IMPORTANT MCQ'S FOR SECTION A   **X MATH**

TOPIC: 1

1. _____ is the collection of well defined and distinct objects.

(a) Set (b) Power (c) Conjugate (d) Relation

2) Anything belongs to the set is called an _____ of its set:

(a) Subsets (b) Elements (c) Domain (d) Power

3) A set which described with the help of statement is called _____ form:

(a) Tabular (b) Set builder (c) Descriptive (d) None of these

4) $A \cup \emptyset =$ _____: (a) U (b) $\emptyset$ (c) A (d) None of these

5) The order pair (5, -3) lies in _____ quadrant: (a) 1st (b) 2nd (c) 3rd (d) 4th

6) The set of all subsets of a set is called_____ set: (a) Power (b) Null (c) Super (d) Proper

7) The set {x | x is past president of Pakistan who was a women} is an example of _____ set:

(a) Super (b) Sub (c) Null (d) Finite

8) The order pair (0,-2) lies in/ on: (a) 1st quadrant (b) 4th quadrant (c) X-axis (d) Y-axis

9) The order pair (5,0) lies in/ on:

(a) y-axis (b) 2nd quadrant (c) x-axis (d) 3rd quadrant

10) {0,±1,±2 … … … … } is the set of:

(a) Prime numbers (b) Integers (c) Whole numbers (d) Even numbers

TOPIC: 2

1. √2 is a _____ number:

a) Rational b) Irrational c) Natural d) None of these

2. 6 + 7 = 7 + 6 the property used is called:

a) Commutative property w.r.t addition b) Closure property w.r.t subtraction c) Closure property w.r.t multiplication d)None of these

3. 6 x 7 = 7 x 6 the property used is called :

a) Commutative property w.r.t addition b) Closure property w.r.t subtraction c) Commutative property w.r.t multiplication d)None of these

4. An expression which has atleast one term involving a radical sign is called:

a) Rational b) Surd c) Open sentence d) True sentence

5. The element _____ is called multiplicative identity:

a) 0 b) 1 c) Both A and B d) None of these

6. The element _____ is called additive identity:

a) 1 b) 0 c) 2 d) 4

7. 5 ÷5 =

a) 25 b) 1 c) 2 d) 5

8. The additive inverse of –x+y is :

a) x-y b) –x-y c) x+y d) –x+y

9. {–(−2) 4 }=_____:

a) 16 b) -16 c) 8 d) -8

10. The conjugate of $2\sqrt{a} + 4\sqrt{b}$ is:

a) $-2\sqrt{a} + 4\sqrt{b}$ b) $2\sqrt{a} - 4\sqrt{b}$ c) $-2\sqrt{a} - 4\sqrt{b}$ d) *All of these*

TOPIC: 3

1. If $\log_{10} x = 3$ then x =_____

 (a) 500 (b) 10 3 (c) 700 (d) 1000

2. If $\log_7 x = 2$, then x =_____

(a) 14 (b) 49 (c) 128 (d) 64

3. The characteristic of log 19 is _____

(a) 0 (b) 10 (c) 2 (d) 1

4. The characteristic of log 3.216 is _ _____

(a) 0 (b) 4 (c) 3 (d) 10

 5. Common logarithm has the base _____

(a) 2 (b) e (c)π (d) 10

6. In scientific notation 0.00416 is written as

(a) 0.0416×10^{-1} (d) 41.6×10^{-4} (b) 0.416×10^{-3} (c) 4.16×10^{-4}

7. In Standard form 2.35×10^{-2} is written as _____.

 (a) 2.35 (c) 0.00235 (b) 0.0235 (d) 0.000235

TOPIC: 4

1. When $a+b+c = 0$ then $a^3+b^3+c^3$ _____

(a) $a+b+c$ (b) 3abc (c) $(a+b+c)^3$ (d) 0

2. A polynomial having only one term is called:

 (a) Monomial (b) Trinomial (c) Binomial (d) Expression

3. When $2m + \dfrac{1}{2m} = 12$ then $4m^2 + \dfrac{1}{4m^2}$ is :

(a) 144 (b) 12 (c) 142 (d) 140

4. If $x+y = 3$, $xy = 2$ then $x^2+y^2 = $ _____.

(a) -5 (b) 1 (c) 13 (d) 5

 5. If $x-y=4$ then for $(x-y)^3 = (4)^3$ which of the following sentence is correct?

 (a) $x^3 - y^3 - 12xy = 12$ (b) $x^3-y^3-12xy=64$ (c) $x^3 - y^3 - 4xy = 64$ (d) $x^3-y^3-3xy = 64$

6. $x^4 - 64$ can be made a perfect square by adding _____.

(a) $8x^2$ (b) $4x^2$ (c) $64x^2$ (d) $16x^2$

7. $(a - b - c)(a^2 - b^2 - c^2 + ab - bc + ac) = $ _____.

(a) $a^3 + b^3 + c^3 + 3abc$ (b) $a^3 - b^3 - c^3 - 3abc$ (c) $a^3 - b^3 + c^3 - 3abc$ (d) $a^3 - b^3 + c^3 + 3abc$

8. _____ should be added to $x^4 + 4$ to make it perfect square.

(a) $2x^2$ (b) $4x^2$ (c) $4x$ (d) $4x^4$

9. _____ should be added to $16a^2 + 8ab$ to make it perfect square.

(a) b^2 (b) 2 (c) $2b^2$ (d) $-2b^2$

10. If $(x - 1)$ is a factor of $(x^3 + x^2 - 10x + 8)$ then reminder is:

(a) 0 (b) 1 (c) 2 (d) -1

11. If $X = a^2 - b^2$, $Y = a^2 + b^2$ then $2XY = $ _____:

(a) $(a - b)^2$ (b) $(a + b + c)^2$ (c) $2(a^4 - b^4)$ (d) $a^3 - b^3$

12. A polynomial term having two terms is called:

(a) Binomial (b) Trinomial (c) Monomial (d) Expression

TOPIC: 5

1. Factors of $x^2 - 5x + 6$ are _____.

(a) $(x - 1), (x - 6)$ (b) $(x - 2), (x - 3)$ (c) $(x + 6), (x - 1)$ (d) $(x + 2), (x + 3)$

2. The two numbers, whose sum is -17 and product is 30 are _____.

(a) 2,15 (b) -2,-15 (c) -3,10 (d) 3,-10

3. $x^4 + 64$ can be made a perfect square by adding _____.

(a) $8x^2$ (b) -8^2 (c) $16x^2$ (d) $4x^2$

4. $8x^3 + 27y^3 = ($ _____ $)($ _____ $)$

(a) $(2x + 3y)(4x^2 + 9y^2)$ (b) $(2x - 3y)(4x^2 - 9y^2)$ (c) $(2x - 3y)(4x^2 - 6xy + 9y^2)$ (d) $(2x - 3y)(4x^2 + 6xy + 9y^2)$

5. H.C.F of $a^3 + b^3$ and $a^2 - ab + b^2$ is _____.

(a) $a + b$ (b) $a^2 - ab + b^2$ (c) $(a - b)^3$ (d) $a^2 - b^2$

TOPIC: 6

1. If √x − 2=-4 then the solution set of x = _____:

(a) 18 (b) 15 (c) −4 + (d) None of these

2. (x − 6)(x − 4)=_____:

(a) $x^2 − 10x − 24$ (b) $x^2 + 10x − 24$ (c) $x^2 − 10x + 24$ (d) $x^2 + 10x + 24$

3. √x − 4 = −2 then solution set is:

(a) 2 (b) 8 (c) 0 (d) 32

4. If √2y − 3 = √3y + 4 y = _____:

(a) 7 (b) 5 (c) -7 (d) 7/5

5. A quadratic equation in one variable has:

(a) One root (b) Two root (c) Three root (d) none of the above

6. The ordered pair satisfying , 2x − y = 10 is

(a) = {(5 , 0)} (b) = {(0 , 10)} (c) = {(5 , 5)} (d) = {(0 , 5)}

7. The point where the graph of two lines intersects is called:

(a) origin (b) x − intercept (c) Solution set (d) y − intercept

8. The solution set of $x^2+5x+6=0$ is:

(a) ={-2,-3} (b) = {2,3} (c) ={-2,3} (d) ={2,-3}

9. A quadratic equation becomes linear if:

(a) a = 0 (b) b = 0 (c) c = 0 (d) None of these

10. Standard form of quadratic equation is:

(a) $ax^2 + bx + c = 0$ (b) $ax^2 − bx + c = 0$ (c) $ax^2 + by + c = 0$ (d) ax + by + c = 0

TOPIC: 7

1. If A=[2 3 4 6] then |A| = _____

(a) -1 (b) 0 (c) 1 (d) 2

2. If AB=I then B is called the _____ inverse of A

(a) Additive (b) Multiplicative (c) Both (a) & (b) (d) None of these

3. Multiply [2 3][6 7]

(a) [10] (b) [18] (c) Not possible * (d) None of these

4. The numbers used in rows or columns are said to be the _____ of the matrices

(a) Column (b) Order (c) Row (d) Elements

5. A matrix which has only one column is said to be a _____ matrix.

(a) Square (b) Null (c) Row (d) Column *

6. The vertical arrangement of numbers is called _____

(a) Column * (b) Order (c) Element (d) Row

7. A Square matrix, in which all elements are zero, is called a _____.

(a) Unit (b) Diagonal (c) Square (d) Null

8. A diagonal matrix in which all diagonal elements are equal is called:

(a) Scalar matrix (b) square matrix (c) Unit Matrix (d) Null matrix

TOPIC: 8

1. The method of finding a relation independent of any variable is called _____:

(a) substitution (b) elimination (c) addition (d) proposition

2. Eliminating "x" from $x + 1 x = a$ and $x - 1 x = b$ then:

(a) $a_2 = b_2$ (b) $a_2 - b_2 = 1$ (c) $a = b$ (d) $a_2 - b_2 = 4$

3. As a result of elimination the new equation or relation obtained is called _____:

(a) Eliminant (b) Eliminate (c) Solution (d) variation

4. Elimination by application of formulae is a method involving the _____:

(a) value (b) formula (c) sentence (d) none of these

5. Eliminate "t" from $t = a$ and $l x = b$ then:

(a) $l = bc$ (b) $ad = bc$ (c) $b = -ac$ (d) $ab = c$

6. If $V = Vf - Vi$ and $a = v t$ find a relation independent of V:

(a) $2aS = Vf_2 - Vi_2$ (b) $Vf = Vi + at$ (c) $S = Vit + 1 2 at_2$ (d) $S = 0$

7. Eliminate "t" from the following equations $x = 2at$ and $y = at_2$:

(a) $x_2 = 4ay$ (b) $y_2 = 4ax$ (c) $x = 2ay$ (d) $y = 4x$

8. Find a relation independent of "a" from the following equation $a + 1 a = x$; $a - 1 a = y$:

(a) $x_2 + y_2 = 4$ (b) $x - y = 0$ (c) $x_2 - y_2 = 4$ (d) $x_2 - y_2 = 0$

9. Eliminate "t" from the following equation ay + t = 0 and bx – at + 0:

(a) bx – a2y = 0 (b) bx + a2y = 0 (c) x = 4y (d) bx + y = 0

10. Eliminate "t" from the following equations Vf = Vi + gt and S = Vit + 1 2 gt2:

(a) 2aS = Vf 2 – Vi 2 (b) Vf = Vi + at (c) S = Vt (d) 2gS = Vf 2 – Vi 2

TOPIC: 9

1. Such a method of arriving at a general result is known as _____ method of reasoning.

(a) Inductive (b) Deductive (c) Fundamental (d) Postulate

2. In _____ method, we deduce particular result from the general results.

(a) Inductive (b) Deductive (c) Fundamental (d) Postulate

3. There are certain statements which are regarded as correct without any proof. Such statements are called agreements.

(a) Deductive (b) Inductive (c) Fundamental (d) Axiom

4. _____ are those fundamental agreements which are related to geometrical figures.

(a) Congruent (b) Postulates (c) Theorems (d) Axioms

5. If two adjacent angles are equal in measures their common arm is called the _____ of the angle formed by their non-common arms.

(a) Bisector (b) Exterior (c) Convex set (d) Coincident lines

6. An _____ is the union of two non-collinear rays having a common end points

(a) Vertex (b) Half pane (c) Angle (d) Ray

7. If the sum of the measures of two angles 90° , they are called _____ angles

(a) Supplementary (b) Complementary (c) Convex set (d) Coincident lines

8. If the sum of the measures of two angles 180° , they are called _____ angles

(a) Exterior (b) Adjacent (c) Supplementary (d) Complementary

9. An angle with measure greater than 90° is called an _____ angle

(a) Obtuse (b) Right (c) Acute (d) Congruent

10. An angle with measure less than 90° is called an _____ angle

(a) Acute (b) Obtuse (c) Right (d) Congruent

TOPIC: **10**

1. A parallelogram, having at least one angle right is called a _____.

(a) Circle (b) Rectangle (c) Triangle (d) Line

2. A parallelogram whose adjacent sides are congruent and opposite angles are acute is called a _____.

(a) Triangle (b) Square (c) Rhombus (d) Rectangle

3. A rectangle whose adjacent sides are congruent is called a_____.

(a) Triangle (b) Circle (c) Rectangle (d) Square

4. _____ correspondence can be established between non-negative integers and the points of a ray

(a) (2-2) (b) (1-1) (c) (3-3) (d) (5-5)

5. A Quadrilateral having only one pair of opposite sides parallel is called a_____.

(a) Rectangle or Line (b) Trapezoid or Trapezium (c) Triangle (d) Square

TOPIC: **11**

1. A _____ is the set of all the points in a plane which are equidistant from a fixed point of the plane.

(a) Line (b) Circle (c) Ray (d) Point

2. The line segment whose end-points are any two points of the circle is called a _____ of a circle.
(a) Radius (b) Secant (c) Chord (d) Tangent

3. An arc which is less than a semi-circle is called a _____ arc.

(a) Minor (b) Semi-circle (c) Major (d) Central angle

4. A circle which touches all the three sides of a triangle is called the _____ of the triangle.

(a) Escribed circle (b) Circum circle (c) Inscribed circle (d) None of these

5. The distance between any point on the circle and its centre is called the _____ of the circle.

(a) Radius (b) Segment (c) Diameter (d) Chord

1. The value of sin30 ° is _____:

 (a) 2 (b) √ 12 (c) 12 (d) - 2

2. The value of cot 60 ° is _____:

(a) √ 23 (b) √ 32 (c) √ 3 (d) 1√3

3. sin 260 ° + cos 260 ° = _____:

(a) 12 (b) 1√2 (c) 1 (d) √ 12

 4. 1 + tan 45 ° = sec 2 _____ :

(a) 30 ° (b) 60 ° (c) 90 ° (d) 45 °

5. 1 + cot 2 30 ° = cosec 2 _____:

 (a) 45 ° (b) 60 ° (c) 30 ° (d) 0 °

 6. tan 60 ° = _____:

 (a) 12 (b) 1√3 (c) 1 (d) √ 3

7. sec 30 ° = _____:

 (a) √ 32 (b) 2 √ 3 (c) 12 (d) None of these

8. sin 30 ° = cos _____:

(a) 60 ° (b) 30 ° (c) 90 ° (d) 120 °

 9. (sin 45 °) 2 + (cos _____)2 = 1

(a) 30 ° (b) 60 ° (c) 45 ° (d) 90 °

10. √ 1 − cos 2 θ = _____:

(a) Cot θ (b) tan θ (c) sin θ (d) cosec θ