Chapter 1.   Sets

1)   Empty set is a

   A)   Infinite
   B)   Finite
   C) Invalid
   D) None of these
Answer: B

2)   How many rational and irrational numbers are possible between 0 and 1

   A) finite
   B) infinite
   C) 0
   D) 1
Answer: B

3)   A ⊂ B is read as

   A) A is less than B
   B) A is a proper subset of A
   C) B is a proper subset of A
   D) None of these
Answer: B

4)   Every set is a   of itself.

   A) improper subset
   B) proper subset
   C) compliment
   D) none
Answer: A

5)   A set has n elements, then the, number of elements in its power set is

   A) 2^n
   B) 2^{n-1}
   C) 2^{n+1}
   D) None of these
Answer: A

6)   The union of sets A and B is expressed as

   A)   A∪B
   B)   A×B
   C) A/B
Answer: D)   None of these
                   A

7)   The intersection of sets A and B is expressed as

   A)   A∪B
   B)   A∩B
   C) A/B
   D) None of these

Answer: B

8)   A—B is read as

   A) Difference of A and B of B and A
   B) Difference of A and B
   C) Neither A nor B
   D) Both A and B
Answer: A

9)   A — B will contain elements in

   A) A not in B
   B)   B not in A
   C) Neither A nor B
   D) Both A and B
Answer: A

10)   A' will contain how many elements from the original set A

   A) infinite
   B) 0
   C) 1
   D) All elements of A
Answer: B

11)   (A')' =

   A) A'
   B) U – A
   C) A
   D) U
Answer: C

12)   If A is not equal to B, then the Cartesian product

   A) A x B= B x A
   B) A x B≠ B x A
   C) Is not possible
   D) None of these
Answer: B

13)   If A has m elements and B has n elements, then A x B has elements

   A) m+n
   B) m-n
   C) m x n
   D) 2n
Answer: C

14)   In lst quadrant

   A) X > 0, Y < 0
   B) X < 0, Y > 0
   C) X < 0, Y < 0
   D) X > 0, Y > 0
Answer: D

15)   If R = {(1,1),(2,3),(4,5)}, then domain of the function is

   A) Dom R = {I,2,4}
   B) Dom R {1,3,5}

C) Dom R {1,1,4,5}
D) Dom R = {2,3,4,5}

Answer: A

Chapter 2. System of real numbers, Exponents and Radicals

1) $\sqrt{2}$ is a_____number.

   A) rational
   B) irrational
   C) Natural
   D) None of these
   Answer: B

2) 6 + 7 = 7 + 6 the property used is called

   A) Closure property w.r.t addition
   B) Closure property w.r.t subtraction
   C) Closure property w.r.t multiplication
   D) None of these
   Answer: A

3) 6 X 7 = 7 X 6 the property used is called

   A) Closure property w.r.t addition
   B) Closure property w.r.t subtraction
   C) Closure property w.r.t multiplication
   D) None of these
   Answer: C

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

   A) rational
   B) Surd
   C) Open sentence
   D) True sentence
   Answer: B

5) The element _____ is called multiplicative identity.

   A) 0
   B) 1
   C) Both A and B
   D) None of these
   Answer: B

6) The additive inverse of $\dfrac{1}{A-B}$ is

   A) $\dfrac{1}{1-A+B}$
   B) $\dfrac{-A+B}{1}$
   C) $\dfrac{1}{-A-B}$
   D) None of these
   Answer: A

7) The multiplicative inverse of $\dfrac{1}{x-y}$ is

   A) (x - y)
   B) (x+y)
   C) (xy)
   D) None of these
   Answer: A

8) The $x=y, y=z \Rightarrow x=z$ the property used is called

   A) Symmetric property of equality
   B) Transitive property of equality
   C) Closure property
   D) None of these
   Answer: B

9) The element _____ is called additive identity.

   A) 1
   B) 0
   C) 2
   D) 4
   Answer: B

10) If $x<y, y<z \Rightarrow x<z$ the property used is called_____.

   A) transitive property of inequality.
   B) Symmetric property of equality
   C) Closure property
   D) None of these
   Answer: A

11) $5^{3^2} \div 5^{2^3} =$

   A) 25
   B) 1
   C) 2
   D) 5
   Answer: D

12) If y = 3 then $y^2 + y^{-2}$ is

   A) $\frac{82}{9}$
   B) 3
   C) 4
   D) 5
   Answer: A

13) The conjugate of $\sqrt{2}$ - $\sqrt{3}$ is_____.

   A) $\sqrt{2} + \sqrt{3}$
   B) $-\sqrt{2} + \sqrt{3}$
   C) $-\sqrt{2} - \sqrt{3}$

D) Both A and C

Answer: D

Chapter 3. <u>Logarithms</u>

1) In scientific notation 756837 is written as

A) 7.56837×10^5
B) 7.56837×10^6
C) 7.56837×10^2
D) None of these

Answer: A

2) In ordinary notation of 7.0056×10^{-8} is written as

A) 0.0000000070056
B) 0.000000070056
C) 0.00000070056
D) All of these

Answer: B

3) The logarithm of 1 to any base is

A) 1
B) 0
C) 2
D) undefined

Answer: B

4) If $\log_7 x = 2, \quad then \ x =$

A) 50
B) 49
C) 3
D) 4

Answer: B

5) If $\log_4 x = -\dfrac{3}{2}, \ then \ x =$

A) $\frac{1}{2}$
B) $\frac{1}{8}$
C) 3
D) 45

Answer: B

6) $\log_a^{16} = 4, \ then \ x =$

A) 2
B) 3
C) 4
D) 32

Answer: A

7) $\log \dfrac{x^3 y}{z^2} =$

A) $3\log x + \log y - 2\log z$
B) Logx + logy -logz
C) Both A and B
D) None of these

Answer: A

8) The characteristic of 7832.56 is

A) 4
B) 3
C) 2
D) 1

Answer: B

9) The characteristic of 0.00721 is

A) $\bar{3}$
B) $\bar{2}$
C) $\bar{5}$
D) $\bar{9}$

Answer: A

10) The natural logarithm has a base

A) 10
B) e
C) 2
D) 5

Answer: B

11) The common logarithm has a base

A) e
B) 10
C) 4
D) 5

Answer: B

12) If $\dfrac{\log 5^3}{\log 5^2} = x, \ then \ x=$

A) $\log_2 3 \ 2$
B) $\log_2 3$
C) $\log_4 3 \ 2$
D) None of these

Answer: B

Chapter 4.   Algebraic Expressions

1)   A polynomial having one term is called

   A) monomial
   B) Binomial
   C) Trinomial
   D) None of these
Answer: A

2)   A polynomial having two term is called

   A) Binomial
   B) Trinomial
   C) Binomial
   D) None of these
Answer: C

3)   The degree of $x^4 y + y^2 + y^3$
                   is
   A) 4
   B) 5
   C) 6
   D) 7
Answer: B

4)   The degree of polynomial $x^2 + xy + y^2$ is

   A) 3
   B) 4
   C) 6
   D) 2
Answer: D

5)   The degree of the polynomial 9 is

   A) 1
   B) 2
   C) 3
   D) 0
Answer: D

6) $(a + b + c)^2 =$

   A) $a^2 + b^2 + c^2 + 2ab + abc + 2ca$
   B) $a^2 + b^2 + c^2 + 2ab + 2ac + 2ca$
   C) $a^2 + b^2 + c^2 + 2ab + abc + 2ca$
   D) $a^2 + b^2 - c^2 + 2ab + abc + 2ca$
Answer: A

7)   If $a + b = 2$, $a - b = 2$ then $a^2 + b^2 =$

   A) 4
   B) 5
   C) 3
   D) 2
Answer: B

8) $(a+b)^2 + (a-b)^2 =$

   A) $3(a^2-b^2)$
   B) $2(a^2-b^2)$
   C) $4(a^2-b^2)$
   D) $2(-a^2 -b^2)$
Answer: B

9) $x+\sqrt{3}$ is a_____eacpression.

   A) rational
   B) irrational
   C) polynomial
   D) none
Answer: C

10) $y+\dfrac{1}{\sqrt{y}}$ is a _____ expression.

   A) rational
   B) irrational
   C) polynomial
   D) none
Answer: B

11)   If x=-2 and y=2 the value of $x^2 - xy + y^2$

   A) 4
   B) 3
   C) 8
   D) 12
Answer: D

12) $(p - q)^3 =$

   A) $p^3 + 3p^2q+3pq^2+q^3$
   B) $p^3 - 3p^2q+3pq^2+q^3$
   C) $p^3 - 3p^2q+3pq^2-q^3$
   D) none
Answer: C

13) $(x+2)(x+4) = x^2 +$_____+8

   A) 7x
   B) 6x
   C) 2x
   D) none
Answer: A

14) $(\sqrt{x} + f\sqrt{y}) (\sqrt{x} - f\sqrt{y}) =$

   A) $x^2 - y^2$
   B) $x^2 + y^2$
   C) $-x^2 - y^2$
   D) $x - y$
Answer: D

Chapter 5.   Factorization,   H.C.F,   L.C.M, simplification and Square root

1)   Factors of $(a^2 - \frac{1}{4})$ are

   A) $(a + \frac{1}{2})(a - \frac{1}{3})$
   B) $(a + \frac{3}{2})(a - \frac{1}{3})$
   C) $(a + \frac{1}{2})(a - \frac{1}{3})$
   D) none
Answer: C

2) $a^4b^2 - a^2b^4 = a^2b^2$ (_____) (_____)

   A) (a+b)(a+b)
   B) (a+b)(a - b)
   C) (a-b)(a-b)
   D) none
Answer: B

3)   If $(x^3-x^2-226x+1410)$ is divided by $(x+17)$ then remainder is

   A) 0
   B) 20
   C) 40
   D) 50
Answer: D

4)   factors of $(a^3 - 27)$ are

   A) $(a+3)(a^2-3a+9)$
   B) $(a-3)(a^2+3a+9)$
   C) $(a+3)(a^2-3a+9)$
   D) none
Answer: B

5)   Highest common factor is also known as

   A) highest factor
   B) Greatest common divisor
   C) Both A and B
   D) none
Answer: B

6)   H.C.F can be found by_____methods.

   A) 4
   B) 3
   C) 2
   D) 9
Answer: C

7)   The two methods of finding H.C.F are

   A) factor method and algebraic method
   B) factor method and numerical method
   C) factor method and division method
   D) none
Answer: C

8) $2(a - b)^2 - (a - b)^3 =$

   A) $(2 - a + b)(a - b)^2$
   B) $(2 - a + b)(a + b)^2$
   C) $(2 - a - b)(a - b)^2$
   D) $(2 + a + b)(a - b)^2$
Answer: A

9)   H.C.F, G.C.D of $x^3 + 8y^3 \ and \ x + 2\ y =$

   A) $x - 2y$
   B) $x - 2xy$
   C) $x + 2y$
   D) none of these
Answer: A

10)   L.C.M of $x^3 + 8y^3 \ and \ x + 2\ y =$

   A) $(x+2y)(x^2+2xy+4y^2)$
   B) $(x-2y)(x^2+2xy+4y^2)$
   C) $(x+2y)(x^2-2xy+4y^2)$
   D) $(x+2y)(x^2+2xy-4y^2)$
Answer: C

11) $(a^2 - b^2)^2 =$

   A) $(a^2+2ab+b^2)(a^2 - 2ab+b^2)$
   B) $(a^2-2ab+b^2)(a^2 - 2ab+b^2)$
   C) $(a^2+2ab+b^2)^2$
   D) none
Answer: A

12)   Factors of $x^2 - y^4$ are

   A) $(x+y^2)(x - y^2)$
   B) $(3x+y^2)(x - y^2)$
   C) $(x-y^2)(x - y^2)$
   D) $(2x-y^2)(x - y^2)$
Answer: A

13)   L.C.M of two or more polynomials is found by two methods which are

   A) by Factorization and by algebra
   B) by Factorization and by H.C.F
   C) by Factorization and by hypothesis
   D) none
Answer: B

Chapter 6.   <u>Algebraic Sentences</u>

1)   (2,3) lies in_____quadrant.

    A) 1st
    B) 2nd
    C) 3rd
    D) None of these
Answer: A

2)   (-6 , 4) lies in_____quadrant.

    A) 1st
    B) 2nd
    C) 3rd
    D) None of these
Answer: B

3) $(\frac{3}{4}, -1)$ lies in _____ quadrant.

    A) 2nd
    B) 1st
    C) 4th
    D) None of these
Answer: C

4)   In (3 , 4), 3 is called_____.

    A) abscissa
    B) ordinate
    C) ordered pair
    D) none of these
Answer: A

5)   In (3,4), 4 is called_____.

    A) abscissa
    B) ordinate
    C) ordered pair
    D) none of these
Answer: B

6)   If symbol of equality is involved in an open sentence then such sentence is called a/an_____.

    A) open sentence
    B) equation
    C) vertical axis
    D) horizontal axis
Answer: B

7)   An_____sentence containing the symbol of > or < is called inequation.

    A) open
    B) closed
    C) zero
    D) none of these
Answer: A

8)   Standard quadratic equation is $ax^2+bx+c = 0$, where the value of a

    A) $= 0$
    B) $\neq 0$
    C) > 0
    D) < 0
Answer: B

9)   The equation $ax^2+bx+c = 0$, remain quadratic if

    A) b=0 and $c \neq 0$
    B) $b = c = 0$
    C) $b \neq 0$ and $c = 0$
    D) all of these
Answer: D

10)   The value of variable for which given equation becomes true is called a _____ of the equation.

    A) value
    B) constant
    C) root
    D) none of these
Answer: C

11)   An equation containing one or more radical expressions involving unknown is called_____equation.

    A) linear
    A) radical
    B) irrational equation
    C) both B and C
Answer: D

12)   Let x ε R, then $|x|$ is read as

    A) modulus of x
    B) absolute value of x
    C) both A and B
    D) none of these
Answer: C

Chapter 7.   **Matrices**

1)   If matrix $A = \begin{bmatrix} 4 & 2 \\ 3 & 1 \end{bmatrix}$ then its order will be =

   A) 3 x 3
   B) 2 x 2
   C) 4 x 2
   D) 2 x 7

Answer: B

2)   If $A = \begin{bmatrix} 4+2 \\ 3-1 \end{bmatrix}$ then its order will be

   A) 2 x 1
   B) 3 x 2
   C) 3 x 3
   D) none

Answer: A

3)   If $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ then it is called_____matrix

   A) scalar
   B) unit
   C) singular
   D) none

Answer: B

4)   If $A = \begin{bmatrix} 5 & 7 \\ 8 & 9 \end{bmatrix}$ then the transpose of it will be

   A) $\begin{bmatrix} 5 & 8 \\ 7 & 1 \end{bmatrix}$

   B) $\begin{bmatrix} 5 & 8 \\ 7 & 9 \end{bmatrix}$

   C) $\begin{bmatrix} 5 & 9 \\ 7 & 8 \end{bmatrix}$

   D) none

Answer: B

5)   The additive inverse of $\begin{bmatrix} 0 & 5b \\ 3c & -1 \end{bmatrix}$ is

   A) $\begin{bmatrix} 0 & -5b \\ -3c & 1 \end{bmatrix}$

   B) $\begin{bmatrix} 0 & -5b \\ -3c & 11 \end{bmatrix}$

   C) $\begin{bmatrix} 0 & 5b \\ -3c & 1 \end{bmatrix}$

   D) none

Answer: A

   A) non-singular
   B) singular
   C) null
   D) unit

Answer: B

7)   If the order of two matrices are same then _____
operation(s) are conformable possible.

   A) addition
   B) subtraction
   C) multiplication
   D) both A and B

Answer: D

8)   A_____matrix is always square matrix.

   A) scalar
   B) diagonal
   C) both A and B
   D) none of these

Answer: C

9)   In matrix, $\begin{bmatrix} 7 & 2 \\ 3 & 1 \end{bmatrix}$, the elements 2,3 are in _____
diagonal while 7,1 are in_____diagonal.

   A) leading, legging
   B) legging, leading
   C) first, second
   D) none

Answer: A

10)   If A,B,C are conformable for multiplication the
_____property of multiplication is hold by A,B,C.

   A) commutative
   B) associative
   C) both A and B
   D) none of these

Answer: B

11)   If A and B are multiplicative inverse matrices of each
other then

   A)   AB = A
   B)   AB = B
   C)   AB = I
   D)   None of these

Answer: C

12)   If A is a non-singular matrix then |A| =

   A) |adjoint A|
   B) |-A|
   C) $|^1|_{\mathcal{E}}$
   D) Both A and B

Chapter 8.   Elimination

1)   The method of finding a relation independent of any variable id called_____.

A) substitution
B) elimination
C) proposition
D) addition

Answer: B

2)   The relation obtained after elimination is called _____

A) surd
B) result
C) eliminant
D) none of these

Answer: C

3)   Elimination by application of formulae is a method involving the_____.

A) value
B) sentence
C) formula
D) none of these

Answer: C

4)   If a + b =3 and a – b =2 then the relation free from'b' is _____.

A) b = 3
B) a = 2
C) 2a = 5
D) a = 4

Answer: C

5)   Eliminate x from $\begin{array}{c} b + x = 0 \\ c + x = 0 \end{array}$ then it will be _____.

A) b – c = 0
B) c – b = 0
C) both A and B
D) none of these

Answer: C

Chapter 9.   <u>Variations</u>

1)   The relation between similar quantity is called
_____

    A) result
    B) ratio
    C) connection
    D) comparison
Answer: B

2)   The ratio between two quantities can be represented by the_____symbol.

    A) : :
    B) :
    C) ?
    D) >
Answer: B

3)   The quantities a and b are called_____of the ratio.

    A) ratio
    B) terms
    C) relation
    D) none of these
Answer: B

4)   The first term of ratio is called_____.

    A) relation
    B) proposition
    C) antecedent
    D) consequent
Answer: C

5)   The second term of the ratio is called_____.

    A) relation
    B) proposition
    C) antecedent
    D) consequent
Answer: D

6)   The duplicate ratio of 2a:3b is_____.

    A) $4a^2 : b^2$
    B) $4a^2 : 9b^2$
    C) $4a : 9b^2$
    D) $4a^2 : -9b^2$
Answer: B

7) $a^{\frac{1}{2}} : b^{\frac{1}{2}}$ is the sub-duplicate of_____.

    A) $a^2 : b^2$
    B) a : b
    C) b : a
    D) $b^2 : a^2$
Answer: B

8)   The triplicate of a:b is_____.

    A) $a^{\frac{1}{2}} : b^{\frac{1}{2}}$
    B) $a^{\frac{1}{3}} : b^{\frac{1}{3}}$
    C) $a^3 : b^3$
    D) None of these
Answer: C

9)   If a:b :: c:d then a,b,c,d are called_____.

    A) proportional
    B) proportion
    C) connected
    D) both A and B
Answer: A

10)   If a:b :: c:d then a,b,c,d are in_____.

    A) proportion
    B) proportional
    C) both A and B
    D) none of these
Answer: A

11)   a:b :: c:d can be written as_____.

    A) a:b < c:d
    A) a:b > c:d
    B) a:b = c:d
    C) none of these
Answer: C

12)   In a:b :: c:d, a and d are called_____.

    A) extremes
    B) means
    C) numbers
    D) none of these
Answer: A

13)   The method of using the symbol k is called _____ method.

    A) R
    B) P
    C) K
    D) None of these
Answer: C

14)   If a:b :: c:d then b:a :: d:c is called_____.

    A) invertendo
    B) alternendo
    C) componendo
    D) dividendo
Answer: A

15)   If a:b :: c:d then a:c :: b:d is called_____.

    A) invertendo

B) alternendo
C) componendo
D) dividendo

Answer: B

16)   If a:b :: c:d then (a+b):b :: (c+d):d is called_____.

A) invertendo
B) alternendo
C) componendo
D) dividendo

Answer: C

17)   If a:b :: c:d then (a-b):b :: (c-d):d is called_____.

A) invertendo
B) alternendo
C) componendo
D) dividendo

Answer: D

18)   "a ratio b is same as c ratio d", this statement is suitable
for

A) a:c :: b:d
B) a:b :: c:d
C) c:a :: b:d
D) none of these

Answer: B

Chapter 10.   <u>Information Handling</u>

1)   The information given in quantitative or qualitative from regarding particular characteristic is called_____.

    A) variable
    B) data
    C) constant
    D) none of these
Answer: B

2)   _____ is a characteristic that can take different values for the elements in the data.

    A) variable
    B) data
    C) constant
    D) none of these
Answer: A

3)   _____is a variable because it varies from country to country.

    A) sample
    B) population
    C) error
    D) all of these
Answer: B

4)   The collection of all observations (elements) relating to a characteristics is called statistical_____or sample _____.

    A) sample
    B) population
    C) set
    D) all of these
Answer: B

5)   _____is a subset of a population.

    A) population
    B) error
    C) sample
    D) none of these
Answer: C

6)   _____variable can be represented numerically.

    A) qualitative
    B) quantitative
    C) both A and B
    D) none of these
Answer: B

7)   _____variable cannot be represented numerically.

    A) qualitative
    B) quantitative
    C) both A and B
    D) none of these
Answer: A

8)   _____ variable is that variable whose value arises through measurement.

    A) discrete
    B) continuous
    C) both A and B
    D) none of these
Answer: B

9)   _____ variable is that variable whose value arises through counting.

    A) discrete
    E) continuous
    F) both A and B
    G) none of these
Answer: A

10)   Colour, happiness, quality, intelligence are the examples of_____variable.

    A) quantitative
    B) qualitative
    C) continuous
    D) discrete
Answer: B

11)   When an original enquiry is conducted for the collection of information, the collected data are called _____ data.

    A) primary
    A) secondary
    B) constant
    C) continuous
Answer: A

12)   _____ is the process of sorting the data into classes or groups having similar properties, according to their observed characteristics.

    A) classification
    B) tabulation
    C) distribution
    D) all of these
Answer: A

13)   The procedure employed to reduce and simplify the raw data is called classification and_____.

    A) classification
    B) tabulation
    C) sorting
    D) distribution
Answer: B

14) $\dfrac{\text{range}}{h}$ = _____

    A) number of classes
    B) number of values
    C) class height
    D) all of these
Answer: A

15) _____ diagram consists of horizontal or vertical bars of equal widths and lengths proportional to the value they represent.

    A) simple bar
    B) multiple bar
    C) frequency polygon
    D) all of these
Answer: A

16) _____ diagram is used for the comparison of characteristics two or more variable, simultaneously.

    A) simple bar
    B) multiple bar
    C) histogram
    D) frequency polygon
Answer: B

17) _____ diagram is used for comparison of values of different items by making the corresponding sectors of a circle.

    A) multiple bar
    B) simple
    C) histogram
    D) pie
Answer: D

18) Measure of central tendency gives a picture of whole _____.

    A) population
    B) sample
    C) data
    D) all of these
Answer: A

19) The most common types of central tendency commonly known as _____.

    A) variance
    B) average
    C) standard deviation
    D) all of these
Answer: B

Chapter 11.   Fundamental Concepts of Geometry

1)   One and only one line can pass through _____ distinct points.

   A) one
   B) two
   C) three
   D) four
Answer: B

2)   One and only one plan can pass through_____ distinct points.

   A) two
   B) three
   C) four
   D) five
Answer: B

3)   If the sum of the measures of the two angles is 90° then they are called_____angles.

   A) complementary
   B) supplementary
   C) adjacent
   D) alternate
Answer: A

4)   If the sum of two angles is 180° then they are called__angles

   A) supplementary
   B) complementary
   C) adjacent
   D) alternate
Answer: A

5)   The compliment of 80° is

   A) 20°
   B) 10°
   C) 40°
   D) 60°
Answer: A

6)   The supplement of θ is

   A) $(180^\circ - \theta)$
   B) $(180^\circ + \theta)$
   C) $(90^\circ - \theta)$.
   D) None of these
Answer: A

7)   Two lines are said to be perpendicular on each other, If they form a_____angle.

   A) right
   B) Straight
   C) alternate
   D) none of these
Answer: A

8)   Two intersecting line can't be_____to the third line

   A) parallel
   B) perpendicular
   C) both A and B
   D) none of these
Answer: A

9)   A triangle having no side congruent is called _____triangle.

   A) Equilateral
   B) Scalene
   C) Isosceles
   D) Acute angled
Answer: B

10)   The sum of the measures of the all angles is _____.

   A) 90^0
   B) 180^0
   C) 50^0
   D) None of these
Answer: B

11)   The sum of the measures of the all angles of quadrilateral is_____.

   A) 90^0
   A) 150^0
   B) 360^0
   C) 30^0
Answer: C

12)   The point of concurrency of three medians of a triangle is called_____.

   A) in-centre
   B) Circum-centre
   C) centroid
   D) ortho-centre
Answer: C

13)   The perpendicular from the vertex of a triangle to the opposite side is called_____.

   A) median
   B) altitude
   C) both A and B
   D) none of these
Answer: B

Chapter 12.   <u>Demonstrative Geometry</u>

1)   The sum of the lengths of any two sides of a triangle must be_____then the third side.

    A) less
    B) greater
    C) equal
    D) none of these
Answer: B

2)   The segment connecting the mid-points of two sides of a triangle is_____to the third side and is half as long.

    A) perpendicular
    B) parallel
    C) coincident
    D) all of them
Answer: B

3)   In a triangle, the longest side is always opposite to the _____angle.

    A) smallest
    B) largest
    C) both A and B
    D) none of these
Answer: B

4)   If three sides of one triangle are congruent to three sides of another triangle, the triangles are_____.

    A) similar
    B) proportional
    C) congruent
    D) none of these
Answer: C

5)   If three angles of one triangle are congruent to three angles of another triangle, the triangles are_____.

    A) congruent
    B) equal
    C) similar
    D) proportional
Answer: C

6)   If two angles and the included side of one triangle are congruent to the corresponding parts of another triangle, the triangles are_____.

    A) similar
    B) equal
    C) proportional
    D) congruent
Answer: D

7)   If two angles and the non-included side of one triangle are congruent to the corresponding parts of another triangle, the triangles are_____.

    A) similar
    B) equal
    C) congruent
    D) none of these
Answer: C

8)   If the three sets of corresponding sides of two triangles are in proportion, the triangles are_____.

    A) similar
    B) congruent
    C) proportional
    D) equal
Answer: A

9)   If two_____lines are cut by a transversal, then the pairs of corresponding angles are congruent.

    A) intersecting
    B) parallel
    C) perpendicular
    D) coincident
Answer: B

10)   The sum of all the three interior angles of a triangle is _____.

    A) 360^0
    B) 180^0
    C) 90^0
    D) 45^0
Answer: B

11)   If two sides of a triangle are congruent then the angles opposite to them are_____.

    A) not congruent
    A) equal
    B) congruent
    C) all of these
Answer: C

Chapter 13. **Circle**

1)   Set of points which is equidistant from a fixed point is called___.

    A) square
    B) rectangle
    C) circle
    D) rhombus
Answer: C

2)   A circle has_____centre(s).

    A) two
    B) three
    C) four
    D) one
Answer: D

3)   A line segment touching the circle at two points is called___.

    A) line
    B) chord
    C) diameter
    D) radius
Answer: B

4)   A line segment touching the circle at two points and passing through centre is called_____.

    A) line
    B) chord
    C) diameter
    D) radius
Answer: C

5)   A chord passing through the centre of the circle is called__.

    A) line
    B) diameter
    C) radius
    D) none of these
Answer: B

6)   Two circles having same centre are called _____circles.

    A) same
    B) alike
    C) concentric
    D) None of these
Answer: C

7)   Double of the radius is_____.

    A) chord
    B) Diameter

    C) secant
    D) none of these
Answer: B

8)   A line touching the circle at two points is called _____.

    A) radius
    B) diameter
    C) chord
    D) secant
Answer: D

9)   .

    A) Equilateral
    B) Scalene
    C) Isosceles
    D) Acute angled
Answer: B

10)   The sum of the measures of the all angles is _____.

    A) 90^0
    B) 180^0
    C) 50^0
    D) None of these
Answer: B

11)   The sum of the measures of the all angles of quadrilateral is_____.

    A) 90^0
    A) 150^0
    B) 360^0
    C) 30^0
Answer: C

12)   The point of concurrency of three medians of a triangle is called_____.

    A) in-centre
    B) Circum-centre
    C) centroid
    D) ortho-centre
Answer: C

13)   The perpendicular from the vertex of a triangle to the opposite side is called_____.

    A) median
    B) altitude
    C) both A and B
    D) none of these
Answer: B

Chapter 14. <u>**Practical Geometry**</u>

1)   In a triangle, the_____angle can be only one.

    A)   acute
    B)   right
    C)   reflex
    D) None of these
Answer: B

2)   The point of concurrency of the medians is_____.

    A) in-centre
    B) Circum-centre
    C) Ortho-centre
    D) centroid
Answer: D

3)   The point of concurrency of the altitudes is_____.

    A) in-centre
    B) Circum-centre
    C) Ortho-centre
    D) centroid
Answer: C

4)   The point of concurrency of the angle bisector is _____.

    A) in-centre
    B) Circum-centre
    C) Ortho-centre
    D) centroid
Answer: A

5)   The point of concurrency of side bisectors is called _____.

    A) in-centre
    B) Circum-centre
    C) Ortho-centre
    D) centroid
Answer: B

6)   _____ tangent(s) can be drawn from a point outside the circle.

    A) one
    B) two
    C) three
    D) four
Answer: B

7)   _____tangent(s) can be drawn from a point which is on the circle.

    A) one
    B) two
    C) three
    D) four

Answer: A

8)   _____tangent(s) can be drawn from a point which is inside the circle.

    A) one
    B) two
    C) no
    D) none of these
Answer: C

Chapter 15.   **Trigonometry**

1)   Trigonometry   is   an   important   branch   of _____.

    A) Physics
    B) Chemistry
    C) Biology
    D) Mathematics
Answer: D

2)   _____ plays significant role in the field of navigation, surveying, electronics, electrical engineering and many other branched of physical sciences.

    A) Biology
    B) Trigonometry
    C)   Anatomy
    D)   Geology
Answer: B

3)   The_____angles and three sides of a triangle are called elements of a triangle.

    A) two
    B) three
    C) four
    D) none of these
Answer: B

4) $\sin 8 =$

    A) $\frac{P}{B}$
    B) $\frac{P}{K}$
    C) Both A and B
    D) None of these
Answer: B

5) $\cos 8 =$

    A) $\frac{P}{K}$
    B) $\frac{B}{K}$
    C) $\frac{P}{B}$
    D) None of these
Answer: B

6) $\tan 8 =$

    A) $\frac{P}{B}$
    B) $\frac{P}{K}$
    C) $\frac{K}{B}$
    D) None of these
Answer: A

7) $\sin^2 60° + \cos^2 60° =$

    A) 2
    B) 3
    C) 1
    D) 0
Answer: C

8) $1 + \text{Tan}^2\theta =$

    A) $\sec^2 8$
    B) $\text{Tan}^2 8$
    C) $\text{Cos}^2 8$
    D) None of these
Answer: A

9) $1 + \text{Cot}^2\theta =$

    A) $\text{cosec}^2\theta$
    B) $\text{Sin}^2\theta$
    C) $\text{Cos}^2\theta$
    D) $\text{Tan}^2\theta$
Answer: A

10) $\tan 20^0 = \cot (\_\_)$

    A) 20^0
    B) 30^0
    C) 70^0
    D) 80^0
Answer: C

11) $\sin 30^0 = \cos (\_\_)$

    A) 50^0
    A) 60^0
    B) 30^0
    C) 40^0
Answer: B

12) $\tan\theta = \cot (\_\_)$

    A) $90^0 + \theta$
    B) $90^0 - \theta$
    C) 90^0
    D) $20^0 + \theta$
Answer: B

13) $\text{Cot } 60° =$

    A) $\sqrt{3}$
    B) $\frac{1}{\sqrt{3}}$
    C)   1
    D) None of these
Answer: B

14) $\sin 60^0 =$

    A) $\frac{1}{2}$
    B) $\frac{\sqrt{3}}{2}$

C) $\dfrac{1}{\sqrt{2}}$

D) 0

Answer: B

15)   sinθ.**sec**θ =

A) cotθ
B) cosθ
C) tanθ
D) cosecθ

Answer: C

16)   cotθ is the reciprocal of_____.

A) sinθ
B) tanθ
C) secθ
D) cosecθ

Answer: B

17) $\sqrt{1 - \sin^2\theta}$ =

A) cos²θ
B) sinθ
C) secθ
D) cosθ

Answer: D