1542	Question Image	A. 2 B. 4 C. 8 D. 16
1543	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
1544	The set {0,-1} hold closure property under	A. Addition B. Both a & c C. Multiplication D. None of these
1545	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
1546	Question Image	A. Closure law of addition B. Closure law of multiplication C. Commutative law of addition D. Commutative law of multiplication
1547	Question Image	
1548	Question Image	
1549	csc(-π/2) = _____;	A. 0 B. 1 C. -1 D. Undefined
1550	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 D. none of these
1551	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
1552	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
1553	Question Image	A. range of f B. domain of f C. both (a) and (b) D. none of these
1554	The set {Z\ {0} } is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
1555	Question Image	A. 1 B. 2 C. 3 D. 4
1556	Name the property used in 100 + 0 = 100	A. Additive inverse B. Multiplicative inverse C. Additive identity D. Multiplicative identity
1557	The latus rectum of the ellipse $5x^2 + 9y^2 = 45$ is	A. 10 / 3 B. 5 / 3 C. 3 / 5 D. 3 / 10

1558	Question Image	A. 0 B. 1 C. -1 D. None
1559	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
1560	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
1561	Question Image	A. Parallel to the plane B. At right angles to the plane C. Lies in the plane D. Meet the plane obliquely
1562	Question Image	A. 1 D. -1
1563	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
1564	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
1565	Question Image	
1566	Question Image	
1567	Question Image	
1568	The solution set of trigonometric equation contains	A. one element B. two elements C. three elements D. Infinite elements
1569	14 is not a	A. Prime number B. Whole number C. Even number D. Real number
1570	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
1571	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
1572	Tan 360° = _____	A. -1 B. 0 C. 1 D. Undefined
1573	The length of perpendicular form(-2,3) to the line y=2x-3 is:	A. $5\sqrt{2}$ B. 6 C. $2\sqrt{5}$ D. 7.5
1574	Question Image	A. -8 B. 8 C. 8i D. 32
1575	A conjunction is considered to be true only if both its components are	A. False B. Equivalent C. Equal D. True
1576	Question Image	
1577	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the resulting section is:	A. an ellipse B. Circle C. a hyperbola D. a parabola
1578	$2^{2x+2} - x^{+1} + 32 = 0$ is gives value of x	A. (3,4) B. (8,4)

1578	2−3+2 +32 = 0 is gives value of x	C. (2,3) D. (5,9)
1579	Range of cos x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
1580	Arithmetic mean between x - 3 and x + 5 is	A. x + 1 B. x + 2 C. x + 3 D. x + 4
1581	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
1582	Question Image	
1583	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□
1584	Question Image	A. Three Independent Variables B. Two independent constant C. Three independent parameters D. Three independent constant
1585	sn (2sin-10.8)	A. 0.56 B. 0.69 C. -0.16 D. 0.96
1586	Question Image	
1587	Question Image	A. 0 B. 1
1588	The familiar plane curves, namely circle, ellipse, parabola and hyperbola are called:	A. cones B. conics C. nappes D. apex
1589	Domain of y = cot x = _____	
1590	Minor of an element $a_{ij}$is denoted by	A. M_{ij} B. A_{ij} C. |A| D. None of these
1591	Question Image	
1592	a + x is _____	A. A trinomial B. A binomial C. A monomial D. None of these
1593	1/3 is _____	A. A prime number B. An integer C. A rational number D. An irrational number
1594	Question Image	A. Rational B. Irrational C. Even D. Odd
1595	Question Image	
1596	The zero vector is regarded to be parallel to	A. Every vector B. Is some cases C. Both a,b D. None
1597	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)
1598	Question Image	
1599	$\cos\theta/2=$	
1600	Let the real valued function F and G be defined by f(x) = 2 x + 1 and g(x) = x2 -x . The	A. 2^{x2} - x+1 B. 2^{x2} - 2x +1

1600	by f(x) = 2 x + 1 and g(x) = x2 -x . The expression fg (x) is given by?	C. 2^{x2} -x + 2 D. x² -x +1
1601	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
1602	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
1603	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
1604	Question Image	A. A(α) - A(β) B. A(α) + A(β) C. A(α-β) D. A(α+β)
1605	{x|x∈R∧x≠x} is a	A. Infinite set B. Null set C. Finite set D. None of these
1606	Extraction of square root of a given number is a	A. unary operation B. binary operation C. group D. inverse function
1607	The number of subset of {0} is	A. 1 B. 2 C. 3 D. None
1608	w^{11}= _____	A. 0 B. 1 C. w D. w²
1609	Question Image	D. none of these
1610	Question Image	A. 1 B. 1/2 C. 0 D. None
1611	Question Image	A. 1/8 B. 1/2 C. 1/4 D. 1/6
1612	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
1613	Question Image	A. 0 B. -2 C. 1 D. 4
1614	Question Image	A. 1 B. -1 C. 0 D. None of these
1615	Question Image	
1616	Question Image	
1617	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
		A. 4/5

1618	The eccentricity of the conic $9x^2 - 16y^2 = 144$ is	B. 5/4 C. 4/3 D. 3/4
1619	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
1620	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
1621	Question Image	
1622	The measure of the acute angle between the lines represented by x2 -xy -6y2 =0 is	A. 120° B. 30° C. 130° D. 45°
1623	Find all the angle between -360^o and 180^o when sinx = 1/2?	A. -30^o , -150^o B. 30^o , 150^o C. 30^o , -150^o D. -30^o, 150^o
1624	Which of the following is a vector.	A. work B. time C. density D. electric field
1625	Question Image	C. 2x D. 2
1626	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
1627	f(x) = C is	A. identity function B. constant function C. linear function D. quadratic function
1628	Question Image	
1629	Question Image	D. none of these
1630	Multiplicative inverse of 0 is	A. 0 B. 1 C. ±1 D. Does not exist
1631	Question Image	A. x C. y
1632	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
1633	Question Image	
1634	The multiplicative inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
1635	All men are mortal. We are men, therefore, we are also mortal. This is a useful example of	A. deduction B. induction C. conjunction D. disjunction
1636	Question Image	
1637	Question Image	A. A = x, B = 1 B. A = 0, B = 2 C. A = -1, B = 1 D. A = x-1, B = x + 1
1638	A triangle which is not right angle is called _____ triangle	A. acute B. Obtuse C. Right D. Oblique
1639	Period of cos x is _____	
		A. 100°

1640	Which of the following is a quadrantal angle	B. 200° C. 170° D. 270°
1641	Question Image	A. a = 2, b = 3 B. a = 3, b = 2 C. a = 2, b = 1, 2 D. a = 3, b = 3
1642	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)
1643	154^{o} 20' =	A. 2550/34401π<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> B. 27721/22400 π C. 2521/32400π D. 4125/32400π
1644	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
1645	The point which is closet to the focus of a parabola is:	A. vertex B. Chord C. Focus D. Directix
1646	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)
1647	Which of the following is an identity matrix?	D. none of these
1648	Which type of the matrix-has no inverse?	A. Square B. Adjoint C. Singular D. Non-singular
1649	We often consult doctors or lawyers on the basis of their good	A. personality B. behaviour C. reputation D. good dealing
1650	The parabolay2=4ax open up if	A. a<0 B. a≠0 C. a>0 D. All are incorrect
1651	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
1652	If no two elements of ordered pairs of a function from A onto B are the same, then it is called	A. surjective B. injuctive C. bijective D. on to
1653	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
1654	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
1655	Which of the following has the same value as i113	A. i B. -1 C. -i D. 1
1656	Question Image	A. 1 B. -1
1657	Range of sec$\theta$is	A. Z - {x | -1 < x < 1} B. W - {x | -1 < x < 1} C. R - {x | -1 < x < 1} D. R
1658	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then	A. an ellipse B. a hyperbola C. a circle

	the curve of intersection is	C. a circle D. a parabola
1659	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
1660	The period of|sin2x| is	A. π/2 B. -π/2 C. π D. π/3
1661	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
1662	Question Image	
1663	Question Image	A. 0 B. -1-w²
1664	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
1665	Question Image	A. (-1, 2) B. (-1, 1) C. (1, 2) D. {-1}
1666	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)
1667	Question Image	
1668	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
1669	Arithmetic mean between 14 and 18 is	A. 16 B. 17 C. 15 D. 32
1670	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
1671	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
1672	Question Image	A. Addition B. Multiplication C. Division D. Both addition and multiplication
1673	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
1674	E-radius corresponding to < C is	
1675	Question Image	A. -sinθ B. cosθ C. sinθ D. -cosθ
1676	The inverse of a line is	A. inverse B. Line C. quadratic D. Circle

1677	Question Image	
1678	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a.b and c
1679	Question Image	A. conclusion B. consequent C. hypothesis D. conditional
1680	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
1681	The period $\sin^2\theta$is	A. π² B. π C. 2π D. π/2
1682	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
1683	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
1684	If Projvu = Projuv, then	A. Uand vare parallel B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
1685	Question Image	A. Square matrix B. Row matrix C. Symmetric matrix D. Null matrix
1686	Question Image	A. Associate law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
1687	{1, 2, 3} is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
1688	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
1689	Question Image	A. 9 B. -9 C. 0 D. 1
1690	The exponent of x in 10th term in the expansion of (a+x)n	A. 10 B. 12 C. 11 D. 9
1691	{0} is a	A. Empty set B. Singleton set C. Zero set D. Null Set
1692	Question Image	
1693	The general value ofθsatisfying the equation 2 $\sin^2\theta$- 3 sinθ-2 = 0 is	
1694	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
1695	Question Image	A. Null matrix B. Triangular matrix C. Unit matrix D. Rectangular matrix

1696	Question Image	A. n < 8/5 B. n < 5/8 C. |n| < 8/5 D. |n|>8/5
1697	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)
1698	For a set A, A∪Ac= ----------	A. A B. ⌀ C. Ac D. U
1699	i^9 =	A. i² B. -1 C. 1 D. i
1700	A function f is said to be an even if f(-x) =	A. 0 B. 1 C. f(x) D. -f(x)
1701	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
1702	The solution set of the equation |3x + 2| = 5 is	
1703	If a,b,c are unit vectors then |a + b|2 +|a - b|2	A. 4 B. 8ab C. 9cos D. 4(a,b)
1704	The identity function is	A. surjective B. injuctive C. bijective D. into
1705	Question Image	
1706	x = $\sin^{-1}$ 3, then the value of sin x is	A. √(3/2) B. 3 C. Not possible D. -1
1707	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplication identity C. Associative law of multiplication D. Multiplication inverse
1708	For≥ -2 , 1+3+5+.....+(2n+5)	A. (n+2)² B. (n-2)² C. 2n+1 D. (n+3)²
1709	Question Image	
1710	The equation of the circle wit (-1, 1) and radius 2 is	
1711	The value of i^{4n+1}	A. 1 B. -1 C. i D. i²
1712	(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
1713	w^{29}= _____	A. 0 B. 1 C. w D. w²
1714	In-radius is denoted by	A. r B. η C. r2 D. R
1715	The transport of a square matrix is a	A. Row matrix B. Column matrix C. Square matrix D. Null matrix

		D. Null matrix
1716	There are 50 students in a class out of these 38 used desktop computers, 16 out of these used laptop. It is noted that five student neither use laptop or computer. The students having both laptop and computer are A. Based on the information find out the greatest value of A	A. 36 B. 4 C. 16 D. 30
1717	Derivative of sin x w.r.t. sin x is	A. 0 B. 1 C. sin x D. cos x
1718	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)
1719	Find a if 1 is a root of the equation x^2+ ax + 2 = 0	A. 3 B. -3 C. 2 D. 0
1720	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
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 difference of two consecutive terms of an A.P is called the	A. Common difference B. Common ratio C. Geometric series D. Geometric mean
1723	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
1724	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
1725	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
1726	Question Image	
1727	¡^{101}=	A. i B. i² C. -i D. -1
1728	The zero vector is	A. [0, 0, 0] B. [1, 1, 1] C. [0, 1, 0] D. [0, 0, 1]
1729	Parametric equation of circle : $x^2+y^2+r^2$, are	A. r1 = x cos□ r² = y sin□ B. x = r cos□ y = r sin□ C. x = r sin□1 y = r sin□2 D. x = r₁ cos□ y = r^{2 sin□}
1730	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
1731	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
1732	Question Image	A. Zero matrix B. Diagonal matrix C. Column matrix D. Scalar matrix
1733	Inequalities have _____ symbol	A. 2 B. 3 C. 4

		D. 1
1734	The range of function f(x)=-x2+2x-1 is	A. R B. (-∞,0] C. (-∞,1] D. [0,∞)
1735	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
1736	A conjunction is considered to he true only if both its components are	A. false B. equilvalent C. equal D. true
1737	The standard parabolic form of the equation f(x) = x^2 +4 x +1 is	A. x(x+4)+1 B. (x+2)²-3 C. (x+4)³ + 9 D. x(x-2)²+1
1738	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
1739	The multiplicative inverse of x such that x = 0 is	A. -x B. does not exist C. 1/x D. 0
1740	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
1741	Z is a	A. Infinite set B. Finite set C. Singleton set D. Set of all integers
1742	Φ set is the _____ of all sets	A. Subset B. Union C. Universal D. Intersection
1743	Question Image	B. a = b , h = 0 C. f = g, h = 0 D. h = h, c = 0
1744	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
1745	Question Image	
1746	$(x^3-1/2x)^6$ is	A. 15/16 x² B. 2/13 x² C. 17/7 x² D. 16/15 x²
1747	The sum of first twenty odd integers in A.P is	A. 400 B. 397 C. 404 D. 408
1748	The solution of the equation $\cos^2\theta$+ $\sin\theta$+ 1 = 0 lies in the interval	
1749	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
1750	Question Image	A. 4 B. 6 C. 8 D. 10
1751	Question Image	A. 0 B. 1 C. 1/2
	An unbiased die is thrown. Then the probability	A. 1/2

1752	An unbiased die is thrown. Then the probability of getting a prime is	B. 2/3 C. 3/4 D. None of these
1753	Question Image	D. none of these
1754	Question Image	A. 2 B. 4 C. 6 D. 8
1755	The sum of the roots of the equation x2 -6x +2 = 0 is	A. -6 B. 2 C. -2 D. 6
1756	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
1757	Question Image	
1758	The quadratic formula is	
1759	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
1760	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
1761	If f (x) = |x|, then (0,0) is the	A. Critical point B. Inflection point C. Stationary point D. None of these
1762	If α,β are the roots of $ax^2+ bx + c = 0$ and $\alpha+ h,\beta+ h$ are the roots of $px^2+ qx + r=0$, then h =	
1763	Domain of cosh x is	A. R B. R -{0} C. [1,∞) D. [0,∞)
1764	A sequence is a function whose domain is	A. N B. Subset of N C. R D. None of these
1765	The largest possible domain of the function: $y=\sqrt{(x)}$ is:	A. (0 ,∞) B. 12 C. (3 , 12) D. (3 ,∞)
1766	Question Image	B. 0 C. 1 D. undefined
1767	The equation $x^2 + y^2 +2g +2fy + c =0$ represents a circle whose centre is :	A. (g,f) B. (-g,-f) C. (2g ,2f) D. (-2f ,-2g)
1768	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
1769	The term involving x^4 in the expansion (3-2x) is	A. 217x⁴ B. 15120x⁴ C. 313x⁴ D. -25x⁴
1770	Question Image	A. 5 / 12 B. 3 / 8 C. 5 / 8 D. 7 / 4
1771	Cofactor of an element aij denoted by Aij is	A. (-2)i+j B. Mij C. (-1)i+j Mij D. None of above
	The equation of the line through the point (2, 3	

1772	The equations of the line thro' the point (2, 3, -5) and equally inclined to the axis are	
1773	Question Image	
1774	Question Image	
1775	The exact value of $\cos^{-1}(-1) + \cos^{-1}(1) =$	A. π B. -π C. π/2 D. π/3
1776	60° = _____	
1777	Arithmetic mean between a and b is	
1778	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)
1779	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)
1780	Question Image	
1781	The domain of an infinite sequence is a	A. Set of natural numbers B. R C. Subset of N D. None of the above
1782	The magnitude of vector a 2i-7j is	A. √23 B. √43 C. 3 D. √53
1783	The value of 150^{o} in term of π is	A. 2π/5 <!--[endif]--><o:p></o:p> B. 5π/2 C. 3π/2 D. 2550/32401π
1784	Question Image	A. 2x cos x2 B. 2sinxcosx C. - sin x2 D. 2x sin x2
1785	Sum of n terms of a geometric series if | r | < 1 is	
1786	(a,0) x (c,0) =	A. (0,ac) B. (ac,0) C. (0,0) D. (a,c)
1787	Question Image	A. 3 B. 1 C. 4
1788	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
1789	Which of the following is the subset of all sets	A. Φ B. {1,2,3} C. {Φ} D. {0}
1790	The fifteenth term of $(3-a)^{15}$ is	A. -17a¹² B. -945a¹³ C. -941a¹³ D. -515a¹²
1791	Shifting origin to (-3,2), the new coordinate of (-2,6) are:	A. (1,4) B. (2,4) C. (-1,3) D. (-1,4)
1792	The conjunction of 3>5 , and 5>9, is	A. False B. True C. Disjunction D. Unknown
1793	The sum of all 2 digit number is	A. 4750 B. 3776 C. 4895

		C. 4895 D. 4905
1794	Period of 2 cos x is _____	
1795	the latus rectum of the parabola $x^3 = -4ay$ is:	A. x = a B. y = -a C. x = -a D. y = 0
1796	Question Image	
1797	Tan 180° = _____	A. -1 B. 0 C. 1 D. Undefined
1798	A - B = _____	
1799	Question Image	A. P(A) + P(B) B. P(A) - P(B) C. P(A) . P(B) D. P(A) / P(B)
1800	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
1801	The angles with some initial and terminal sides are called	A. Quadrantal angles B. Coterminal angles C. Allied angles D. None
1802	Question Image	A. 0 B. 1 C. 2 D. none of these
1803	Differentiation of sin x w.r.t. cot x is:	A. -sin² x sec x B. -cos x sin² x C. -cos² x tan x D. -sin² x
1804	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
1805	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
1806	Question Image	
1807	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
1808	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
1809	Question Image	
1810	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
1811	Question Image	
1812	The conjugate of √5 *i* is	A. √5 B. -√5 i C. i D. 5i
1813	The matrix A = [aij]mxn with m≠n is	A. Rectangular B. Symmetric C. Square D. None
1814	The number of x-intercepts of y= sin x in his period	A. 0 B. 1 C. 2

	period	C. 2 D. 3
1815	A point where two of its boundary lines intersect is called	A. Corner point B. Feasible point C. Vertex D. Feasible solution
1816	∀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
1817	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
1818	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
1819	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
1820	Question Image	A. 1 B. 2 C. 3 D. None of these
1821	Question Image	
1822	Question Image	A. Imaginary B. Rational C. Irrational D. Real numbers
1823	The period of 2 cos x is	A. 30π B. 7π C. 5π D. 2π
1824	If b^2- 4ac is positive then the roots of the equation are	A. Real B. Imaginary C. Positive D. Negative
1825	Question Image	A. (2x4) B. (2x7) C. (2x3) D. (7x2)
1826	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ 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
1827	The order axioms are satisfied by set of	A. C B. C and R C. R D. None of these
1828	x = _____ is in the solution of 2x + 3 ≥ 0	A. 1 B. -2 C. -3 D. -4
1829	An equation which holds good for all values of variables is called	A. Equation B. Conditional equation C. Constant D. None
1830	Question Image	
1831	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
1832	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
	Sand falls from a tube in such a way that it forms a cone whose height is always 4/3 times	

1833	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	
1834	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
1835	Question Image	A. A B. B C. U D. None of these
1836	Question Image	A. I and II quadrants B. I and III quadrants C. II and III quadrants D. II and IV quadrants
1837	cos(a +β)-cos(a-β) = _____;	A. 2cosa cosβ B. 2sina cosβ C. -25 in a cosβ D. -2sin a sinβ
1838	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
1839	The seventh term of (x3+1/x)8is	A. 71 B. -22 C. 27 D. 28
1840	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
1841	If A is a raw vector, then its transpose is a	A. Row vector B. Diagonal matrix C. Identity matrix D. None of these
1842	Question Image	
1843	The distance of the point (2,3) from origin is	B. 5 C. 2 D. 3
1844	If a2 = b2 then	A. a = b B. a+b= 1 C. |a+b| =0 D. None
1845	If the number of elements in set A is n, and in set B is m, then the number of elements in AxB will	A. n^m B. mⁿ C. m x n D. m + n
1846	For all points (x,y) on x-axis	A. x is positive B. x is negative C. y = 0 D. y is negative
1847	Question Image	A. 5 B. 25 D. 3
1848	Range of cot$\theta$is	A. (+∞to -∞) B. (-1 to +1) C. (-5 to +5)

		D. Set of even numbers only
1849	f(x) = sin x + $\cos^2 x$ is	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
1850	The multiplicative inverse of 4 is	A. -4 B. -1/4 C. 1/4 D. 1
1851	Negation of a given number is an example of	A. Binary operation B. group C. unary operation D. function
1852	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)
1853	The differential equations of all conis whose axes coincide with the co-ordinate axis is	
1854	Question Image	A. Rational B. Irrational C. Natural D. Odd
1855	Question Image	
1856	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
1857	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
1858	Question Image	
1859	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
1860	(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
1861	Question Image	A. 0 B. 1 C. 2 D. None of these
1862	Question Image	A. Additive property of inequality B. Commutative property C. Additive inverse D. Additive identity
1863	How many terms of the A.P 3,6,9,12,15.....must be taken to make the sum 108	A. 8 B. 6 C. 7 D. 36
1864	If a plane passes through the vertex of the cone, then the intersection is	A. an ellipse B. a parabola C. a hyperbola D. a point circle
1865	The point on $y^2 = 4ax$ nearest to the focus has its abciassae equal to	A. -a B. a C. a/2 D. 0
1866	Question Image	A. 1 B. 0
1867	If B⊆ A, then complement of B in A is = ----------	A. A-B B. A∩B C. B-A D. A∪B

1868	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
1869	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
1870	Question Image	A. -2217 B. -8064 C. -1301 D. -8011
1871	Question Image	A. Two real roots B. Two positive roots C. Two negative roots D. One positive and one negative root
1872	For trival solution |A| is	A. A B. |A| = 0 C. A = 0 D. |A|≠ 0
1873	According to Aristotle, in proposition there could be	A. one possibilities B. two possibilities C. three possibilities D. seven possibilities
1874	A∪(A∪B)= ----------	A. B B. A C. A∪B D. None of these
1875	General solution of 1 + cos x = 0 is	
1876	Question Image	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t. to addition
1877	The two lines 5x + 7y = 35 and 3x -7y=21, intersect at the point:	A. (7,5) B. (1,2) C. (2,7) D. (7,0)
1878	sin(π+θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
1879	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
1880	Question Image	B. ln(x²- x + 1) + c D. ln(2x - 1) + c
1881	The extraction of a cube root of a given number is a	A. Binary operation B. Unary operation C. group D. multiplicative inverse
1882	The number of proper subset of A ={a.b.c.d} is	A. 3 B. 6 C. 8 D. 15
1883	The value of the expression $\sin\theta + \cos\theta$ lies between	
1884	Question Image	A. 0 B. -1 C. 1 D. 1/2
1885	Question Image	A. 0 B. 1 C. 2 D. 3
1886	Which is not included in the domain of $\cos^{-1}x$	A. 0 B. 1 C. -1 D. 2

1887	Question Image	A. 5 B. 20 C. 9 D. 4
1888	What is the period of sin 2x/3 cos 4x=?	A. π B. 2π C. π/2 D. π/3
1889	$(0.90)^{1/2}$is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
1890	Question Image	B. ln(x²- x + 1)⁴+ c
1891	If x>0 and y<0, then cosθ	A. Positive B. negative C. zero D. infinity
1892	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
1893	If $y = x^n$then dy/dx equals:	A. nx B. xⁿ⁻¹ C. nxⁿ⁻¹ D. n
1894	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
1895	The point _____ is in the solution of the inequality 4x - 3y < 2	A. (0,1) B. (2,1) C. (2,2) D. (3,3)
1896	Question Image	
1897	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
1898	In R, the multiplicative identity is	A. 0 B. 1 C. -1 D. None
1899	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
1900	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|
1901	Question Image	A. 5x^{4 + c} B. 1/6 x⁶+ c C. 5x²+ c D. 1/5 x⁶+ c
1902	The greater part of our knowledge,is based on	A. Deduction B. Induction C. Conjunction D. Disjunction
1903	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
1904	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
1905	(fog)'(x) =f'(g(x))g'(x) is derivative by	A. Chain rule B. Reciprocal rule C. Power rule D. Product rule

		D. Product rule
1906	Question Image	A. sec 3x + c B. - cosec 3x + c
1907	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
1908	Conjunction of two statements p and q is denoted symbolically as	
1909	If $f(x) = 1/x-2$ then $f^{1}(0)$ equals:	A. -1/4 B. -3/2 C. -1/2 D. 1/5
1910	The transport of a rectangular matrix is a	A. Square matrix B. Rectangular matrix C. Row matrix D. Column matrix
1911	Question Image	A. 5 C. -5 D. none
1912	For any set B, BUB' is	A. Is set B B. Set B' C. Universal set D. None of these
1913	Question Image	
1914	Question Image	A. Multiplication property B. Additive property C. Trichotomy property D. Transitive property of inequality
1915	The harmonic mean between a and b is	
1916	Question Image	
1917	If A is a non-singular matrix then adj A is	A. Non-singular B. Symmetric C. Singular D. Non defined
1918	If two matrices have the same order and if their corresponding elements are also equal, then the matrices are	A. idempotant B. nilpotant C. indentity D. None of these
1919	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 2 C. Quadratic equation D. None of these
1920	For any set B,B∪B' is	A. Is set B B. Set B' C. Universal set
1921	Question Image	
1922	Question Image	A. 0 B. 1 C. -1 D. none of these
1923	Every irrational number is	A. A real number B. A prime number C. A natural number D. An integer
1924	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)
1925	The maximum value of the quadratic function f(x) = 2x2-4x+7,is	A. 3 B. 5 C. -3 D. -5
1926	The distance of the point (2, -3) from x-axis is	A. -2 B. -3 C. 2 D. 3

1927	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
1928	A point (x,y) which satisfy a linear inequality in two variables form its	A. Solution B. Domain C. Range D. None
1929	√(-1b) =?	A. b i B. -i b C. b2 D. i√b
1930	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is:	A. an ellipse B. a circle C. a parabols D. a hyperbola
1931	The number of combinations of 10 different objects taken 8 objects at a time is	A. 90 B. 45 C. 55 D. 50
1932	Question Image	B. 1 C. 2 D. -2
1933	Question Image	
1934	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
1935	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
1936	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
1937	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	
1938	If no two elements of ordered pairs of a function from A onto are the same, then it is called.	A. Surjective B. Injuctive C. Bijective D. on to
1939	Question Image	D. none of these
1940	Which of the following points is a pont of intersection of the curve x+y = 8 and the straight line 2x - y =2.	A. -2,-2 B. 2,2 C. 0.4,2.8 D. 0,1
1941	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
1942	Question Image	A. false B. true C. not valid D. undefine
1943	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)
1944	Solving the equation 2^{2x}-3 x 2^{x+2} + 2^5 = 0 for 2 2^x-3 x 2^{x+2} +2^5 = 0	A. (1,4) B. (8,4) C. (2,3) D. (5,9)
1945	A relation a into B in which Domain is not equal to a, is called.	A. Into function B. on to function C. None of these D. Surjective
		A. A = B

1946	Question Image	B. B = C C. A = C D. None of these
1947	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
1948	Question Image	A. - cot 4x + c B. cot 4x + c C. tan 4x + c D. - tan 4x + c
1949	99th term of the series 2 + 7 + 14 + 23 + 34 + ... is	A. 9998 B. 9999 C. 10000 D. None of these
1950	graph of trigonometric function y = sec x does not meet	A. x - axis B. y -axis C. both axis D. None of these
1951	1 radian = _____	A. 60° B. 57.296° C. 57.2° D. 180°
1952	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
1953	Question Image	A. I B. |A| C. |A| I D. None of these
1954	i^3 =	A. -1 B. i C. -i D. 1
1955	Roots of the equation x^2+ 5x - 1 = 0 are	A. Rational B. Irrational C. Complex D. None of these
1956	θ and 2kπ+θ are the _____ angles	A. Quadrantal angles B. Coterminal C. Allied D. None
1957	Question Image	A. A rational number B. A natural number C. An irrational number D. An integer
1958	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
1959	Adjoint of matrix A is denoted by	A. A⁻¹ B. adjA |A| C. -A D. None of these
1960	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
1961	(n + 2) (n + 1) n= _____	
1962	In R the number of identity element w.r.t '+' is	A. One B. Two C. Three D. Four
1963	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
1964	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
1965	The equation |x + 4| = x has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
1966	The minimum value of the quadratic function f(x) = 5 x 2-11,is	A. -11 B. 6 C. -7 D. 7
1967	(x3-1/x)12	A. 295 B. 495 C. 395 D. 722
1968	A function f from A to B can be written as	
1969	tan(2π+θ) = _____;	A. tanθ B. -tanθ C. cotθ D. -cotθ
1970	if x∈ Dƒ and ƒ1(x) exists, then ƒ is said to be	A. zero at x B. Differentiable at x C. Continuous at x D. None of these
1971	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
1972	How many types of an equation	A. 1 B. 3 C. 2 D. None
1973	One second is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
1974	The exact degree value of the function sin-1(-√3/2) is	A. 70^o B. 50^o C. 90^o D. 60^o
1975	Question Image	A. 5 B. 10 C. 20 D. 30
1976	Question Image	A. 0 B. -1 C. 1/2 D. 1
1977	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
1978	Every natural number is	A. A prime number B. An irrational number C. An integer D. An even number
1979	Question Image	A. are real no B. both are not real C. are imaginary no D. both are imaginary
1980	Question Image	A. a cot(ax + b) + c B. - a cot(ax + b) + c
1981	One root of the equation cos x - x + 1/2 = 0 lies in the interval	
1982	Question Image	
1983	Question Image	
1984	Question Image	A. images B. pre-images C. constants D. none of these

1985	Question Image	A. An ellipse B. A parabola C. A circle D. A hyperbola
1986	Question Image	A. Hermitian matrix B. Skew-hermitian matrix C. Symmetric matrix D. Identity matrix
1987	Matrices are represented by	A. Natural numbers B. Real numbers C. Small letters D. Capital letters
1988	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□
1989	The value of 7π /9 in terms of degrees is	A. 150^o B. 130^o C. 135^o D. 140^o
1990	0 is a symbol of	A. singleton set B. Empty set C. Equivalent set D. Infinite set
1991	Question Image	A. A variable B. A constant C. 0 D. None of these
1992	Question Image	A. Reflexive property B. Symmetric property C. Transitive property D. Additive property
1993	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
1994	The triangle that does not have a right angle is called.	A. Isosceles triangle B. right angle triangle C. equivalent triangle D. oblique triangle
1995	If $x^3 - x^2 + 5x + 4$ is divided by x - 2, then the reminder is	A. 0 B. 2 C. 18 D. 14
1996	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
1997	The element range of sequence are called	A. Series B. progression C. Members D. Terms
1998	Question Image	
1999	Which symbolic notation represent unary operation ?	A. - B. ∨ C. ∧ D. ⇔
2000	The negative square root of 9 can be written as:	A. -√9 B. √9 C. √18 D. -√18
2001	Question Image	A. 1 B. 2 C. 3
2002	Roots of the equation $9x^2 - 12x + 4 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these
		A. One-one but not onto

2003	Question Image	B. One-one and onto C. Onto but not one-one D. Neither one-one nor onto
2004	Which is in the solution set of 4x - 3y < 2	A. (3, 0) B. (4, 1) C. (1, 3) D. None
2005	If a set S contains n elements then P (S) has ..... number of elements	A. 2ⁿ B. 2ⁿ² C. 2.n D. n²
2006	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx D. lnx
2007	Question Image	A. -1 B. 0 C. 1 D. None of these
2008	Question Image	A. 3 x 1 B. 1 x 3 C. 3 x 3 D. 1 x 1
2009	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
2010	w^{15}= _____	A. 0 B. 1 C. w D. w²
2011	Question Image	
2012	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
2013	Question Image	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
2014	If A and B are skew-symmetric then (AB)t is	A. At Bt B. AB C. -AB D. BA
2015	Question Image	
2016	Question Image	D. none of these
2017	Question Image	A. 30° B. 45° C. 60° D. 120°
2018	cot(3π/2 -θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
2019	How many arrangements of the letters of the word ADDING can be made	
2020	In R the right cancellation property w.r.t. addition is	
2021	Question Image	A. 0 B. 1 C. -1 D. None of these
2022	Question Image	
2023	The sum of the squares of three distinct real numbers, which are in G.P., is S^2. if their sum isαS then	
		A. 0

2024	Question Image	A. 0 D. undefined
2025	xy= 2 is:	A. a constant function B. an identity function C. an improper function D. implicit function
2026	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass
2027	The middle term of $(x-y)^8$is	A. 25 x⁴y⁴ B. 70 x⁴y⁴ C. 120 x⁴y⁴ D. 97x⁴y⁴
2028	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
2029	Question Image	A. 1 B. -1 C. 0 D. None of these
2030	The parametric equations of a circle are	
2031	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
2032	The behavior of trigonometric function is called	A. Continuity B. Discontinuity C. Periodicity D. Smoothness
2033	The square root of 2i - 20i is	A. +-(5 - 2i) B. +-(5 + 2i) C. (5 - 2i) D. None of these
2034	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
2035	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
2036	$f(x) = 2^x+ 3 . 2^{2x}+ 5$ is	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
2037	Question Image	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
2038	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
2039	Question Image	A. Right angled B. Obtuse angled C. Isosceles D. Equilateral
2040	Question Image	
2041	Shifting origin to (1,-2), the new coordinates of (4,5) are:	A. (3,7) B. (5,3) C. (-3,7) D. (3,-7)
2042	The common point to four standard parabolas	A. Focus B. Centre C. Vertex D. P(x,y)
2043	Question Image	

2044	The range of the principle cos function is	
2045	The coefficient of x^{18} in $(ax^4-bx)^9$ after expansion is	A. 84a³ b⁶ B. 22a³b⁶ C. 27a⁴b⁵ D. 28a³b⁶
2046	Question Image	
2047	Question Image	
2048	Question Image	A. A prime number B. An integer C. A whole number D. An irrational number
2049	√-1 b=	A. b B. 2 C. 2b D. None of these
2050	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
2051	The 5th term of $(3a-2b)^{-1}$ is	A. 77b²/a⁵ B. 16b²/243 a⁵ C. 17b⁴/43a⁵ D. 25b³/43a⁵
2052	The lines that form the cone are called its:	A. Generation B. Circular cone C. nappes D. conics
2053	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
2054	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
2055	Period of tan x is _____	
2056	Question Image	
2057	Question Image	
2058	The product of the four fourth roots of unity is	A. 0 B. 1 C. -1 D. None of these
2059	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 internally	
2060	How many arrangements of the letters of the word PAKISTAN cab be made	
2061	The maximum value of $\sin\theta\cos\theta$ is	A. 1 B. 1/2 C. 1/4 D. 1/6
2062	Question Image	
2063	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>
2064	The expansion $(1 + x)^{-3}$ holds when	A. |x| > 1 B. |x| < 1 C. x < 1 D. x > 1
2065	Which of the following is a quadrantal angle	A. 30° B. 45° C. 60° D. 90°
	Question Image	

2066	Question Image	
2067	Question Image	
2068	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
2069	The symbol ∋ stand for	A. Such that B. There exist C. For all D. Belongs to
2070	Domain of $\cos\theta$ is	A. Set of odd numbers B. Set of integers C. Set of real numbers D. Set of complex numbers
2071	Any recurring decimal represents a	A. Irrational no B. Integer C. Rational no D. None of these
2072	If three non-collinear points through which a circle passes are known, then we can find the	A. variables x and y B. value of x and c C. three constant f, g and c D. inverse of the circle
2073	Question Image	A. 4A - 3I B. 3A - 4I C. A - I D. None of these
2074	Which of the following represent injuctive function	
2075	Sin 270° = _____	A. -1 B. 0 C. 1 D. Undefined
2076	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
2077	20. 19. 18. 17= _____	
2078	cos $2\alpha =$	A. sin²α+ cos²α B. -cosθ C. tanθ D. None of these
2079	Question Image	
2080	If z = (x,y) , then $\bar{z}$ =	A. (-x,y) B. (x,-y) C. (-x, -y) D. None of these
2081	tan (-135°) = _____ θ	A. 0 B. 1 C. 2 D. 3
2082	The position vector of a point (x, y) in xy plane is	D. none of these
2083	d/dx (cos x^2) =	A. -2x cos x B. -2x sin x² C. -2x tan x D. -2x sec² x
2084	cos 315° = _____	
2085	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)

2086	Question Image	
2087	If $f(x) = x^2 - x$ then f(-2) is	A. 4 B. 6 C. 2 D. 0
2088	The point of concurrency of the medians of a triangle is called	A. incentre B. circumcentre C. e-centre D. centroid
2089	Question Image	
2090	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
2091	Question Image	
2092	$f(x) = 2x^2 + 3x + 5$ is a	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
2093	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. None of these
2094	Question Image	A. 1 B. -i C. i D. 0
2095	If x is an image of y under the function f. This can be written as	A. y = f(x) B. f(x) = 0 C. x = f(y) D. f(y) =0
2096	$2/9,5/7 \in R,(2 \mid 9)(5 \mid 7)=10/63 \in R$ this property is called	A. Associative property B. Identity property C. Commutative property D. Closure property w.r.t multiplication
2097	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
2098	Question Image	
2099	If there is one-one correspondence between A and B, then we write.	A. A = B B. $A \subseteq B$ C. $A \supseteq B$ D. A ~ B
2100	$\sqrt{25}$ is a number	A. Rational B. Irrational C. Natural D. Odd
2101	Question Image	D. none of these
2102	$\sin^2 \pi/6 + \sin^2 \pi/3 + \tan^2 \pi/4 =$_____;	A. 1 B. 2 C. 3 D. 4
2103	The proposition S(k+1) is true when _____ is true $\forall K \in N$	A. S(n) B. S(k) C. S(1) D. S(k-1)
2104	The period of the function csc x/4 us	A. 4x B. π/4 C. 8π D. π/8
2105	$7^{2n} + 3^{n-1} \cdot 2^{3n-3}$ is divisible by	A. 24 B. 25 C. 9 D. 13
2106	Question Image	

2107	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)
2108	Question Image	A. sec 5x + c B. - sec 5x + c
2109	Rank of matrix [1 3 5 0] is	A. 1 B. 3 C. 2 D. 4
2110	Question Image	
2111	Question Image	A. cos x B. sec x tan x C. sec²x D. -cosec²x
2112	Question Image	
2113	Question Image	A. -3 B. -7 C. 1 D. 0
2114	The set {1, -1, 1, -1}, form a group under	A. Addition B. Multiplication C. Subtraction D. None
2115	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8
2116	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
2117	Question Image	A. A complex number B. A rational number C. A natural number D. An irrational number
2118	A statement which is either true or false is called	A. Induction B. Deduction C. Propositicon D. Logic
2119	Question Image	
2120	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
2121	The set of first elements of the ordered pairs forming the relation is called its	A. domain B. range C. ordered paris D. relation
2122	Apollonius was a	A. rocket B. Muslim scientist C. Greek mathematicians D. method of finding conics
2123	The√ is used for the	A. Positive square root B. Negative square root C. +ve and -ve square root D. Whole number
2124	If a > b or a < b than a = b is a	A. Additive property B. Transitive property C. Trichotomy property of inequality
2125	H.M. between 3 and 7 is	
2126	There is no integer n for which 3n is	A. Even B. Prime C. Odd D. Real
	Considering Cosine Rule of any triangle	A. Angle A is obtuse B. Angle A is acute

2127	ABC, possible measures of angle A includes	B. Angle A is acute C. Angle A is right-angle D. All of above
2128	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
2129	Question Image	A. -1 B. 1 C. 2 D. -2
2130	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
2131	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
2132	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	
2133	Question Image	A. -x B. Infinite set C. {-4, 4} D. None of these
2134	n(n-1)(2n-1), for all natural numbers n, is divisible by	A. 12 B. 6 C. 2 D. 18
2135	The matrix A = [aij]1xn is a	A. Vector B. Rectangular matrix C. Column vector D. Square matrix
2136	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)
2137	i^2 =	A. 1 B. 2 C. -1 D. 0
2138	Under multiplication, solution set of is	A. Groupoid B. Abelian group C. Semi group D. All of these
2139	If cosα = 4/5, then cosα/2	
2140	The set { {a,b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set
2141	Question Image	
2142	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
2143	An implication of p and q is denoted by	
2144	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
2145	If A and B are two sets then intersection of A and B is denoted by	
2146	cos (180° -θ)=	A. sinθ B. - cosθ C. - sinθ D. None of above
		A. mx

2147	If $y=x^m$ then dy/dx equals:	B. x/m C. mx^{m-1} D. xm^{m-1}
2148	Question Image	A. p and q B. p or q C. p implies q D. p is equivalent to q
2149	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
2150	$\int Sec^2$ (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)
2151	Question Image	A. 3 x 2 B. 2 x 3 C. 3 x 3 D. 2 x 2
2152	Question Image	
2153	If sin A = cos A, 0°<A<90° then A is equal to	A. 1 B. 1/2 C. 0 D. None of these
2154	In translation of axes,_____is shifted to another point in the plane.	A. a-axis B. y-axis C. origin D. Point
2155	Question Image	
2156	Question Image	
2157	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
2158	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
2159	The point _____ is in the solution of the inequality 2x - 3y < 4	A. (0, -2) B. (1, -3) C. (2, 2) D. (3, 0)
2160	Question Image	
2161	Question Image	A. a constant function B. linear function C. quadratic funtion D. none of these
2162	Question Image	A. A.P. B. G.P. C. H.P. D. None of these
2163	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
2164	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
2165	Question Image	A. 100x ⁹⁹ B. 100x ¹⁰¹ C. -99x ⁹⁹ D. -100x ¹⁰¹
2166	sin 2 α=	
		A. 2 sinαcos<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color:

2167	sin$\alpha =$	rgb(255, 255, 224);">α B. 2 sinαcosβ C. 2 sinα/2 cosα/2 D. 1+ tan²α/2
2168	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
2169	Area ofΔABC=	A. ab sinα B. 1/2 ab sinα C. 1/2 ac sinγ D. 1/2 ac sinβ
2170	Period of cos 2x is _____	
2171	Disjunction of p and q is	A. p or q B. p and q C. p if q D. p implies q
2172	Q ∪ Q' =	A. Q B. Q' C. N D. R
2173	Question Image	A. cos x + c B. -sin x + c C. -cos x + c D. sin x + c
2174	The coefficient of x^{10} in the expansion $(x^3+3/x^2)^{10}$ is	A. 1700 B. 17023 C. 17027 D. 17010
2175	The sixth term of the sequence 1,3,12,60....is	A. 1500 B. 72 C. 2160 D. 2520
2176	Question Image	
2177	Question Image	A. 20 B. 10 C. 0 D. None of these
2178	Question Image	
2179	Question Image	
2180	Question Image	
2181	Question Image	
2182	The middle term of the expansion $(1 + 2x)^6$ is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
2183	If y=sin(ax+b) then y4=_____:	A. sin4(ax+b) B. a4sin(ax+b) C. a4cos(ax+b) D. None of these
2184	Question Image	
2185	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
2186	Question Image	

2187	Question Image	
2188	$_{e}$ is a	A. variable B. Positive constant C. Positive variable D. Directrix
2189	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
2190	Question Image	A. 0 B. 1 C. 13
2191	For all points (x,y) on y-axis	A. x is positive B. x = 0 C. x is negative D. y = 0
2192	$4^{1+x}+ 4^{1-x}= 10$ is called	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
2193	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	
2194	If the points (a,b), (x,y) and (a-x, b-y) are collinear, then ay =	A. bx B. b-y C. a-x D. x
2195	∀ 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
2196	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of these
2197	For trival solution |A| is	A. A B. |A| is non zero C. A = 0 D. None of these
2198	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
2199	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
2200	$\cot\theta= \sin 2\theta$if$\theta=$	
2201	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
2202	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
2203	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
2204	Range of y = sec x is	A. -1≤ y≤ 1 B. y≥ 1 or y≤ -1 C. y≤ 1or y≥ -1 D. -∞ < y < +∞
2205	The lines l1and l2intersect. The shortest distance between them is	A. Positive B. Negative C. Zero D. Infinity

2206	tan(cot^{-1}x) is equal to	A. cot(tan⁻¹x) B. tan x C. secon x D. None of these
2207	Range of cosec x is _____	A. {-1, 1} B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
2208	The nth term of an A.P is (3n+5) Its 75th term is	A. 26 B. 7 C. 21 D. Cannot be determined
2209	Question Image	
2210	Question Image	A. I and III quadrants B. II and III quadrants C. I and II quadrants D. II and IV quadrants
2211	w^4= _____	A. 0 B. 1 C. w D. w²
2212	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
2213	Question Image	
2214	Question Image	
2215	Question Image	
2216	If no two elements of ordred pair of a function from A into B are equal, then it is called	A. surjective B. injuctive C. bijective D. on to
2217	The centre of the circle x2+y2 -2fx-2gy+x=0 is	A. (-g,-f) B. (g,f) C. (f,g) D. (-f,-g)
2218	(x + 2)^2= x^2+ 4x + 4 is	A. A linear equation B. A cubic equation C. A quadratic equation D. None
2219	Question Image	
2220	Question Image	A. 2 B. 5 C. 7 D. None of these
2221	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
2222	Question Image	
2223	According to Aristotle, in preposition there could be	A. One possibility B. Two possibility C. three possibility D. Seven possibilites
2224	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
2225	The set { 1 , -1} is closed w.r.t.	A. Addition B. Multiplications C. Subtraction D. None of these
2226	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

2227	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
2228	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
2229	The root of the quadratic equation are	A. 3 B. 2 C. 1 D. 4
2230	Question Image	A. 1 B. 2 C. 0 D. None of these
2231	the function y = mx+c is, called linear function, because	A. it has only two variables B. it has one varible C. its graphs is straight line D. its graphs is circle
2232	Question Image	D. none of these
2233	Question Image	A. A finite set B. An infinite set C. An empty set D. None of these
2234	There are _____ types of rational fraction	A. Three B. Four C. Five D. Two
2235	If|a| =|b| = |a+b|=1, then|a-b| is equal to:	A. 1 B. √3 C. √2 D. 7
2236	The differential equation of all st. lines which are at a constant distance to form the origin is	
2237	The vector k = [0,0,1] is called unit vector along:	A. x -axis B. y - axis C. z- axis D. None of these
2238	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
2239	Question Image	
2240	Question Image	
2241	Question Image	
2242	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. +-1 D. 0
2243	Question Image	A. π B. π/6 C. -π/2 D. 2π
2244	Question Image	
2245	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

2246	The principal value of $\sin^{-1}[-\sqrt{(\sqrt{3})}/2]$ 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
2247	If y = 2x , then	A. y1 -ln2y = 0 B. y2-(ln2)2 y = 0 C. y2-(ln2)y1 = 0 D. All are correct
2248	The 7th term of the A.P 7,11,15,is	A. 24 B. 31 C. 26 D. 23
2249	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)
2250	Question Image	
2251	If the vector 2i + 4j - 7k and 2i + 6j + xk are perpendicular then x = ?	A. 0 B. 2 C. 4 D. 7
2252	The distance of the point (1.1) from the origin is	A. 0 B. 2
2253	Question Image	
2254	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
2255	Question Image	A. No solution B. One real solution C. More than one real solution D. None of these
2256	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
2257	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
2258	Question Image	
2259	Question Image	
2260	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
2261	The symbol _____ shall be used both for equation and identity	A.
2262	The unit vector along y-axis is	D. none of these
2263	If n is any positive integer then n^2> n + 3 for	
2264	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
2265	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)
2266	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
2267	Which of the following is skew symmetric matrix	

2267	Which of the following is skew symmetric matrix	
2268	The real numbers which satisfy an inequality form its	A. solution B. coefficient C. domain D. range
2269	Question Image	A. 295 B. 495 C. 395 D. 722
2270	Question Image	
2271	Question Image	
2272	sin (2π-θ)	A. cosθ B. sinθ C. tanθ D. -sinθ
2273	Question Image	
2274	The Domain of y = sin x is _____	A. Set of real numbers B. Rational C. Irrational no. D. None of above
2275	A _____ divides the plane into left and right half planes.	A. Vertical line B. Horizontal line C. Non vertical line D. Inequality
2276	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
2277	Question Image	A. 1 B. 12 C. 5 D. 29
2278	The symbol ∃ stand for	A. Such that B. This implies that C. For all D. There exist
2279	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
2280	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
2281	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
2282	The domain and range of a trigonometric function can be allocate by their	A. graph B. Continuity C. Discontinuity D. Periods
2283	Question Image	A. 30° B. 45° C. 60° D. 75°
2284	Question Image	
2285	A cone is generated by all lines through a fixed point and the circumference of	A. a circle B. an ellipse C. a hyperbola D. none of these
2286	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
2287	A quadrilateral whose diagonals are perpendicular bisector of each other is	A. Square B. Rectangle C. Rhombus D. Parallelogram E. Trapezium

		E. Trapezium
2288	Question Image	
2289	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
2290	Question Image	
2291	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
2292	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
2293	Question Image	
2294	O (0,0)is called:	A. Position vector B. Free vector C. Unite vector D. Null vector
2295	Period of sec x is _____	
2296	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²)² C. x²-y² D. √(x²+y²)
2297	Question Image	
2298	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
2299	If (x_1, y_1) and (x_2,y_2) are the end points of a diameter then the centre of the circle is	
2300	In R the left cancellation property w.r.t addition is	
2301	While witting his hooks on geometry, Euclid used	A. inductive method B. deductive method C. implication D. proposition
2302	Question Image	A. 0 B. 90° C. 180° D. 360°
2303	Question Image	A. a₁+ a₂ B. a²₁+ a²₂
2304	A fixed point which lies on the axis of the cone is called its:	A. axis B. apex C. plane D. diameter
2305	Question Image	
2306	The point (1,3) is one solution of	A. 3x + 5y > 29 B. 3x + 5y < 7 C. x + 2y < 4 D. x + 4y > 3
2307	Question Image	D. none of these
		A. I and II quadrants B. II andI<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255

2308	Question Image	248);">II quadrants C. II andIVquadrants D. none of these
2309	The square root of 2i - 20i is	A. ±(5 - 2i) B. ±(5+ 2i) C. (5 - 2i) D. None of these
2310	The solution set of the equation 1 + Cos x = 0 is _____	D. none of these
2311	If a_1, r are first term and the common ratio respectively then the sum of an infinite geometric series is	
2312	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
2313	Question Image	A. a sin(ax + b) + c B. - a sin(ax + b) + c
2314	Latus rectum = 4 x _____	A. focal distance of the vertex B. Chord C. Focus D. 1/2
2315	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}
2316	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
2317	Question Image	A. 8 B. 9 C. 10 D. 11
2318	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
2319	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
2320	Question Image	A. π B. 2π C. π/2 D. None of these
2321	How many arrangements of the letters of the word MI SSI PPI, taken all together can be made?	
2322	x =r cosθ,y= sinθ are the parametric equations of	A. Circle B. Ellipse C. Parabola D. Hyoerbola
2323	Question Image	A. -1 B. 0 C. 1

		D. undefined
2324	If $f(x) = x^{2/3}$ then $f^{1}(x)$ at x = 8 equals:	A. 8 B. 1/8 C. 1/3 D. 2/3
2325	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
2326	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
2327	If aand bare two vectors then a+b =	A. b + a B. b - a C. ab D. a^ b
2328	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
2329	d/dx (cos x sin x) =	A. cos² x - sin² x B. 2cos²x + sin² x C. 2cos² x - sin² x D. 1 - sin²x
2330	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
2331	If A is non-empty set, any subset of AxA is called a relation in a	A. A B. B C. D D. r
2332	The point lying on the terminal rat of -270° is	A. (1,0) B. (0,-1) C. (0,1) D. (-1,0)
2333	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
2334	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1 D. None
2335	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
2336	If A is non-empty set, any subset of A x A is called a relation in	A. A B. B C. ⌀ D. r
2337	The contra positive of p → q is	A. q → p B. ~q→~q C. ~p→~q D. None of these
2338	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
2339	A sequence of number whose reciprocals form an arithmetic sequence is called	A. Geometric sequence B. Arithmetic series C. Harmonic sequence D. Harmonic series
2340	The fixed point which lies on the axis of the cone is called its	A. axis B. apex C. nappes D. axis
	The sum of an indicated number of terms in a	A. sequence B. progression

2341	The sum of an indicated number of terms in a sequence is called	B. progression C. Series D. Mean
2342	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	
2343	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
2344	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
2345	Question Image	D. none of these
2346	Multiplying each side of an inequality by (-1) will:	A. Not effect B. Change the sign C. Become zero D. Not defined
2347	Question Image	
2348	Question Image	
2349	The distance between the points (0 , 0) and (1, 2) is	A. 5 C. 0 D. 3
2350	Shifting origin to (-3,2), the new coordinates of (-6,9) are:	A. (-9,7) B. (3,7) C. (-3,7) D. (3,-7)
2351	The distance between two parallel lines 2x - 5y + 13 = 0 and -2x +5y -6 = 0 is:	A. √29 B. 8/√29 C. 7 /√29 D. 29√7
2352	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
2353	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
2354	The distance of the point (-2, -3) from the origin is	A. 2 B. -5 C. -3
2355	Question Image	B. A C. A' D. U
2356	The common ration of a geometric sequence cannot be	A. 0 B. 1 C. 2 D. 3
2357	Question Image	A.
2358	Question Image	A. - cos x B. sin x C. - sin x D. sec x
2359	Digit in the unit place of the number 183! + 3^{183}	A. 7 B. 6 C. 3 D. 0
2360	If all members of a sequence are real numbers then it is called a	A. Series B. Function C. Real sequence D. Range
2361	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

2362	-2, 1, 4, 7,.... is _____	A. Harmonic sequence B. Arithmetic sequence C. Geometric sequence D. Arithmetic series
2363	Question Image	
2364	The equation: $x^2+ y^2+ 2gx + 2fy + c = 0$, represents	A. pair of lines B. a circle C. a general second degree equation D. a hyperbola
2365	Question Image	
2366	The graph of a constant line is	A. vertical line B. parabola C. circle D. horizontal line
2367	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
2368	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
2369	y=-a is the equation of the directrix of	A. y2 =4ax B. x2=-4ay C. x2=4ay D. y2=-4ax
2370	Question Image	
2371	Question Image	A. 4(x³- 3x²)³+ c B. 3x²- 6x + c
2372	The are of the circle centred at (1 , 2) and passing through (4 , 6) is:	A. 10π B. 25π C. 5π D. 25/2π
2373	Question Image	
2374	Question Image	D. none of these
2375	If the line is parallel to they y-axis, then m is said to be:	A. zero B. undefined C. 1/2 D. -1
2376	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
2377	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)
2378	150°= _____	
2379	If (2, 3) and (2, 5) are end points of a diameter of a circle, then the centre of the circle is	A. (2, 4) B. (4, 8) C. (0, 2) D. (0, -2)
2380	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 externally are	
2381	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
2382	√2 is a number	A. Rational B. Irrational C. Even D. Odd
2383	Question Image	A. 2²- n - 1 B. 1 - 2⁻ⁿ

		C. n + 2⁻ⁿ-1 D. 2ⁿ- 1
2384	The symbol of irrational is	A. W B. N C. Q D. Q'
2385	If either A = 0 or B =0,then Ax2 +By2 +2Gx +2Fy +c =0 represents a	A. Circle B. Hyperbola C. Ellipse D. Parabola
2386	The two vertices of a triangle are (-2,4)and (5,4). If its centroid is (5,6), then third vertex is:	A. (-10,12) B. (12,-10) C. (12,10) D. (10,12)
2387	Question Image	A. 30° B. 60° C. 45° D. None of these
2388	The parabola y2 + 2y + x = 0 lie in _____ quadrant.	A. First B. Second C. Third D. Fourth
2389	Question Image	
2390	If x = 1/x for x ∈ R then the value of x is	A. ±1 B. 0 C. 2 D. 4
2391	Sin $h^{-1}x$ = _____	
2392	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
2393	∀x,y∈R and x> 0 , y>0, if x > y	D. None of these
2394	Each complex cube root of unity is square of	A. itself B. 1 C. -1 D. the other
2395	Question Image	A. From an empty set B. 1 C. 2 D. >2
2396	Question Image	
2397	Question Image	
2398	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
2399	Question Image	D. none of these
2400	Range of cot x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
2401	Axes remain parallel to the old axes, in:	A. Translating of axes B. rotation of axes C. Translation and rotation of axes D. None of these
2402	A function whose domain is a subset of natural numbers is called _____	A. Identity function B. Sequence C. Onto function D. Series
2403	Question Image	A. (x, y) B. (kx, y) C. (x, ky) D. (kx, ky)
2404	If A,B and C are three matrices, and A is non	A. A B. 0

	singular then AB = AC iff B=	C. C D. A⁻¹
2405	Question Image	
2406	Question Image	
2407	Question Image	A. a-b=ab B. ab=a C. a+b=ab
2408	If $f(x) = x^2-x$ then f(0) is	A. 0 B. 1 C. 2 D. 3
2409	Question Image	
2410	The trigonometric function are continuous whenever	A. They are defined B. their limit exist C. Their period is given D. All are incorrect
2411	Question Image	A. 1 B. 0 C. -1 D. 2
2412	Question Image	
2413	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
2414	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
2415	Question Image	D. None of these
2416	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^o respectively. The the ratio of the heghts of the tower is	A. 2 : 1 B. 3 : 1 C. 1 : 2 D. 1 : 3
2417	Intersection of two parabolas	A. parabola B. Two points C. Four points D. Hyperobla
2418	The solution set of the inequality ax + by < c is	A. straight line B. half plane C. parabola D. none of these
2419	The distance of the point (-2 , 3) from y-axis is	A. 2 B. -2 C. 3 D. 1
2420	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
2421	Question Image	
2422	Question Image	A. -1 B. 0 C. 1 D. undefined
2423	The set of all antiderivaties of $f(= \int f(x)dx)$ is the	A. Definite integral B. Indefinite integral C. Integral D. Area
2424	Which of the following us a scalar	A. displacement B. velocity C. acceleration D. density
2425	In general for matrix multiplication, which property is not possible?	A. Associative B. Commutative C. Left distributive property D. right distributive property

		D. right distributive property
2426	The consecutive terms of a progressions are 30, 24, 20. The next term of the progression is	
2427	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
2428	Question Image	A. A B. B C. A'B' D. B'A
2429	Question Image	A. A B. A' C. U D. None of these
2430	If line through (4,3) and (2,k) is perpendicular to y =2x +3, then k =_____	A. -1 B. 1 C. -4 D. 4
2431	Question Image	A. 360° B. 180° C. 90° D. None of these
2432	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
2433	The obtuse angle between lines = -2 and y = x +2 is	A. 120° B. 135° C. 150° D. 140°
2434	Question Image	
2435	2 x + 3 < 0 is.	A. Inequality B. Equality C. Identity D. None
2436	Question Image	
2437	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
2438	Question Image	A. 0 B. 1 C. -1 D. 2
2439	The function sine and Cosine have the closed internal as their range	A. [1, 0] B. [-1, 1] C. [0, 1] D. [-1, 2]
2440	IF the cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. circle B. ellipse C. hyperbola D. parabola
2441	Question Image	D. none of these
2442	F(x) = x^xdecreases in the interval	A. (0, e) B. (0, 1) C. (-∞,0) D. None
2443	Multiplicative inverse of "1" is	A. 0 B. ±1 C. 1 D. {0,1}
2444	The distance of the plane 2x - 3y + 6z + 14 = 0 from the origin is	A. 14 B. 2 C. -2 D. 11
	If p, q, r and in A.P., a is G.M. between p and q	A. A.P.

2445	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
2446	ax + by < c is linear inequality in	A. four variables B. three variables C. two variables D. one variable
2447	Area of the triangle whose vertices are (2,3), (0,1),(0,0) is	A. 6 B. 2 C. 4 D. 1
2448	Question Image	
2449	Question Image	
2450	Question Image	
2451	Question Image	
2452	If n(X) = 18, n(X∩Y) = 7, n(X∪ Y) = 40 then n(Y) =	A. 1 B. 12 C. 5 D. 29
2453	Which is an explicit function	A. y = x²+ 2x - 1 B. x²+ xy + y²= 2 C. x²+ y²= xy + 2 D. All are
2454	If the roots of 3x2+kx + 12 = 0 are equal then k = _____	
2455	Question Image	
2456	sin ($\alpha - \beta$)=	A. sinαcosβ- cosαsinβ B. sinαcosβ+ cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα- cosβsinβ
2457	Question Image	
2458	If n is any positive integer then 3 + 6 + 9 + ...+ 3n = _____	
2459	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}
2460	Question Image	
2461	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
2462	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
2463	The length of perpendicular from (3,1) to the line 4x + 3y +20 = 0 is:	A. 7 B. 5 C. 11

	line 4x + 3y +20 = 0 is:	C. 11 D. 12
2464	If the 4th term in the expansion of $(px + x^{-1})^m$ is 2.5 for all $x \in R$, then	
2465	Question Image	
2466	Question Image	
2467	The point (x_1, y_1) lies outside the circle $x^2 + y^2 + 2gx + 2fy + c = 0$ if	
2468	Question Image	
2469	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
2470	Question Image	
2471	Question Image	
2472	Question Image	
2473	In □ABC the mid points of AB and AC are (3,5) and -3,-1) respectively, then the length of the side BC is:	A. 15 B. 10 C. 30 D. 20
2474	Binomial expansion of an expression A gives 1-8 x + 24 x2-32 x3 -16 x4 the expansion A is given by	A. (1-2x)⁴ B. (1+2x)⁴ C. (1-4x)⁴ D. (1+4x)⁴
2475	If x < y, 2x = A, and 2y = B, then	A. A = B B. A < B C. A < x D. B < y
2476	If $x^2 - 7x + a$ has remainder 1 when divided by x + 1, then a = _____	A. -7 B. 7 C. 0 D. None of these
2477	$2x^3 + 3x + 9$ is a _____	A. Polynomial of degree 3 B. Quadratic equation C. Cubic equation D. Polynomial of degree 2
2478	cos $(\alpha - \beta)$ = cosαcosβ + sinαsinβ is true for all	A. α>β> 0 B. α>β C. β>α D. None of these
2479	0! = _____	A. 0 B. 1 C. 2 D. Not defined
2480	If f(x) = c then $f^{-1}(x)$ equals:	A. 1 B. 0 C. cx D. c
2481	Question Image	
2482	For any set X, X∪X is	A. X B. X' C. Φ D. Universal Set
2483	Question Image	
2484	Question Image	A. Proper fraction B. Improper fraction C. Rational fraction D. None of these
2485	the value of 25π/36 in degrees is	A. 120^o <!--[endif]--><o:p></o:p> B. 125^o C. 60^o D. 115^o
	A bag contains 3 white, 4 black and 2 red balls	A. 1/18

2486	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	B. 1/12 C. 1/36 D. None of these
2487	Question Image	
2488	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}
2489	(x + 3) (x + 4) = x^2+ 7x + 12 is _____	A. Quadratic equation B. Linear equation C. Cubic equation D. Identity
2490	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
2491	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
2492	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
2493	Question Image	B. 1 D. -1
2494	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
2495	If 3x4 +4x3+x5is divided by x+1 , which of the following is the remainder	A. 7 B. -2 C. 6 D. 1
2496	Shifting origin to (-4,-6), the new coordinates of (-6,-8) are:	A. (-1,2) B. (-2,-2) C. (1,-2) D. (3.-2)
2497	The span of a standard parabola depends upon	A. x B. a C. y D. y2
2498	Question Image	A. 1 B. 7 C. 4 D. None of these
2499	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
2500	Question Image	
2501	f 2x -1/x2 -x-1 dx = _____	A. ln (2x-1)+c B. (2x-1)+c C. 0 D. ln (x²-x+1)+c
2502	The fifth term of the sequence a_n= 2n + 3 is _____	A. 13 B. -13 C. 8 D. 3
2503	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
2504	an -an-1, $\forall n \in N \wedge n>1$ in an A.P is called	A. Common difference B. nth term C. Common ratio D. None of these
2505	Lis not	A. Real number B. Natural number

		C. Prime Number D. Whole Number
2506	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)
2507	Question Image	
2508	Question Image	
2509	A tower subtends an angleαat 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 isβ. The height of the tower is	A. b cotαtanβ B. b tanαtanβ C. b tanαcotβ D. None of these
2510	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
2511	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
2512	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
2513	Question Image	
2514	If a and B are two matrices of the same order , then A+B=B+A , what is this property called:	A. associative B. additive C. commutative D. additive identity
2515	Question Image	
2516	f(x) = sin x is:	A. an odd function B. an even function C. an implicit function D. an exponential function
2517	cos2a=_____;	A. cos2 a-sin2 a B. 2cos2 a-1 C. 1-2 sin2 a D. All of these
2518	Which of the following statement, is ture	A. Lahore is in Punjab and 5>7 B. Lahore is the capital of Pakistan and 3<23 C. Lahore is capital of Sindh and 2+2=7 D. Lahore is the capital of Sindh or 2+2 = 4
2519	Question Image	A. Associative law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
2520	Question Image	
2521	If a set S contains "n" elements then P (S) has ..... number of elements	A. 2ⁿ B. 2²ⁿ C. 2 . n D. n²
2522	(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
2523	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
2524	Question Image	A. 1, 2, 3 B. 1, 5, 9 C. 2, 5, 8

		D. 3, 6, 9
2525	Question Image	A. 1/2 B. 2 C. 1/4 D. 4
2526	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
2527	There are 50 students in a class out of these 38 used desktop computer 16 out of these used laptop. It is noted that five students neither used laptop of computer. The students having both laptop and computer are A. Based on the information find out the greatest value of A.	A. 16 B. 8 C. 4 D. 0
2528	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
2529	Question Image	A. 15 B. 15 i C. -15 i D. -15
2530	Question Image	
2531	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
2532	The distance between two points P(x1, y1) and Q(x2, y2) is	
2533	Question Image	A. image B. pre-image C. constant D. none of these
2534	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
2535	The axis of the parabola $y^2 = 4ax$ is	A. X = 0 B. Y = 0 C. X = y D. X = -y
2536	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
2537	The slope of x-axis is	A. 0 B. undefined C. 1
2538	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
2539	If $f(x) = x^3$ then f(-2) is	A. -2 B. -4 C. -8 D. 8
2540	Each point of the feasible region is called	A. Solution B. feasible solution C. Both a & b D. None
2541	(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
2542	The sum of the cubes of three consecutive natural number is divisible by	A. 9 B. 6 C. 5 D. 10

2543	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
2544	The slope of y-axis is	A. 0 B. undefined C. 1
2545	What is the conjugate of -6 -i	A. -6 +i B. 6 + i C. -6 -i D. 6 -i
2546	Question Image	A. -2x³ B. 2x⁻³ C. -2x⁻³ D. 2x³
2547	Find the geometric mean between 4 and 16	
2548	sin 3a = _____;	A. 3sin a - 4sin3a B. 4sin a -3 sin3 a C. 3 cos3 a -cosa D. 4cos3 a - 3cos a
2549	Question Image	A. bijective function B. into function C. onto function D. surjective
2550	Question Image	
2551	If Sin A = sin B, cos A = cos B, then the value of A in terms of B is	
2552	Question Image	
2553	Question Image	A. 12 B. 13 C. 14 D. 15
2554	The multiplicative inverse of 1 - 2i is	
2555	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	
2556	Question Image	A. G.P B. H.P. C. A.P. D. No particular sequence
2557	Question Image	
2558	What is the period of 6 sin x=?	A. π B. -π C. π/2 D. 2π
2559	Question Image	A. 0 B. 1 C. 2 D. 3
2560	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
2561	Question Image	
2562	Question Image	A. Reflexive property B. Symmetric property C. Transitive property D. Additive property
2563	Question Image	
2564	Differentiating the equation e^2x/x+1 with respect to X is given by	A. (2x +1) e²x/(x+1)² B. 2xe^{2x}/(x+1)² C. 2e^{2x}/(x+1)² D. (x+1)e^{2x}/(x+1)²
		A. sin(π/2-x) B. Sin 1 (π/2-x)

2565	Sin -1 x=	B. Sin-1 (π/2-x) C. π/2-cos-1x D. π/2 + cos-1x
2566	If c is a constant, then d/dx (c) =	A. 0 B. c C. cx D. 1
2567	Question Image	A. sec x tan x B. cos²x C. sin²x D. sec²x
2568	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
2569	a >b, b >c ⇒a >c is a	A. Multiplicative property B. Additive property C. Trichotomy property D. Transitive property of inequality
2570	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
2571	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
2572	If y = 3 x + 2cos x, then dy/dx =	A. 3-2 sin x B. 3-t sin x C. 3x² - 2sin x D. 3(1-4 sin x)
2573	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
2574	An open sentence formed by using the sign of equality "=" is called	A. Equation B. In equation C. True sentence D. False sentence
2575	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
2576	Question Image	
2577	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
2578	In (x + iy), y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
2579	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
2580	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
2581	The cartesian system of coordinates was introduced by:	A. Eulaer B. Euclid C. Descrates D. Maclream
2582	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
2583	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
2584	The domain of the principle cos function is	
2585	Question Image	A. a = a B. a < a C. a > a D. a²= a
2586	1/2,1/3,1/4,1/5.....is	A. a geometric sec B. an arithmetric series C. finite sequence D. an infinite sequece
2587	The period of cot 8x is	A. π/10 B. 9π/7 C. π/9 D. π/8
2588	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
2589	The domain of the principle sine function is	
2590	Question Image	
2591	Question Image	A. cos 3x + c B. - cos 3x + c
2592	The range of the principle cot function is	
2593	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
2594	Question Image	
2595	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
2596	The nth term of a G.P. is	A. a₁rⁿ B. a₁rⁿ⁺¹ C. a₁rⁿ⁻¹ D. a₁r⁻ⁿ
2597	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity
2598	Question Image	
2599	sin -1(sin2π/3) =	A. π/2 B. 2π/3 C. -3π/2 D. π/3
2600	Question Image	A. 0.9 B. 0.74 C. 0.2016 D. None of these
2601	$(0.90)^{1/2}$ is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
2602	Question Image	A. I andII quadrants B. II andIII quadrants

		C. III andIV quadrants D. none of these
2603	Question Image	
2604	If E = { } , then P(E)	A. ⌀ B. { } C. {(2),(4),(6)....} D. (⌀)
2605	Question Image	A. Associative property of addition B. Commutative property of addition C. Distributive property D. Additive identity
2606	Question Image	A. 1760 B. -193 C. 223 D. none of these
2607	Question Image	A. A²- 5A + 7I = 1 B. 2A²- 3A + 7I = 0 C. A²- 5A + I = 0 D. A²- 5A + 7I = 0
2608	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
2609	Question Image	
2610	If distance of (a,b) from y-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. a = 4
2611	Question Image	A. 184 D. none of these
2612	If c = 2i+j+k and d= -1 + 4j +2k, then [c-d]=	A. √7 B. √41 C. √19 D. √(2&7)
2613	sin(a + β)+sin(a -β) =_____;	A. 2cosa cosβ B. 2sina cosβ C. 2cosa sinβ D. -2sina sinβ
2614	The square root of every incomplete square is an	A. Rational numbers B. Even numbers C. odd numbers D. Irrational numbers
2615	f(x) = x is	A. trigonometric function B. exponential function C. quadratic function D. identify function
2616	Question Image	A. [0,1[B. [0, 1] C.]0, 1[D. None of these
2617	The group of a constant line is	A. Vertical line B. Parabola C. Circle D. Horizontal line
2618	If a point (p,q) is equidistant from the points (5,3) and (-2,-4), then p+ q =	A. -1 B. 1 C. 3 D. -3
2619	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
2620	Question Image	
2621	Question Image	
2622	Question Image	
2623	The square matrix A is skew Hermitian when (A)'=	A. A B. A' C. -A D. A
2624	The property used in -3 <-2 ⇒0 <1	A. Commutative property B. Additive property of inequality C. Additive inverse D. Additive identity
2625	The sum of first n even number is	A. n2 B. n(n+1) C. n+1 D. n+2
2626	The points (3,1), (-2,-3) and (2,2) are the vertices of :	A. Equilateral triangle B. Isosceles triangle C. right -angled triangle D. rhombus
2627	Derivative of a w.r.t x is	A. 0 B. 1 C. x D. x
2628	The distance between the points (1, 2) and (2, 1) is	A. 3 B. 6
2629	Question Image	B. 6x + 2 + c C. 6x + x²+ c D. 6x³+ x²+ x
2630	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
2631	If Sn is a definite number as n → ∞,then the geometric series is	A. Convergent B. Divergent C. Oscillatroy D. None of these
2632	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
2633	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
2634	If f(x) = ax^2, and a>0, then the lowest point on the parabola is called.	A. Vertex of parabola B. Co-ordinates of parabola C. Roots of the equation D. Coefficient of the equation
2635	(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
2636	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
2637	Question Image	B. a^xln a + c C. a^x+ c D. x a^x+ c
2638	$\tan^{-1}x > \cot^{-1}x$ holds for	A. x > 1 B. x < 1 C. x = 1 D. All values of x
2639	The sum of the even coefficients in the expansion $(1 + x)^n$is	A. n² B. 2ⁿ⁻² C. 2ⁿ⁻¹ D. 2ⁿ

2640	Question Image	A. A parabola B. An ellipse C. A hyperbola D. A circle
2641	Question Image	A. x = f(y) B. y = f(x) C. x = f(x) D. y = f(y)
2642	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
2643	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. $-3-3\sqrt{2}$
2644	$16^o30'$ =	A. 16.5^o B. 16.2^o C. 16.60^o D. 19.9^o
2645	Which of the following statement is true	A. 16^{1/3}x 16^{1/6} = 4 B. 9^{1/3} x9^{1/6} =8^{11/8} C. 9^{1/3} x9^{1/6} = 9^{1/8} D. All of these
2646	Question Image	A. x³ B. 3x² C. 3x D. 3
2647	QUQ, =	A. N B. R C. W D. Z
2648	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
2649	Question Image	A. 0 B. 1 C. 2 D. 4
2650	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
2651	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. 0 D. Does not exist
2652	Derivative of strictly increasing function is always	A. Zero B. Positive C. Negative D. Both (A) and (B)
2653	Question Image	
2654	Domain of 3 sin x is _____	A. [-3, 3] B. R C. Positive real numbers D. None of these
2655	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
2656	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
2657	Question Image	A. 0 B. 1 C. 8 D. ∞

2658	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
2659	Question Image	
2660	The set (Q, .)	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
2661	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
2662	Question Image	A. xy B. y C. 0 D. x
2663	A Geometric Series is divergent only if	A. |r|>1 B. |r|≥1 C. |r|=1 D. None of these
2664	The sum of all odd numbers between 100 and 200 is	A. 6200 B. 7500 C. 6500 D. 3750
2665	Question Image	
2666	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
2667	(A ∩ B)c =	A. A∩ B B. (A ∪ B)c C. Ac∪Bc D. Φ
2668	Question Image	
2669	Question Image	A. 0 B. 1 C. -1 D. None of these
2670	Question Image	
2671	Question Image	A. -76 B. 96723 C. 5721 D. -96096
2672	Question Image	D. none of these
2673	Question Image	
2674	The point where the axis meets the parabola is called	A. Directrix B. Foucu C. Chord D. Vertix
2675	Two straight line are given as M:y = -1/3 x+2 which of the following statement is correct	A. M & N are parallel B. M & N are not intersect C. M & N is perpendicular D. M & N are intersect at multiple
2676	Question Image	A. 0 B. 1
2677	x-axis divides the line segment joining points (2,-3) and (5,6) in the ratio:	A. 2 : 1 B. -2 : 1 C. 1 : 2 D. -1 : 2
2678	1^0= _____	
2679	If x =1 -t^2 and y =3t^2 - 2t^3 then dy/dx =	A. (1-t) B. 3(1+t) C. 3(t-1)

		D. 3/1-t
2680	Question Image	A. 0 B. -1 C. 1 D. -2
2681	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
2682	Question Image	
2683	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
2684	The line y = 4x + c touches the hyperbola x^2-y^2= 1 if	
2685	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a, b and c
2686	Question Image	A. hypothesis B. implication C. consequent D. antecedent
2687	sin5θ+sin3θ = _____;	A. 2sin 4θ cosθ B. 2cos 4θ sinθ C. 2cos 4θ cosθ D. -2sin 4θ sinθ
2688	The equation of motion of a stone thrown vertically up wards is s = ut - 4.9$t^2$the maximum height attained by it =	
2689	Question Image	A. 1 B. 2 C. -1 D. 0
2690	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 >
2691	The period of 3 sin x is	A. 2π B. 9π C. 3π D. 5π
2692	The additive inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
2693	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
2694	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite
2695	In a triangle ABC, if angle A = 72° , angle B = 48° and c = 9 cm then Ĉ is	A. 69° B. 66° C. 60° D. 63°
2696	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_1 - Z_2\|$ = ?	
2697	If n is any positive integer then $4^n > 3^n$+ 4 is true for all	
2698	Period of Cotangent function is	A. π B. -π C. 0 D. -2π
		A. 1

2699	Question Image	B. 2 C. 3 D. 4
2700	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
2701	(√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
2702	If distance of (a,b) from origin is 5 then	A. a²+ b²=5 B. a = 5 C. b = 5
2703	Question Image	A. 8 C. 4 D. 64
2704	The modulus of 12-5i is:	A. 7 B. 13 C. √7 D. 119
2705	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
2706	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
2707	(-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
2708	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
2709	Question Image	
2710	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
2711	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!
2712	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
2713	Question Image	A. 0 B. 2 C. 4/3 D. 5/3
2714	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
2715	Cot 45° = _____	
2716	The 60th part of one minute is called	A. Degree B. Second C. Radiam D. None of these
2717	Question Image	D. none of these
2718	Question Image	
2719	Question Image	
		A. A real number

2720	Every whole number is	A. A real number B. An irrational number C. A prime number D. A negative integer
2721	Question Image	D. none of these
2722	Question Image	A. -cosec²x B. -sec²x C. - cosec x cot x D. cosec x
2723	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
2724	Range of $\cos\theta$ is	
2725	Question Image	A. π/ 2 B. π/ 3 C. π/ 4 D. π
2726	The smallest positive root of the equation tan x - x = 0 lies on	
2727	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
2728	Question Image	
2729	Empty set is	A. Not subset of every set B. Finite set C. Infinite set D. Not the member of real numbers
2730	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
2731	In one hour, the minute hand of a clock turns through	
2732	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
2733	Period of Sine and Cosine function is	A. π B. 2π C. -π D. -2π
2734	$x^4 - 3x^3 + 3x + 1 = 0$ is called _____	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these

2735	Question Image	D. none of these
2736	The period of cosec 10x is _____	
2737	Question Image	
2738	Question Image	
2739	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
2740	How many arrangements of the letter of the word PAKPATTAN can be made	
2741	Question Image	A. π / 3 B. π / 4 C. π / 2 D. π
2742	Deductive logic in which every statement is regarded as true or false and there is no other possibility is called	A. deductive logic B. inductive logic C. Aristolian logic D. non-Aristolian logic
2743	√23 is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
2744	Which element is the additive inverse of (a, b) in Complex numbers?	A. (a, 0) B. (0, b) C. (a, b) D. (-a, -b)
2745	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
2746	The multiplicative inverse of -3i is	A. 3i B. -3i C. -1/3i D. 1/3 i
2747	Domain of 2 cos x is _____	A. [-2, 2] B. R C. Negative real numbers D. None of these
2748	Question Image	D. none of these
2749	Question Image	
2750	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
2751	The three consecutive numbers a,√ab,b are in	A. G.P B. H.P C. G.M D. None of these
2752	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
2753	Question Image	A. 0 B. -1 C. 1 D. 2
2754	If y = $(7x + 9)^2$, then dy/dx equals:	A. 98x +126 B. 14x C. 14x +18 D. 14x+81
2755	cos (α+β) + cos (α-β) =	A. 4 cosαcosβ B. 2 cosαcosβ

		C. 2 sinαsinβ D. 2 sinαcosβ
2756	The nth term of an A.P., is 12-4n. Its common difference is	A. 8 B. 4 C. 4 D. 16
2757	The transpose of a column matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
2758	if Z1 = 1+i, Z2= 2+3i, then |Z2 -Z1| =	A. √3 i B. √7 C. -2-i D. √5
2759	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
2760	To each element of a group there corresponds _____ inverse element	A. Two B. One C. No D. Three
2761	Distance between A(3, 8), B(5, 6) is	
2762	Question Image	A. 1/3 B. 1 C. 3 D. None of these
2763	Three points (-2,2) (8,-2) and (-4,3) are vertices of a :	A. Isosceles triangle B. right-angled triangle C. Equilateral trainagle D. Rectangle
2764	Point (2,0) lies on trigonometric function f(x)=_____;	A. sinx B. cosx C. tanx D. secx
2765	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
2766	Question Image	
2767	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}
2768	Question Image	
2769	If distance of (a,b) from x-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. b = 4
2770	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
2771	The vertex of the cone is also called	A. nappes B. axis C. rulings D. apex
2772	¡^{101} =	A. i B. i² C. -i D. -1
2773	Question Image	A. cos 2x B. 2 cos 2x C. 2 sin2x D. -2 cos2x
2774	Question Image	A. 6, -12, -18 B. -6, 4, 9 C. -6, -4, -9 D. 6, 12, 18

		D. -6, 12, 18
2775	An improper rational fraction can be reduced by division to a	A. Proper fraction B. Polynomial C. mixed form
2776	Question Image	
2777	A line joining two distinct points on a parabola is called a _____ of the parabola.	A. Chord B. Tangent C. Lust rectum D. directrix
2778	The number of permutation that can be formed from the letters of the word OBJECT is	A. 700 B. 600 C. 720 D. 620
2779	Every real number is	A. a positive integer B. a rational number C. a negative integer D. a complex number
2780	Question Image	A. 15 B. 15 i C. -15 i D. -15
2781	The period of|sin⁄02x| is	A. π/2 B. -π/2 C. π D. π/3
2782	Question Image	
2783	Question Image	A. An upper triangular matrix B. A lower triangular matrix C. A diagonal matrix D. A null matrix
2784	Question Image	A. real part of z B. imaginary part of z C. conjugate of z D. modulus of z
2785	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
2786	if $y=x^2$ then dy/dx equals:	A. 2x B. x/2 C. 2x³ D. x³/2
2787	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
2788	The negation of a number	A. a relation B. a function C. unary operation D. binary operation
2789	The transpose of a row matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
2790	The vertex of the equation $y^2 = 4ax$ is:	A. (2, -2) B. (1,1) C. (0 , 0) D. (2 , 2)
2791	If $f(x) = -x^3$then f(-2) is	A. -2 B. -4 C. -8 D. 8
2792	If distance between (a,2) and (0,0) is 2 then a = _____	A. 0 B. 2 C. 4
2793	If $x^2 + y^2 = 1$, then dy/dx	A. y/x B. -x/y C. 1/x D. None of these

2794	Question Image	A. 12 B. 6 C. 8 D. none of these
2795	Tangent is .....function	A. Inverse B. one-one C. in-to D. Periodic
2796	A declarative statement which may be true or false but not both is called a	A. Hypothesis B. Proposition C. implication D. conjunction
2797	Question Image	
2798	Any conditional and its contrapositive are	A. Equilavant B. Opposite C. Equal D. Not Equal
2799	120° degrees are equal to how many radians?	
2800	Question Image	A. -2x cos x² B. -2x²sin x² C. -x²sin x D. -2x²sin x²
2801	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
2802	A complex number "1 + i" can also be expressed as"	A. 2(Cos60^o + i sin 30^o) B. Cos 60^o + i sin 60^o C. (Cos 60^o + i sin 60^o) D. Cos 30^o + i sin 30^o
2803	A relation A into B in which Domain is not equal to A, is called	A. into function B. onto function C. None of these D. surjective
2804	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
2805	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)
2806	The next term of the sequence 1, 2, 4, 7, 11, ... is.	A. 15 B. 16 C. 17 D. 18
2807	If no two elements of ordered pair of a functions from A into B are equal, then it is called.	A. Surjective B. Injuctive C. Bijective D. Onto
2808	Question Image	
2809	Question Image	A. 16 / 7 B. 6 / 17 C. 7 / 16 D. None of these
2810	The probability to get an odd number in a dice thrown once is	A. 1/2 B. 1/6 C. 1/3 D. 2
2811	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
2812	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
	Three dice are thrown together. The probability	A. 103 / 108 B. 10 / 216

2813	Three dice are thrown together. The probability of getting a total of at least 6 is	B. 10 / 216 C. 93 / 108 D. None of these
2814	The parametric equation of a curve are $x = t^2$, $y = t^3$then	
2815	The mid point of the line segment joining the points A(3,1) and B(-2,-4) is	A. (1, -3)
2816	A fraction in which the degree of the numerator is less the degree of the denominator is called	A. Polynomial B. Proper fraction C. Rational fraction D. None
2817	In R, the additive inverse of a is	A. 0 B. 1 C. -a D. 1/a
2818	Question Image	A. sec x tan x B. -cosec x cot x C. sec²x D. -sin x
2819	There may be _____ feasible solution in the feasible region	A. Infinite B. Finite C. Defined D. None of above
2820	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
2821	If n is a negative integer n! is	A. 1 B. 0 C. Unique D. Not defined
2822	The feasible region which can be enclosed within a circle is called	A. Bounded region B. Convex region C. Unbounded region D. None
2823	The set which has no proper subset is	A. {0} B. {} C. {∅} D. None of these
2824	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd B. 3rd C. 4th D. 5th
2825	Let A and B be two non-empty sets, then any subset of the cartesian product AxB is called a	A. function B. domain C. range D. binary relation
2826	Question Image	A. -3 -2i B. 3 +2i C. 1 + 2i D. 1 - 2i
2827	If A is non singular, and B is an nxn matrix, such that $B=0_{nxn1}$then AB=	A. A B. Null C. A⁻¹ D. None singular
2828	Question Image	
2829	There are _____ basic techniques for solving a quadratic equation	A. Two B. Three C. Four D. None of these
2830	For three consecutive terms in A.P middle term is called	A. A.M B. nth term C. Central term D. None of these
2831	(a,b) (c,d) if and only if	A. a = b and c =d B. a = d and b = c C. a = c and b = d D. a - b = c - d
		A. -1 B. i

2832	i^3=	C. -i D. 1
2833	If n is odd then the middle terms in the expansion of $(a + x)^n$are	
2834	Question Image	
2835	Question Image	
2836	The sum of n terms of a series is denoted by	A. d B. n C. S_n D. a_n
2837	Graph of the question $x^2+ y^2= 4$ is	A. A circle B. An ellipse C. A parabola D. A square
2838	Range of sin x is _____	A. [-1, 1] B. R C. Negative real numbers D. None of these
2839	Question Image	A. a tan(ax + b) + c B. - a tan(ax + b) + c
2840	Question Image	
2841	Question Image	A. π/ 4 B. π/ 6 C. π/ 3 D. 2π/ 3
2842	There is no integer n for which 3^n is	A. Odd B. even C. Natural D. Prime
2843	Which of the following are valid roots of $3x^3 - 8x^2 - 5x + 6$	A. -1 B. 3 C. 1 D. Both A and B
2844	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
2845	A matrix with a single column is called	A. Column matrix B. Row matrix C. Identity matrix D. Null matrix
2846	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
2847	A function of the form p(x)/Q(x) is called:	A. Rational function B. Logarithmic function C. Exponential function D. Hyperbolic function
2848	(A∩Bc)c= ----------	A. Ac∪Bc B. Ac∪B C. Ac∩B D. None of these
2849	Question Image	A. 6x - 2 + c B. x³- x²+ x + c C. 6x - x²+ c D. 6x³- x²+ c
2850	Question Image	A. (g,f) B. (-g,f) C. (g,-f) D. (-g,-f)

2851	Question Image	A. (1,7/3) B. (1, 7/5) C. (1, 11/7) D. (1, 3/5)
2852	Write down the power set of {9, 11}	
2853	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
2854	$\sin^2\alpha\cos^2\alpha=$	A. -1 B. 0 C. 1 D. None of these
2855	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
2856	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
2857	The positive value of k for which the equation x2 + kx + 64 = 0 has one of the roots 0	A. 4 B. 64 C. 8 D. All values of k
2858	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
2859	n(n - 1) (n - 2) in factorial form is	
2860	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
2861	The multiplicative inverse of -1 in the set {1-,1} is	A. 1 B. -1 C. ±1 D. 0 E. Does not exist
2862	Question Image	A. 1760 B. -193 C. 223 D. none of these
2863	The distance of the point (2,3) from y-axis is	A. 2 B. 3 C. 5
2864	The set of all points in the plane that are equally distant from a fixed point to called a	A. Parabola B. ellipse C. Hyperbola D. Circle
2865	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
2866	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
2867	The 26th term of the A.P -2,-4,10,.....is	A. 136 B. -136 C. 148 D. -148
2868	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
2869	The equation of the circle whose centre is (-3, 5) and having 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. x²+y²+6x-10y-15=0

2870	Question Image	
2871	If $f(x) = x^{-100}$ the value of f^1 (1) is:	A. 100 B. -100 C. 0 D. -101
2872	Question Image	
2873	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
2874	$f(x) = 3x/x^2 + 1$ is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
2875	a rectangular array of numbers in rows and columns is called a	A. Matrix B. Element C. Determinants D. entries
2876	Question Image	A. 16 B. 256 C. 64 D. 1024
2877	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
2878	The sum of first 60 natural numbers is	A. 1830 B. 3660 C. 1640 D. 1770
2879	Question Image	
2880	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
2881	Which of the following integrals can be evaluated	
2882	Question Image	
2883	For each natural number n, n (n+1) is	A. an even B. an odd C. multiple of 3 D. Irrational
2884	If range of a function f is B, then the function is	A. surjective B. injuctive C. bijective D. into
2885	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
2886	An infinite sequence has no	A. nth term B. Last term C. Sum D. None of these
2887	Which of the following diagrams represent bijective function?	
2888	Question Image	
2889	A key ring is an example of	A. Permutation B. Circular permutation C. Combination D. None
2890	Question Image	A. 1 B. 0 C. -2 D. 3
		A. 3 B. 6

2891	Question Image	C. 0 D. None of these
2892	Question Image	A. 110 B. 220 C. 1320 D. None of these
2893	The value of sin 28°cos 17°+cos 28°sin 17°is	
2894	Question Image	A. (-6,4) B. (-3,2) C. (6,-4) D. (3, -2)
2895	Given matrix A of order mxn then A+(-A)=	A. 0 B. A C. -A D. 2A
2896	If sinθ = 12/13, and sinθ > 0, then tan θ =	A. 2/5 B. 12/13 C. 13/5 D. 12/5
2897	How many necklaces can be made from 6 beads of different colours?	A. 120 B. 60 C. 24 D. 15
2898	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
2899	Question Image	
2900	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
2901	∀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
2902	Question Image	
2903	The set of months in a year beginning with S.	A. {September, October, November} B. Singleton set C. Null set D. Empty set
2904	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
2905	Question Image	A. The law of sines B. The law of tangents C. The pythagorus theorem D. None of these
2906	If $\underline{u}$ =2$\underline{i}$ +p$\underline{i}$ + 5$\underline{k}$ and $\underline{v}$ = 3$\underline{i}$ + $\underline{i}$ +p$\underline{k}$ are perpendicular , then p=	A. 1 B. 2 C. -1 D. -3
2907	Question Image	
2908	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
2909	Question Image	
2910	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
2911	If #n = $(n-5)^2 + 5$, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9

2912	General solution of tan 5θ= cot $2\theta$is	
2913	Question Image	
2914	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
2915	To each element of a group there corresponds ..... inverse element	A. Two B. One C. No D. Three
2916	Question Image	
2917	Question Image	
2918	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
2919	If$_e$> 1 , then the conic, is:	A. Ellipse B. Parabola C. Hyperbola D. None of these
2920	Question Image	A. 2 B. 6
2921	-p is the	A. Implication of p B. disjunction of p C. negation of p D. conjunction of p
2922	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
2923	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
2924	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
2925	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
2926	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
2927	Deductive logic in which every statement is regarded as true or false and there is no other possibility is called:	A. Deductive logic B. Inductive logic C. Aristotlian logic D. Non-Aristotlian logic
2928	Question Image	
2929	Question Image	A. 5 B. 15 C. 10 D. 20
2930	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
		A. 1700 B. 17023

2931	Question Image	B. 17025 C. 17027 D. 17010
2932	The point _____ is in the solution of the inequality 2x - 3y > 5	A. (1, -1) B. (2,2) C. (0,0) D. (3,0)
2933	Question Image	
2934	In the expansion of $(a + x)^n$ the general term T_{r+1} is	
2935	If y=f(x) is a function then y is called	A. dependent variable B. independent variable C. constant D. none of these
2936	Question Image	A. 3/4 B. r C. v D. None of these
2937	Question Image	
2938	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
2939	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
2940	Question Image	A. 0 B. 1 D. none of these
2941	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
2942	The periods of the function f(x) = x[x] is	A. 1 B. 2 C. Non periodic D. None of these
2943	r + 3 >5 then which is true	A. r + 2 > 4 B. r + 2 < 4 C. r + 2 = 4 D. None
2944	If $y = 1/x^2$ then dy/dx equals:	A. -2x B. x⁻³ C. -2/x³ D. -2x³
2945	Sum of all the four forth roots of unity is	A. 1 B. -1 C. i D. 0
2946	If z=(x,y) then z has no multiplicative inverse when	A. x ≠ 0, y = 0 B. x = 0, y = 0 C. x = 0, y ≠ 0 D. None of these
2947	Question Image	
2948	The fifth term of (a+2x3)17 is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
2949	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
2950	Question Image	

2951	Question Image	
2952	Question Image	
2953	If C is the mid point of AB and P is any point outside AB, then	
2954	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)
2955	The centroid of a triangle divides each median in the ratio	A. 2 : 1 B. 3 : 1 C. 3 : 2 D. 1 : 1
2956	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
2957	Cos (α+β) - cos (α-β) =	A. -2 sinα sinβ B. 2 sinαcosβ C. -2 sinαcosα D. 4 sinα cosβ
2958	Question Image	
2959	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
2960	The circular measure of the angle between the hands of a watch of 4 0'clock is	A. π/2 B. π/4 C. 2π/3 D. π/6
2961	Question Image	A. 3 B. 2 C. 8 D. 0
2962	(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
2963	If n is add the expansion (a + x)^{n}has middle terms	A. 2 B. 3 C. 4 D. 5
2964	One degree is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
2965	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
2966	The term involving x4 the expansion (3-2x)7 is	A. 217 x4 B. 15120x4 C. 313x4 D. -25x4
2967	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
2968	Question Image	
	A card is drawn from a pack of cards numbered	A. 2 / 13

2969	2 to 53. the probability that the number on the card is prime number less than 20 is	B. 4 / 13 C. 5 / 13 D. 8 / 13
2970	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
2971	The sum if 1,3,5,7,9..... up to 20 terms is	A. 400 B. 472 C. 563 D. 264
2972	The point of contact of the circles $x^2 + y^2 - 6x - 6y+10 = 0$ and $x^2 + y^2 =2$ is	A. (-3 ,2) B. (1 , 3) C. (-2 , -1) D. None of these
2973	$(a^{-1})^{-1}$=	A. a⁻¹ B. a C. -a D. None of above
2974	The distance of a moving particle at any instant t is x = 3t2 +1 then velocity of particle at t = 10 is	A. 50 cm/sec B. 60 cm/sec C. 61 cm/sec D. None of these
2975	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
2976	Question Image	A. 0 B. 1 C. -2 D. 10
2977	If $3x^{2-6} - 9^{x+1} = 0$ then the valid values of are.	A. (4,2) B. (2,1) C. (0,1) D. (3,-3)
2978	If one end of the diameter of the circle $2x^2 + 2y^2 -8x - 4y = 2 = 0$ is (2 ,3), the other end is:	A. (2,1) B. (-2,1) C. (2,-1) D. (1,-1)
2979	Question Image	
2980	The matrix A is Hermitian when (A)' =	A. A B. -A C. A D. A'
2981	If a is any real number and a = a is called	A. symmetric property B. Trichotomy Properties C. Transitive Property D. Reflexive Properties
2982	Which shape of the following objects are approximately parabolic ares?	A. Light reflectors B. Force C. Weight of the pendul D. None of these
2983	Question Image	
2984	To draw conclusions from some experiments or few contacts only is called:	A. Deduction B. Implication C. Conjunction D. Induction
2985	d/dx [$\tan^2 x$]	A. 2tan x sec² x B. 2tan x sec x C. 2 cot x tan x D. 2sec² x cos² x
2986	Domain of tangent function is	
2987	Question Image	A. 2x B. x/2 C. 2x³ D. x³/2
2988	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

2989	3x + 4 = 0 is	A. not inequality B. equation C. identity D. inequality
2990	Question Image	A. Commutative law of addition B. Associative law of addition C. Additive identity D. Additive inverse
2991	The period of tan x/7 is	A. 3π B. 7π C. 15π D. 5π
2992	Question Image	
2993	For reasoning, we have to use	A. implication B. conjunction C. induction D. proposition
2994	Question Image	A. ab=-1 B. ab = 1 C. ab = 2 D. None
2995	Question Image	
2996	Question Image	A. 36 B. 360 C. 24 D. 6
2997	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
2998	Question Image	
2999	The set of all points in the plane that are equally distant from a fixed point is called a	A. parabola B. ellipse C. hyperbola D. circle
3000	π 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
3001	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
3002	The range of the tangent function is	A. all real numbers B. -1 ≤ x ≥ 1 C. natural number D. z⁺
3003	Question Image	A. π / 3 B. π / 4 C. π / 6 D. 0
3004	Question Image	
3005	Question Image	A. (2x+a+b+c) B. (a+b+c) C. (a+b+c+x) D. 0
3006	Question Image	D. all are correct
3007	Question Image	
3008	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
3009	The points (-1,3), (3,0) are the vertices of:	A. Right-angled triangle B. Isosceles triangle C. Equilateral triangle D. square

3010	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
3011	1 radian = _____	A. 180° B. 90° C. 57.296° D. 60°
3012	The expansion of $(1 - 3x)^{-1}$is valid if	A. | x | < 1 B. | x | < 3 C. | x | < 1/3 D. None of these
3013	Domain of 1+cot2θ=csc2θ is	A. [0,π] B. R-{x/x=nπ,n∈ z} C. (-∞,+∞) D. [-1,1]
3014	Which of the following sets has closure property w.r.t. addition	A. { 0 } B. { 1 } C. { 0, -1} D. { 1, -1}
3015	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
3016	Question Image	D. all
3017	Question Image	
3018	tan h x = _____	
3019	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the resulting section is	A. an ellipse B. a circle C. a hyperbola D. a parabola
3020	A polynomial of arbitrary degree	A. f(x) = o B. f(x) = x C. f(x) = a D. f(x) = ax + b,a ≠ 0
3021	The expansion of $(1 + 2x)^{-2}$is valed if	A. | x | < 1/2 B. | x | < 1 C. | x | < 2 D. | x | < 3
3022	sin(a-90°)=_____;	A. sina B. cosa C. -sinθ D. -cosa
3023	If for the matrix A, A^5= I, then A^{-1}=	A. A² B. A³ C. A D. None of above
3024	Question Image	
3025	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%
3026	The number of values of x in the interval [0, 5π] satisfying the equation 3 $\sin^2 x$ - 7 sinx + 2 = 0 is	A. 0 B. 5 C. 6 D. 10
3027	The degree of differential equation is the power of the	A. Lowest order derivative B. Highest order derivative C. Integral D. All are correct
3028	Question Image	A. 71 B. -22 C. 27 D. 28
3029	3x + 4 < 0 is	A. inequality B. equation C. identity D. not inequality

		D. not inequality
3030	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
3031	Two matrices are conformable for addition,if they are	A. equal B. adjoint C. same order D. disjoint
3032	Question Image	
3033	The points of intersection of the line y = 2x -3 and the circle $x^2 + y^2$ - 3x =2y -3 = 0 are:	A. two B. three C. less thean two D. not intersect
3034	The radius of the circle $2x^2 + 2y^2$ - 4x + 12 y+11=0 is:	A. √4.5 B. √11 C. √29 D. √15
3035	The number of subsets of B = {1,2,3,4,5}	A. 10 B. 32 C. 16 D. 5
3036	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
3037	Question Image	
3038	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
3039	The multiplicative inverse of x such that x = 0 is	A. -x B. Does not exist C. 1/x D. ±1
3040	Question Image	A. Symmetric B. Skew-symmetric C. Hermitian D. Skew hermitian
3041	Question Image	
3042	Question Image	
3043	If A and B are two matrices of order B X B then, AB = A iff	A. B=1 B. B=A C. B=A^(-2) D. B =B²
3044	graph of sine function is bounded between lines	A. y± 1 = 0 B. x± 1 = 0 C. x± y - 0 D. None of these
3045	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
3046	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
3047	The st. lines whose direction cosines satisfy al + bm + cn = 0, fmn + gnl + hlm=0 are perpendicular if	
3048	Question Image	
3049	To study conics, Pappus used the method of	A. analytic geometry B. solid geometry C. Euclidean geometry D. none of these
3050	Question Image	A. 0 B. 1

3050	Question Image	C. 2 D. 4
3051	If sin ($\pi\cos\theta$) = cos ($\pi\sin\theta$), then which of the following is correct?	
3052	24 can be written as a product of	A. Odd factors B. Even factors C. Whole factors D. Prime factors
3053	If one root of the equation x^2- 3x + a = 0 is 2 then a = _____	A. 0 B. 1 C. 2 D. 3
3054	Question Image	
3055	Question Image	
3056	(ABC)' =	A. CBA' B. CBA C. C' B' A' D. None of these
3057	Domain of cosec x is _____	
3058	(a,b) = (c,d) if and only if	A. a=b and c =d B. a = d and b = c C. a = c and b = d D. a - b = c -d
3059	If 4 ^6P_r= $^6P_{r+1}$, then r is equal to	A. 4 B. 3 C. 2 D. 1
3060	Question Image	D. none of these
3061	Question Image	A. 0 B. 1 C. 1/2
3062	No term of a geometric sequence can be	A. 0 B. 1 C. 2 D. 3
3063	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
3064	The function whose range consists of just one element is called	A. One-One Function B. Identity Function C. Onto Function D. Constant Function
3065	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
3066	Question Image	A. 2 B. 4 C. 8 D. 12
3067	Question Image	
3068	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
3069	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
3070	Question Image	
3071	Question Image	

3072	The position vector of the point P(a, b, c) is	
3073	Fundamental law is	
3074	The trigonometric equation contains..... trigonometric functions	A. At least one B. At most one C. Exactly one D. None
3075	Question Image	
3076	Question Image	
3077	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
3078	A triangle which is not right is called an _____ triangle	A. Acute B. Obtuse C. Oblique D. None of these
3079	120°=_____	
3080	The set X is	A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these
3081	N is closed with respect to ordinary	A. addition B. multiplication C. addition and multiplication D. division
3082	Question Image	
3083	If n € N , then n(n+3) is always	A. Multiple of 3 B. Multiple of 6 C. odd D. even
3084	Question Image	
3085	Two sets A and B are said to be disjoint if	
3086	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
3087	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
3088	Question Image	A. 2C B. C³ C. 1 D. 0
3089	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b C. -a D. (a - b)²
3090	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
3091	Period of Tangent function is	A. 0° B. -π C. π D. 2π
3092	Question Image	
3093	1 degree = _____	A. 0.00175 rad B. 0.175 rad C. 0.0175 rad

		D. 1.75 rad
3094	The value of n, when $^{n}P_{2}$= 20 is	A. 3 B. 4 C. 6 D. 5
3095	The mid point of the line segment joining the points (a,b) and (b,a) is	
3096	Range of sec x is _____	A. [-1, 1] B. R C. Negative real numbers D. R = {x | -1 < x < 1}
3097	Question Image	A. injuctive as well as surjective B. both onto and into C. one - one and into D. only (1 - 1)
3098	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
3099	The sets {1, 2, 4} and {4, 6, 8, 10} are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Over lapping sets
3100	The multiplicative inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 1
3101	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
3102	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
3103	The period of the trigonometric function y = sin x cos x is	A. 2π B. π C. 4π D. π / 2
3104	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
3105	$w^{28}+ w^{38}$= _____	A. 0 B. 1 C. w D. -1
3106	Question Image	
3107	If A ⊆ B then A ∪ B is	A. A B. B C. A' D. A ∩B
3108	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	
3109	Sec 30° = _____	
3110	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 < ∞
3111	Domain of sec$\theta$is	
3112	Identity w.r.t intersection in a power set of any set is	A. ⌀ B. Set itself C. Singleton set D. {0}
	The slope of the normal at the point (at^2, 2at)	A. 1/t B. t

3113	The slope of the normal at the point $(at^2, 2at)$ of the parabola $y^2 = 4ax$ is	C. -t D. -1/t
3114	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
3115	If $z_1 = \sqrt{-36}$,$z_2 = \sqrt{-25}$,$z3 = \sqrt{-16}$ then	A. 15 B. 15i C. -15i D. -15
3116	The graph of the quadratic equation is	A. Straight line B. Circle C. Parabola D. elipse
3117	If (x,y) are the coordinates of a point P, then the first number of the ordered pair is called:	A. Ordinate B. Abscissa C. quadrant D. Cartesian
3118	$(2 + w)(2 + w^2) =$ _____	A. 1 B. 2 C. 3 D. 0
3119	$f(x) = ax^2-3x-5$, and $f^1(2) = 9$, a is equal to	A. 2 B. 3 C. -2 D. 4
3120	The set {-1, 1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
3121	An infinite arithmetic series is always	A. Convergent B. Oscillatory C. Divergent D. None of these
3122	Question Image	
3123	Which of the following does not represent absolute value of a vector	A. magnitude B. length C. norm D. number
3124	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
3125	sec h x = _____	
3126	Cos^{-1} 12/13 =	A. tan⁻¹ 3/5 B. cot⁻¹ 13/12 C. Sec⁻¹ 13/12 D. sin⁻¹ 5/13
3127	Question Image	
3128	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
3129	Question Image	A. 2 D. 0
3130	What is the period of tan 4/3 x =?	A. π/4 B. 4π/3 C. 7π/4 D. 3π/4
3131	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
3132	An equation of the form ax + by = k is homogeneous linear equation when:	
3133	Question Image	A. 7 B. 5 C. 6

		D. None of these
3134	Question Image	A. 100 B. -100 C. 0 D. -101
3135	The distance of a point (x cosθ , x sinθ) from origin is:	A. x B. x tanθ C. -tanθ D. -cotθ
3136	Question Image	A. trigonometric equation B. conditional equation C. identity D. None
3137	Through how many radians does the hour hand of a clock turn in one hour	
3138	If 2 $\tan^{1}(\cos x) = \tan^{-1}(\operatorname{cosec}^{2}x)$, then x is equal to	A. π/ 3 B. π/ 2 C. π/ 6 D. π
3139	The distance between the points (2, 2) and (3, 3) is	A. 10 C. 5 D. 2
3140	In (x +iy) y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
3141	Question Image	A. A finite non-empty set B. Null set C. Both a and b D. None of these
3142	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
3143	Period of 3 sin x is _____	
3144	Range of tan$\theta$is	A. Set of complex numbers B. Set of real numbers C. Set of odd numbers D. Set of positive integers only
3145	Question Image	
3146	2π is the period of	A. sin□ B. tan□ C. cot□ D. all circular function
3147	If 0 = {1,3,5.....}, then n (0) =	A. Infinite B. Even numbers C. odd integers D. 99
3148	Question Image	
3149	If f(x) = x + 1 then $f(z^{2}-1)$ is	A. z² B. z²+ 2 C. z²- 2 D. none of these
3150	0 (zero) is	A. An irrational number B. A rational number C. A negative integer D. A positive number
3151	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

3152	Question Image	
3153	The distance between the points A(3,1) and B(-2,-4) is	A. 5 C. 25 D. 10
3154	If the centre of the circle is the origin, then equation of the cirlce is	A. x²+ y²= 0 B. 2gx + 2fy - c = 0 C. x²+ y²= r² D. gx + fy - c/2 = 0
3155	Question Image	A. 2 B. -1 C. 8 D. not defined
3156	If|a| =|b|=|a + b|=1, then|a+ b| = 5, then|a-b| =	A. 4 B. 6 C. 5 D. 3
3157	Question Image	
3158	Question Image	A. 2, 3 B. 3, 3 C. 2, 6 D. 2, 4
3159	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
3160	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
3161	Question Image	
3162	Question Image	A. 11 B. 61 D. 1
3163	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
3164	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)
3165	Question Image	A. e^x+ c B. e^{-x}+ c C. x e^x+ c D. not possible
3166	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
3167	Question Image	
3168	The distance of the point (-2,3) from x-axis is	A. -2 B. 2 C. 3 D. 1
3169	Which one is quadrantal angle	A. 8181710° B. 2345° C. -8181180° D. -2344°
3170	Question Image	
3171	Question Image	
3172	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
3173	$\cos h^2 x + \sin h^2 x$	A. an even function B. an odd function

	cos tan x + sin tan x	C. an even and implicit function D. neither even nor a odd
3174	x = _____ is in the solution of 2x - 3 < 0	A. 2 B. -2 C. 3 D. 4
3175	Tan 30° = _____	
3176	A right angle is the angle of measure	A. 90' B. 60° C. 60" D. 90°
3177	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
3178	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
3179	Question Image	A. -228 B. -1/288 C. -1/220 D. -1/177
3180	The integral of $3x^5dx$ is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
3181	Question Image	A. 0 B. 1
3182	Question Image	A. 0 B. 1
3183	Question Image	A. R/[0,4] B. R/(0,4) C. (0,4) D. [0,4]
3184	Multiplicative inverse of "1" is	A. 0 B. -1 C. 1 D. {0, 1}
3185	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
3186	Question Image	
3187	Question Image	
3188	Question Image	
3189	The cube roots of 8 are	
3190	Sin 90° = _____	A. -1 B. 0 C. 1 D. Undefined
3191	Question Image	
3192	In any triangle ABC,with usual notationαsinβ =____;	A. b sinα B. bsinβ C. αsinα D. None of these
3193	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
3194	The additive inverse of a matrix A is	D. None of these
3195	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

3196	The maximum value of sin x + cos x is	
3197	An observer on the top of a cliff 200 m above the sea level, observes the angles of depression of two ships on opposite sides of the cliff to be 45° and 30°, respectively. The distance between the ships if the line joining them points to the base of cliff is	
3198	Associative law of multiplication	A. ab - ba B. a(bc) = (ab) c C. a(b + c) = ab +ac D. (a +b)c = ac + bc
3199	Question Image	A. 2 C. -2 D. none of these
3200	Question Image	
3201	If points A (6,-1), B (1,3) and C (x,8) are such that AB=BC, then x =	A. 3,5 B. -3,5 C. 3,-5 D. -3,-5
3202	Question Image	A. 8 B. 1/56 C. 56 D. None of these
3203	Question Image	A. 0 B. 1 C. -1 D. none of these
3204	The set {1,-1, i, -i} form a group under	A. Addition B. Multiplication C. Subtraction D. None
3205	Question Image	
3206	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
3207	The discriminant of the quadratic equation ax^2+ bx + c = 0 is	A. b²+ 4ac B. b²- 4ac C. 4ac - b² D. a²- 4ac
3208	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
3209	Question Image	
3210	Another name of quadratic equation is	A. Polynomial B. 2nd degree polynomial C. Linear equation D. simaltaneous equations
3211	If $f(x) = -x^2$then f(-2) is	A. -2 B. 2 C. -4 D. 4
3212	The negation of given number is a	A. Binary operation B. Unary operation C. Relation D. None of these
3213	The vector i = [1,0] is called unit vector along:	A. x-axis B. y - axis C. z- axis D. Botha a and y-axis
3214	Question Image	
3215	The coordinates of a point which trisects segment joining (0,0) and (9,12) are:	A. (4,3)(8,6) B. (4,3)(6,8) C. (3,4)(6,8) D. (3,4)(8,6)
		A. A prime integar

3216	6 is	B. An irrational number C. A rational number D. An odd integer
3217	Question Image	
3218	Question Image	A. 0 B. Independent of a C. Independent of b D. Independent of c
3219	If n is any positive integer then n! > $2^{n-1}$for	
3220	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
3221	Question Image	
3222	Question Image	
3223	The points (5,2),(-2,3),(-3,-4) and (4,-5) are the vertices of:	A. rhombus B. Parallelogram C. rectangle D. square
3224	1 + 2 + 3 + ... + n = _____	
3225	Question Image	A. p < r B. p > rr C. p + r < 0 D. p - r < 0
3226	Question Image	
3227	Question Image	
3228	Question Image	
3229	The set of first elements of the ordered pairs in a relation is called its	A. domain B. range C. relation D. function
3230	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
3231	i =	
3232	Question Image	A. 405 / 256 B. 504 / 259 C. 450 / 263 D. None
3233	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
3234	Period of cosec x is _____	
3235	If cosθ = 9/41 and sinθ< 0, the tanθ =	A. 41/9 B. -40/9 C. 9/10 D. 3/20
3236	Roots of the equation x^2+ 7x + 12 = 0 are	A. {3, -4} B. {-3, 4} C. {3, 4} D. {-3, -4}
3237	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
3238	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
3239	The minimum value of the quadratic function f(x) = x2 +6x -2, is	A. 11 B. 6 C. -11

		D. 13
3240	Question Image	A. y + 1 = Ae^x B. y + 1 = Axe^x C. xe^x= C D. y + xe^x= C
3241	Question Image	A. 1 B. 9 C. 3 D. 5
3242	Question Image	
3243	The inclination of a line parallel to y-axis is	
3244	A triangle has six	A. side B. elements C. angle D. tangents
3245	Cos 0° = _____	A. -1 B. 0 C. 1 D. Undefined
3246	A second degree equation in which coefficients of $x^2$and y^2 are equal and there is no product therm xy represents:	A. a parabola B. a circle C. an ellipse D. a pair of lines
3247	The sum of all even numbers less than 100 is	A. 2450 B. 2352 C. 2272 D. 2468
3248	Optimal solution is found by evaluation the objective function at	A. All point of feasible region B. Corner point C. Origin D. None
3249	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
3250	8 . 7 . 6. 5 in factorial form is	
3251	If distance between (3,b) and (0,0) is 3 then b = _____	A. 3 C. 9 D. 0
3252	Find all the angles between 0 and 360 degree such that sinx = -1/2?	A. 210.330 B. 30.210 C. 30.150 D. 330.150
3253	Question Image	A. R B. 2R C. r D. 2r
3254	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
3255	If f (x) = 2x+1 then fof (x) = _____;	A. 4x+3 B. 2x +3 C. 4x +1 D. None of these
3256	What is the number of elements of the power set of {0, 1}	A. 1 B. 2 C. 3 D. 4
3257	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
3258	Question Image	
3259	Additive inverse of -a -b is	A. a B. -a + b C. a - b D. a + b

		D. a + b
3260	Question Image	
3261	In R, the multiplicative inverse of a is	A. 0 B. 1 C. -a D. 1/a
3262	Sequence also called.....	A. Series B. Function C. progressions D. Elements
3263	Question Image	A. 360° B. 180° C. 90° D. None of these
3264	A sequence whose reciprocal is an A.P is called	A. Oscillator B. H.P C. G.P D. None of these
3265	Domain of sec x is _____	
3266	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°
3267	Question Image	
3268	Question Image	
3269	n^2 - 1 divisible by 8 when n is	A. an odd integer B. an even integer C. Irrational D. Prime Number
3270	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
3271	Question Image	
3272	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
3273	The circle with are 60 cm^2 has an arc 8 cm long. The angle that is subtended at the centre of the circle by the are is	A. 1.83 radians B. 2.1 radians C. 1.05 radians D. 1.25 radians
3274	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)
3275	a chord passing through the focus of a parabola is called a:	A. Focal chord B. Latus rectum C. Tangent D. Directrix
3276	If $x = at^2$ and $y = 2at$ then $dy/dx =$	A. 2a/y B. y/2a C. -a/2y D. -2y/a
3277	Which element is the additive inverse of (a,b) in Complex numbers	A. (a,0) B. (0,b) C. (a,b) D. (-a,-b)
3278	Logic in which there is scope of third or fourth possibility is called.	A. non-Aristotlian logic B. Aristotlian logic C. Postulates D. induction logic
3279	Question Image	

3280	If $f(x) = x^2 - x$ then f(2) is	A. 4 B. 6 C. 2 D. 0
3281	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
3282	Question Image	A. ⁿC_r B. ⁿ⁺¹C_{r+1} C. ⁿC_{r+1} D. None
3283	Bisectors of angles of a triangle are:	A. Collinear B. Concurrent C. Perpendicular D. zero
3284	While writing his books on geometry, Euelid used	A. Inductive method B. Deductive method C. Implication D. proposition
3285	Question Image	
3286	Differentiate the expression $(x-1)(x+2)^2$ with respect to x gives	A. 2x(x+2) B. 2(x-1)(x+2) C. 2(x+1) D. 3x (x+2)
3287	A semi-group having an identity is called a	A. groupoid B. non-commutative C. abelian D. monoid
3288	Question Image	D. all
3289	Question Image	
3290	A particle moving in a straight line with velocity V = (4-t2) where t is the line from a fixed point. The acceleration of the particle after 4 sec is.	A. -8 m/ sec² B. -4 m/sec C. -8m/sec D. -4m/sec2
3291	Question Image	A. 3/4 B. -3/4 C. 4/3 D. -4/3
3292	If both p and q are false, then the disjunction of p and q is	A. false B. true C. equal D. equivalent
3293	probability of a certain event is	A. 0 B. -1 C. 1 D. ∞
3294	Question Image	
3295	The sum of indicated terms of a sequence is called	A. Arithmetic series B. Series C. Harmonic series D. None of these
3296	Question Image	A. 0 B. 1 D. undefined
3297	3.5+5.4=5.4+3.5 =8.9 this property of addition is called	A. additive identity B. assoclative property C. commulative property D. closure property
3298	Question Image	
3299	Question Image	A. 15/23 B. 7/15 C. 7/8 D. 15/7
3300	Question Image	
3301	Question Image	

3301	Question Image	
3302	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
3303	Question Image	
3304	If $f(x) = x^5 + x^3 + x$ the value of $f^1(1)$ is:	A. 0 B. 8 C. 5 D. 9
3305	Question Image	
3306	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant D. none of these
3307	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
3308	Question Image	A. 1 B. 2 C. 0 D. 4
3309	Three consecutive terms of a progression are 30, 24, 20. The next terms of the progression is	
3310	The roots of the equations will be equal if b^2-4ac is	A. Positive B. Negative C. 1 D. Zero
3311	Question Image	
3312	In an A.P,a +(n-a)d is	A. 1st term B. General term C. Last term D. None of these
3313	Geometric mean between a and b is	
3314	sin (α+β) - sin (α -β) =	A. 4 cosαsinβ B. 2 cosαsinβ C. 4 cosαcosβ D. 4 sin αsinβ
3315	If (0, 0) and (-1, 0) are end points of a diameter, then the equation of the circle is	
3316	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	
3317	Question Image	
3318	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
3319	{x : xε Z and x < 1} is	A. Singleton set B. A set with two points C. Empty set D. None of these
3320	The value of 300^o in term ofπ is	A. 5π/3 B. 2π/3 C. 5π/2 D. 5π
3321	If $f(x) = x^3 - 2x^2 + 4x - 1$ then f(2) is	A. 7 B. -16 C. 16 D. 9

		D. -9
3322	x = secθ,y = tanθ are the parametric equations of	A. Circle B. Hyperbola C. Ellipse D. parabola
3323	Question Image	
3324	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
3325	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
3326	Tan(α-β)=	
3327	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 of π C. π is independent variable D. None of these
3328	If $f(x) = x^2 - x$ then f(1) is	A. 0 B. 1 C. 2 D. 3
3329	Question Image	
3330	Question Image	A. -1 B. 0 C. 1 D. None of these
3331	Question Image	A. 2x - 3x + c C. x²- 3x + c
3332	Onto function is also called	A. Binjective function B. Injective function C. Surjechive function D. None of these
3333	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
3334	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
3335	$\sin^{-1} x$ =	A. tan⁻¹ x B. Cosec⁻¹ x C. Cosec x D. cosec⁻¹(1/x)
3336	Question Image	C. 0 D. 1
3337	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
3338	Question Image	
3339	Question Image	A. -1 B. 0 C. 2 D. 1
3340	If the sum of two unit vectors is a unit vector the the magnitude of their difference is	A. √2 B. √3 C. 1 D. None of these
3341	Question Image	
3342	On simplifying the express in sin2O/1+Cos 2O the result is.	A. Sin O B. CotanO C. Tan O D. Sec O

3343	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
3344	For every positive integers n 1+5+9+....+ (4n - 3) is	A. n(2n - 1) B. (2n - 1) C. n - 1 D. n
3345	Question Image	C. 0 D. 1
3346	The value of sin [arc cos (-1/2)] is	
3347	Question Image	
3348	Question Image	
3349	The sum of the coefficient in the expansion of $(a + x)^5$is	A. 32 B. 16 C. 8 D. 5
3350	Question Image	
3351	Question Image	A. A⁻ B. A^t C. -A D. A
3352	Question Image	
3353	Root of the equation $3^{x-1}+ 3^{1-x}=$ is	A. 2 B. 1 C. 0 D. -1
3354	Question Image	
3355	The square matrix A is skew-symmetric when At=	A. -B B. -C C. -A D. -D
3356	The number of terms in the expansion of $(a + b)^9$is	A. 10 B. 11 C. 9 D. 12
3357	$\forall x,y \in$ R and x < 0, y < 0, which one is true	A. xy < o B. xy = o C. xy > o D. None of these
3358	Question Image	
3359	Circle $x^2 + y^2 - 2y - y = 0$ and $x^2 + y^2 - 8y - 4 = 0$:	A. Interesect B. touch externally C. touch internally D. do not touch