Question Bank

Class-10th

Questions Regarding Matching

Chapter-1

Q. 1 Match the following:-

1. $\sqrt{3}$	(a) Non-terminating repeating
2. $\frac{17}{8}$	(b) Terminating repeating
3. 2	(c) Irrational number
4. $\frac{17}{6}$	(d) Rational number

(Answer:- $\mathbf{1.} \rightarrow (\boldsymbol{c})$ $\mathbf{2.} \rightarrow (\boldsymbol{b})$ $\mathbf{3.} \rightarrow (\boldsymbol{d})$ $\mathbf{4.} \rightarrow (\boldsymbol{a})$)

Chapter-3

Q. 2 Match the following:-

1. $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$	(a) No solution
2. $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$	(b) Infinitely many solutions
3. $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$	(c) unique solution
4. sum of three angles of a triangle	(d) $360°$
5. sum of four angles of a quadrilateral	(e) $180°$

(**Answer:-** $\mathbf{1.} \rightarrow (\boldsymbol{c})$ $\mathbf{2.} \rightarrow (\boldsymbol{a})$ $\mathbf{3.} \rightarrow (\boldsymbol{b})$ $\mathbf{4.} \rightarrow (\boldsymbol{e})$ $\mathbf{5.} \rightarrow (\boldsymbol{d})$)

Chapter-4

Q. 3 Match the following:-

1. A quadratic equation $ax^2 + bx + c = 0$ has real roots	(a) $b^2 - 4ac = 0$
2. No real roots	(b) $b^2 - 4ac < 0$
3. Two real and equal roots	(c) $b^2 - 4ac > 0$
4. Graphically if two lines intersect at one point then pair of linear equations has/have	(d) No solutions
5. If two lines are parallel then pair of linear equation has/have	(e) Many solutions
6. If two lines are coincident then pair of linear equations has/have	(f) Unique solutions
7. $ax^2 + bx + c = 0$ If $a = 0, b, c \neq 0$ $b, c \rightarrow$ Real number	(g) Quadratic equation
8. $ax^2 + bx + c = 0$ If $a \neq 0,\ a,\ b, c \rightarrow$ Real number	(h) Liner equation

(**Answer:-** $\mathbf{1.} \rightarrow (\boldsymbol{c})$ $\mathbf{2.} \rightarrow (\boldsymbol{b})$ $\mathbf{3.} \rightarrow (\boldsymbol{a})$ $\mathbf{4.} \rightarrow (\boldsymbol{f})$ $\mathbf{5.} \rightarrow (\boldsymbol{d})$ $\mathbf{6.} \rightarrow (\boldsymbol{e})$

$\mathbf{7.} \rightarrow (\boldsymbol{h})$ $\mathbf{8.} \rightarrow (\boldsymbol{g})$)

Chapter-5

Q. 4 Match the following:-

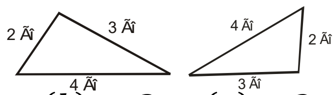
1. $a, a+d, a+2d, a+3d, \cdots\cdots$ (a) sum of the first n terms of an A.P.
2. $S_n = \frac{n}{2}\,[2a + (n-1)d]$ (b) General form of an A.P.
3. $S_n = \frac{n\,(n+1)}{2}$ (c) $a_n = a + (n-1)\,d$
4. n^{th} term of an A.P. (d) sum of first n positive integers
5. For an AP: $2,7,12, \cdots\cdots$ write the next term (e) 12
6. For an AP: $21,18,15, \cdots\cdots$ write the next term (f) 11
7. For an AP:$-5, -1, 3, 7 \cdots\cdots$ write next term (g) 17
8. Is $2, ,4,6, 8, 10 \cdots\cdots$ an A.P.? (h) Not an A.P.
9. Is $1, 4, 8, 13 \cdots\cdots$ an A.P.? (i) An A.P.
10. For an A.P. $3, 1, -1, -3, \cdots\cdots$ first term (j) 4
11. For an A.P. $-5, -1, 3, 7 \cdots\cdots$ common difference (k) 3

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{a})$ $\mathbf{3.} \to (\boldsymbol{d})$ $\mathbf{4.} \to (\boldsymbol{c})$ $\mathbf{5.} \to (\boldsymbol{g})$ $\mathbf{6.} \to (\boldsymbol{e})$

$\mathbf{7.} \to (\boldsymbol{f})$ $\mathbf{8.} \to (\boldsymbol{i})$ $\mathbf{9.} \to (\boldsymbol{h})$ $\mathbf{10.} \to (\boldsymbol{k})$ $\mathbf{11.} \to (\boldsymbol{j})$)

Chapter-6

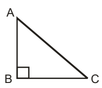
Q. 5 Match the following:-

1. All squaures are .... (a) Equilateral
2. All .... triangles are Similar (b) Similar
3. 

both triangles are............ (c) Congruent

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{a})$ $\mathbf{3.} \to (\boldsymbol{c})$)

Q. 6 Match the following:-

1. In a right triangle $\Delta\, ABC$ 

$AC^2 = AB^2 + BC^2$ (a) $\frac{ar\,(\Delta ABC)}{ar\,(\Delta PQR)} = \left(\frac{AB}{PQ}\right)^2$
2. $\Delta\, ABC \sim \Delta\, PQR$ (b) Pythagoras theorem
3. If Sides of two similar triangles are in the ratio of $4 : 9$ then area of these triangles are in the ratio: (c) $2 : 3$
4. If areas of two similar triangles are in the ratio $4 : 9$ then the sides of these trangles are in ratio: (d) $16 : 81$

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{a})$ $\mathbf{3.} \to (\boldsymbol{d})$ $\mathbf{4.} \to (\boldsymbol{c})$)

Chapter-7

Q. 7 Match the following:-

1.	The distance between the points $P\ (x_1, y_1,)\ and\ Q\ (x_2,\ y_2\ )$ is	(a) $\sqrt{x_1^2 + y_1^2}$
2.	The coodinates of the mid-points $P\ (x_1, y_1,)\ and\ Q\ (x_2,\ y_2\ )$ are	(b) $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
3.	The coordinates of the mid point $(-4\ ,\ 6)\ and\ (8\ ,\ 2)$ are	(c) $(2\ ,\ 4)$
4.	The distance of the point $P\ (x_1, y_1)$ from the origin	(d) $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$
5.	Distance between the points $(0, 0)\ and\ (6, 8)$ is	(e) 10

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{d})$ $\mathbf{3.} \to (\boldsymbol{c})$ $\mathbf{4.} \to (\boldsymbol{a})$ $\mathbf{5.} \to (\boldsymbol{e})$)

Chapter-8, 9

Q. 8 Match the following:-

1.	$\sin 30°$	(a) $\frac{\sqrt{3}}{2}$
2.	$\sin^2 30° + \cos^2 30°$	(b) $\frac{1}{\sqrt{2}}$
3.	$\cos 45°$	(c) 1
4.	$\sin 60°$	(d) $\frac{1}{2}$
5.	$\cos 90°$	(e) 0
6.	$\sec 45°$	(f) $\frac{1}{\sqrt{3}}$
7.	$\tan 30°$	(g) $\sqrt{2}$

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{d})$ $\mathbf{2.} \to (\boldsymbol{c})$ $\mathbf{3.} \to (\boldsymbol{b})$ $\mathbf{4.} \to (\boldsymbol{a})$ $\mathbf{5.} \to (\boldsymbol{e})$ $\mathbf{6.} \to (\boldsymbol{g})$ $\mathbf{7.} \to (\boldsymbol{f})$)

Q. 9 Match the following:-

1.	$\sin^2 \theta + \cos^2 \theta$	(a) $1 + \tan^2 \theta\ ; 0° \leq \theta < 90°$
2.	$\mathrm{cosec}^2\, \theta$	(b) $1 + \cot^2 \theta\ ; 0° \leq \theta < 90°$
3.	$\sec^2 \theta$	(c) 1
4.	$cosec\ A$	(d) $\cos A$
5.	$\sin(90° - A)$	(e) $\frac{1}{\sin A}$
6.	$\tan(90° - A)$	(f) $\frac{1}{\cot A}$
7.	$\tan A$	(g) $\cot A$
8.	$\sin \theta$	(h) $\frac{\text{perpendicular (P)}}{\text{Base (B)}}$

9.	$\tan\theta$	(i)	$\frac{\text{perpendicular (P)}}{\text{Hypotenuse (H)}}$
10.	$\cot\theta$	(j)	$\frac{\text{Hypotenuse (H)}}{\text{perpendicular (P)}}$
11.	$\text{cosec}\,\theta$	(k)	$\frac{\text{Hypotenuse (H)}}{\text{Base (B)}}$
12.	$\sec\theta$	(l)	$\frac{\text{Base (B)}}{\text{perpendicular (P)}}$

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{c})$ $\mathbf{2.} \to (\boldsymbol{b})$ $\mathbf{3.} \to (\boldsymbol{a})$ $\mathbf{4.} \to (\boldsymbol{e})$ $\mathbf{5.} \to (\boldsymbol{d})$ $\mathbf{6.} \to (\boldsymbol{g})$
$\mathbf{7.} \to (\boldsymbol{f})$ $\mathbf{8.} \to (\boldsymbol{i})$ $\mathbf{9.} \to (\boldsymbol{h})$ $\mathbf{10.} \to (\boldsymbol{l})$ $\mathbf{11.} \to (\boldsymbol{j})$ $\mathbf{12.} \to (\boldsymbol{k})$)

Chapter-10

Q. 10 Match the following:-

1.	A circle has ....tangants	(a)	secant
2.	A tangent to a circle touches the circle at ....point	(b)	many
3.	The line which intersects the circle at two points is called..........	(c)	one
4.	A circle can have.............. of parallel tangents.	(d)	Point of contact
5.	The common point of a tangent to the circle and the circle is called..........	(e)	many pairs

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{c})$ $\mathbf{3.} \to (\boldsymbol{a})$ $\mathbf{4.} \to (\boldsymbol{e})$ $\mathbf{5.} \to (\boldsymbol{d})$)

Chapter-12

Q. 11 Match the following:-

1.	Area of the sector	(a)	$2\pi r$
2.	Length of an arc of a sector	(b)	$\frac{\theta}{360°} \times \pi r^2$
3.	Circumference of a circle	(c)	$\frac{\theta}{360°} \times 2\pi r$

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{c})$ $\mathbf{3.} \to (\boldsymbol{a})$

Chapter-13

Q. 12 Match the following:-

1.	Total surface area of a cylinder	(a)	$\pi r^2\, h$
2.	Volume of a cylinder	(b)	$2\,\pi r h + 2\,\pi r^2$
3.	Total surface Area of a cone	(c)	πr^2
4.	Area of a circle	(d)	$\pi r l + \pi r^2$

(**Answer:-** $\mathbf{1.} \to (\boldsymbol{b})$ $\mathbf{2.} \to (\boldsymbol{a})$ $\mathbf{3.} \to (\boldsymbol{d})$ $\mathbf{4.} \to (\boldsymbol{c})$)

Chapter-14

Q. 13 Match the following:-

1.	class mark	(a)	$l + \left(\frac{f_1 - f_0}{2f_1 - f_0 - f_2}\right) \times h$
2.	mode	(b)	$\frac{\text{Upper class limit} + \text{lower class limit}}{2}$
3.	median	(c)	mode + 2 (mean)
4.	3 median	(d)	$l + \frac{\left(\frac{n}{2} - c.f\right)}{f} \times h$
5.	Mean by Direct method	(e)	$\bar{x} = a + \frac{\Sigma f_{id_i}}{\Sigma fi}$
6.	Mean by assumed mean method	(f)	$\bar{x} = \frac{\Sigma f_{ix_i}}{\Sigma f_i}$

(**Answer:-** $\mathbf{1.} \rightarrow (\boldsymbol{b})$ $\mathbf{2.} \rightarrow (\boldsymbol{a})$ $\mathbf{3.} \rightarrow (\boldsymbol{d})$ $\mathbf{4.} \rightarrow (\boldsymbol{c})$ $\mathbf{5.} \rightarrow (\boldsymbol{f})$ $\mathbf{6.} \rightarrow (\boldsymbol{e})$)

Chapter-15

Q. 14 Match the following:-

A card drawn from a well-shuffled deck of 52 cards

1.	Probability of getting a king	(a)	$\frac{13}{52}$
2.	Probability of getting a spade	(b)	$\frac{1}{52}$
3.	Probability of getting the queen of diamond	(c)	$\frac{12}{52}$
4.	Probability of getting a face card	(d)	$\frac{6}{52}$
5.	Probability of getting a red face card	(e)	$\frac{2}{52}$
6.	Probability of getting a king of red colour	(f)	$\frac{4}{52}$

(**Answer:-** $\mathbf{1.} \rightarrow (\boldsymbol{f})$ $\mathbf{2.} \rightarrow (\boldsymbol{a})$ $\mathbf{3.} \rightarrow (\boldsymbol{b})$ $\mathbf{4.} \rightarrow (\boldsymbol{c})$ $\mathbf{5.} \rightarrow (\boldsymbol{d})$ $\mathbf{6.} \rightarrow (\boldsymbol{e})$ $\mathbf{7.} \rightarrow (\boldsymbol{f})$)

Q. 15 Match the following:- **(Mixed Sample Question)**

1.	smallest whole number	(a)	2
2.	smallest natural number	(b)	0
3.	smallest even prime number	(c)	1
4.	sum of three angles of a triangle	(d)	180°
5.	sum of four angles of a quadrilateral	(e)	90°
6.	measure of right angle	(f)	360°

(**Answer:-** $\mathbf{1.} \rightarrow (\boldsymbol{b})$ $\mathbf{2.} \rightarrow (\boldsymbol{c})$ $\mathbf{3.} \rightarrow (\boldsymbol{a})$ $\mathbf{4.} \rightarrow (\boldsymbol{d})$ $\mathbf{5.} \rightarrow (\boldsymbol{f})$ $\mathbf{6.} \rightarrow (\boldsymbol{e})$)

Mark (✓) against correct statement and mark (✗) against wrong (incorrect) statement.

Chapter-1

1. $a = bq + r$ is a part of Euclid's division algorithm. (✓)
2. Euclide's division algorithm is used to compute HCF of two given positive integers. (✓)
3. HCF is the smallest factor of two positive integers. (✗)
4. HCF is the smallest common factor of two integers. (✓)
5. HCF of two consecutive prime numbers is 2. (✗)
6. HCF of two consecutive prime numbers is 1. (✓)
7. HCF of 24 and 4 is 4. (✓)
8. Every composite number can be factorised as product of primes. (✓)
9. HCF of 26 and 91 is 7. (✗)
10. HCF of 26 and 91 is 13. (✓)
11. $\sqrt{5}$ is a rational number. (✗)
12. $3\sqrt{2}$ is a irrational number. (✓)
13. $6 + \sqrt{2}$ is a irrational number. (✓)
14. $3\sqrt{2}$ is a rational number. (✗)
15. L.C.M of two numbers is the smallest common multiple. (✓)

Chapter-2

1. The degree of linear polynomial of one variable is 1. (✓)
2. Number of zeroes of $x^2 + 4x + 9$ is 2. (✓)
3. Degree of polynomial $x^2 + 4x^3 + 6x$ is 2. (✗)
4. The highest power of a variable in the polynomial is called, degee of the polynomial. (✗)
5. $x^2 + 3x + 2$ is a quadratic polynomial. (✓)
6. Number of zeroes of quadratic polynomial is 3. (✗)
7. In the polynomial $x^2 - Sx + P$, S is sum of zeroes. (✓)
8. In the polynomial $x^2 - Sx + P$, P is sum of zeroes. (✗)

Chapter-3

1. Equation $4x + y = 6$ has no solution. (✗)
2. Equation $4x + y = 6$ has many solution. (✓)
3. In equation $2x + y = 3$, If $y = 3$ then $x = 0$ (✓)
4. A pair of linear equations in two variables has one and only one solution. (✗)

5. If graphical representation of a pair of linear equations in two variables are parallel lines then the system has no solution. (✓)
6. If graphical representation of a pair of linear equations in two variables are coincident lines, Then system has no solution. (×)
7. In the pair of linear equations

$$a_1x + b_1y = c_1$$

$$a_2x + b_2y = c_2$$ (✓)

If $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ then system has unique solution.

8. If $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ then system has no solution. (×)
9. If $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ then system has many solution. (×)
10. In equation $4x + y = 0,\ if\ x = 6$ then y = - 4 (×)

Chapter-4

1. A quadratic equation can be used to find the area of a rectangle. (✓)
2. $x + 4 = 0$ is a quadratic equation. (×)
3. $x^3 + 4x + 6 = x(x + 2)$ is not a quadratic equation. (✓)
4. The discriminant of quadratic equation is $D = b^2 - 4ac$ (✓)
5. The formula $x = \frac{-b \pm \sqrt{D}}{2a}$ can be used to find roots of a cubic equations. (×)
6. $4, -3$ are roots of equation $(x - 4)(x + 3) = 0$ (✓)
7. If roots of a quadratic equation are real then $D < 0$ (×)
8. If roots of a quadratic equation are equal then $D > 0$ (×)
9. If $D = 0$ then roots of a quadratic equation are real and equal. (✓)
10. 4 and 3 are roots of the quadratic equation $x^2 - 7x + 12 = 0$. (✓)

Chapter-5

1. 2,3,4,5 .... is not an A.P. (×)
2. Common Difference = $a_2 - a_1$ where a_n is nth term of an A.P. (✓)
3. Common Difference of an A.P: $3, 1, -1, -3, \ldots\ldots$ is -2. (✓)
4. $a_n = a + (n - 1)d$ is used to find the nth term of an A.P. (✓)
5. Common Differance of an A.P. cannot be a negative number. (×)
6. $2, 4, 8, 16, \ldots\ldots\ldots\ldots\ldots$ is not an A.P (✓)
7. 10th term of $2, 7, 12, \ldots\ldots\ldots\ldots$ is 47 (✓)
8. The Difference between 4th and 3rd term is called common difference of an A.P (✓)
9. The Common Difference of an A.P can be negative, positive or zero. (✓)
10. Sum of first n terms of an A.P. is given by the formula

$S_n = \frac{n}{2}\,[2a + (n - 1d]$ (✓)

11. $a_n = a + (n + 1)d$ is used to find the nth term of an A.P. (×)

12. Simple interest $= \frac{P \times R \times T}{100}$ (✓)

13. The sum of first n natural number is given by the formula
$S_n = \frac{n(n+1)}{2}$ (✓)

14. In AP: $4{,}10{,}16{,}22$ .... common difference is 6 and first term is 4. (✓)

Chapter-6

1. Two congruent triangles are of same shape and of equal measurement. (✓)
2. Two congruent triangles are also similar triangles. (✓)
3. Squares of equal sides are congruent. (✓)
4. Corresponding angles of similar triangles are equal. (✓)
5. Corresponding angles of congruent triangles are not equal. (×)
6. Corresponding sides of similar triangles are proportional. (✓)
7. If $\Delta ABC \sim \Delta DEF$ then AB = DE (×)
8. In right angled triangle, the hypotenuse is equal to the sum of squares of other two sides. (✓)
9. Pythagoras theorem is not applicable to obtuse angle triangle. (✓)
10. The perpendicular is the longest side of the right triangle. (×)
11. $7, 24, 25$ is not a pythagorian triplet. (×)
12. Median of a triangle divides the triangle into three triangles of equal area. (×)
13. Median of a triangle divides the triangle into two triangles of equal area. (✓)
14. SAS is not criterion for the congruent triangle. (×)
15. SAS criterion of congruent triangles is also called side-angle-side. (✓)
16. Ratio of area of two similar triangles is equal to the ratio of their corresponding sides. (×)
17. The ratio of the area of two similar triangles is equal to the square of the ratio of their corresponding sides. (✓)

Chapter-7

1. Origin is the intersecting point of x-axis and y-axis. (✓)
2. Point (x,0) lies on y-axis. (×)
3. Point $(2, 0)$ lies on x-axis. (✓)
4. Point $(0, 6)$ lies on y-axis. (✓)
5. Distance of the point (x, y) from the origin is $\sqrt{x^2 + y^2}$ (✓)

6. A graph can be divided into two quadrants. (×)

7. A graph can be divided into four quadrants. (✓)

8. The coordinates of origin are $(0, 0)$. (✓)

9. Abscissa of point $(6, 0)$ in 6. (✓)

10. Ordinate of point $(-7, 4)$ in -7. (×)

11. $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ is called section formula. (×)

12. Sides of a isosceles triangles are of equal length. (✓)

13. No Side of a equilateral triangle is equal. (×)

14. Each angle of a right triangle is of $90°$. (×)

15. Each side of an equilateral triangle is of equal length. (✓)

16. Collinear points lie on the same triangle. (×)

17. Collinear points lie on the same line. (✓)

18. Opposite sides of a parallelogram are not equal. (×)

19. The formula to find the coordinates of mid-point is $(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2})$ (✓)

20. $(\frac{m_1x_2+m_2x_1}{m_1+m_2}, \frac{m_1y_2+m_2y_1}{m_1+m_2})$ is section formula. (✓)

Chapter-8

1. In right angled triangle only one angle is of $90°$ (✓)

2. Measurement of sides of a triangle is called algebra. (×)

3. Trigonometry is called measurement of triangles. (×)

4. The relationship between angles and sides is called Trigonometry. (✓)

5. Trigonometry is not used to measure heights and distances. (×)

6. In right angled triangle, hypotenuse is the longest side. (×)

7. Pythagoras theorem is applied to isosceles triangle. (×)

8. Value of $\sin 0°$ is 0 (✓)

9. Value of $\tan 30°$ is $\sqrt{3}$ (×)

10. $sin(90° - \theta) = tan\theta$ (×)

11. Sum of three angles of a triangle is $180°$. (✓)

12. Value of $\tan A$ is defined for A= 90° (×)

13. $sin(90° - \theta) = cos\theta$ (✓)

14. $sin^2\theta + cos^2\theta = 1$ (✓)

15. $9sec^2A - 9tan^2A = 6$ (×)

16. $1 + tan^2A = sec^2A$ (✓)

17. $\frac{sin16°}{cos74°} = 1$ (✓)

18. $cosec\ A = \frac{1}{sinA}$ (✓)

19. $tanA = \frac{1}{cotA}$ (✓)

Chapter-9

1. The line drawn from the eye of an observer to the location of object is called line of sight. (✓)
2. There is not any difference between angle of elevation and angle of depression. (×)
3. Angle of elevation is above the horizontal level. (✓)
4. Angle of elevation is below the horizontal level. (×)
5. Angle of depression not above the horizontal level. (✓)
6. Angle of depression not below the horizontal level. (×)
7. If in a right triangle length of base and perpendicular is equal then base angle is of $45°$ (✓)
8. The value of $\sqrt{3}$ is 1.41 (×)
9. The value of $\sqrt{2}$ is 1.73 (×)
10. The value of $\sqrt{3}$ is 1.73 (✓)
11. The value of $\sqrt{2}$ is 1.41 (✓)
12. $sin30° = \frac{1}{2}$ (✓)
13. $cos60° = \frac{1}{2}$ (✓)
14. If $tan45° = 1$ then $\cot 45°$ is not defined. (×)
15. $\frac{sin18°}{cos72°} = 2$ (×)
16. The value of $sin^2\theta + cos^2\theta$ is equal to 1 (✓)
17. $sec^2\theta - tan^2\theta$ is equal to 2 (×)
18. $tan\Theta\ \ \theta = \frac{Base}{Hypotenuese}$ (×)

Chapter-10

1. End points of a chord lie on the circle. (✓)
2. There can be only one point common between two circles. (×)
3. The circle and its tangents has two common point. (×)
4. The tangent of circle touches the circle at only one point. (✓)
5. A circle has two tangents. (×)
6. A circle has many tangents. (✓)
7. The diameter of a circle is half of the radius. (×)

8. Concentric circles have common centre. (✓)

9. The radius of the circle is half of the diameter of the circle. (✓)

10. The diameter of the circle is twice the radius of that circle. (✓)

11. The tangent of the circle is perpendicular to radius passing through point of contact. (✓)

12. Angle subtended by the diameter at any point on the circle is of 180^0. (×)

13. Length of tangents drawn from an external point is not equal. (×)

14. Perpendicular drawn from the centre of the circle bisects the chord. (✓)

15. If diameter of circle is 14cm then its radius will be 7cm. (✓)

Chapter-11

1. To find the mid-point of a line, construction can be done with the help of geometrical compass and scale. (✓)

2. A tangent can be drawn to the circle at any point on the circle. (✓)

3. A tangent to the circle can be drawn from a point inside the circle. (×)

4. A tangent subtends an angle of 180° with the radius of the circle. (×)

5. Tangents drawn from the external point to the circle are of equal length. (✓)

6. If scale factor is less than one newly constructed similar triangle will be of small area. (✓)

7. Number of tangents drawn from an external point to the circle is 2. (✓)

8. Centre of the circle is the intersecting point of parallel chords. (×)

9. Centre of the circle is the intersecting point of perpendicular bisectors of non-parallel chords. (✓)

10. A circle can have more than one centre. (×)

Chapter-12

1. Area a circle is $2\pi r$ (×)

2. The radius of circle is twice the diameter. (×)

3. The region bounded between an arc and chord is called segmant. (✓)

4. Sector is a region between radius and chord. (×)

5. Sector is a region between two radii of circle. (✓)

6. The ratio of circumference of the circle to the diameter is called π. (✓)

7. The ratio of circumference of the circle to the radius is called π. (×)

8. To compute the length of boundary of a circular park, formula for circumference of the circle is used. (✓)

9. Area of the minor segment is larger than the area of sector. (×)

10. Area of the major segment is greater then the area of minor segment. (✓)

11. Area of sector of a circle is $\frac{2\pi r\theta}{360^\circ}$, where θ is the angle between two radii. (×)

12. Formula to find the length of an arc of a circle is $\frac{2\pi r\theta}{360^\circ}$, where r is radiues and θ is degree measure of the angle subtended at the centre. (✓)

13. Formula for the circumferene of a circle is $2\pi r$. (✓)

14. Formula for area of a circle is πr^2. (✓)

15. Area of the quadrant of a circle is $\frac{\pi r^2}{4}$. (✓)

16. Area of the sector of a circle is equal to $\frac{\pi r^2 \theta}{360^\circ}$, where as r is radius. (✓)

Chapter-13

1. Formula for finding the volume of a cylinder of radius *r* and height *h*, is $\pi r^2 h$. (✓)
2. The volume of a sphere of radius 3cm is 12π. (×)
3. Volume of a cuboid is a^3. (×)
4. Volume of a cube is $l \times b \times h$. (✓)
5. Area of the roof of cubical room is a^2, where as *a* is the length of the edge of the cube. (✓)
6. Any one part of cone is called frustum. (×)
7. While removing smaller right circular cone from bigger right circular cone, we get a frustum of a cone. (✓)
8. Formula for the volume of cone is $\frac{1}{3}\pi r^2 h$. (✓)
9. Volume of a cuboid is $l \times b \times h$ (✓)
10. Lateral surface area of a cuboid is 2 (l+b) h (✓)
11. If radius of the sphere is 7cm them its curved surface area is 154cm^2 (×)
12. The shape of a cap is of a frustum. (×)
13. To find the volume of a Road Rollar, formula for the volume of cone is used. (×)
14. The shape of the base of a cone is spherical. (×)
15. The shape of the base of cone is circular. (✓)

Chapter-14

1. Numerical representative is measure of central tendency of a data. (×)
2. Mean is not a measure of central tendency. (×)
3. Mean, median and mode are measure of central tendency. (✓)
4. Class mark is difference of upper class limit and lower class limit. (×)
5. Class mark is half of the sum of upper class limit and lower class limit. (✓)

6. Direct method cannot be used for computing mean. (×)

7. Direct method, step-deviation method and Assumed mean method are used to calculate mean. (✓)

8. To compute median, mean and mode continuous of class intervals is necessary. (×)

9. $\bar{x} = \frac{\Sigma f_i x_i}{\Sigma f_i}$ is Direct method to compute mean. (✓)

Chapter-15

1. When a coin is tossed then maximum possible outcomes are 2. (✓)

2. $Probabilty = \frac{Number\ of\ favourable\ outcomes}{Total\ number\ of\ possible\ outcomes}$ (✓)

3. The probability of an impossible event is zero. (✓)

4. When a coin is tossed, probability of getting head and tail is $\frac{1}{3}$. (×)

5. The probalility of a sure event is zero. (×)

6. The probability of sure event is 1. (✓)

7. The probability of every event is negative. (×)

8. Probalilty of an event lies between 0 and 1. (×)

9. The probalilty of an impossible event cannot be calculated. (×)

10. When a die is thrown once, the probability of getting a number greater than 4 is $\frac{2}{6}$. (✓)

11. When a die is thrown, probability of getting a prime number is $\frac{1}{6}$. (×)

12. The probability of an impossible event is 1. (×)

13. $P(E) + P(\bar{E}) = 1$ (✓)

14. When a coin is tossed, probability of getting tail is $\frac{1}{2}$ (✓)

15. It is impossible to find the probability of an absent student in the class. (×)

Multiple choice Questions

Chapter-1

Q 1. Whole number, does not belong to

(a) Natural number (b) Integers
(c) Rational number (d) Real number

Answer:- (a) Natural number

Q 2. Euclid's division algorithm is used to find

(a) H.C.F (b) L.C.F
(c) Addition (d) Multiplication

Answer:- (a) H.C.F

Q 3. Sum of rational and irrational number is

(a) Rational number (b) Irrational number
(c) Whole number (d) Natural number

Answer:- (b) Irrational number

Q 4. Which of the following is a rational number?

(a) $\sqrt{2}$ (b) $\sqrt{3}$

(c) $\sqrt{5}$ (d) 5

Answer:- (d) 5

Q 5. Which is the following is an irrational number?

(a) 2 (b) 3

(c) 5 (d) $\sqrt{5}$

Answer:- (d) $\sqrt{5}$

Q 6. How many factors of a prime number are there ?

(a) Two (b) Three

(c) Four (d) Five

Answer:- (a) Two

Q 7. What is the HCF of 3 and 9 ?

(a) 3 (b) 6

(c) 9 (d) 1

Answer:- (a) 3

Q 8. What is the HCF of 4 and 6 ?

(a) 4 (b) 2

(c) 6 (d) 8

Answer:- (b) 2

Q 9. What is the LCM of 4 and 8 ?

(a) 4 (b) 8

(c) 12 (d) 2

Answer:- (b) 8

Q 10. What is the LCM of 3 and 4 ?

(a) 3 (b) 4

(c) 8 (d) 12

Answer:- (d) 12

Chapter-2

Q 1. What is the degree of linear polynominal ?

(a) 2 (b) 1

(c) 3 (d) 4

Answer:- (b) 1

Q 2. How many zeroes of a quadratic polynomial are there (atmost)?

(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (b) 2

Q 3. What is the degree of a quadratic polynomial ?

(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (b) 2

Q 4. If $\propto$ and β are zeroes of quadratic polyonomial then $\propto + \beta =$

(a) $\frac{c}{a}$ (b) $c + a$

(c) $b + a$ (d) $\frac{-b}{a}$

Answer:- (d) $\frac{-b}{a}$

Q 5. What is the degree of polynomial $P\,(x) = \ 5x^3 + x - 2$

(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (c)

Q 6. In quadratic polynomial $ax^2 + bx + c,\ a$ is not equal to?

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (a) 0

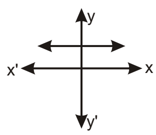
Q 7. $x^3 + 2x^2 + 1$ is an example of which type of polynomial ?

(a) Quadratic polynomial (b) Cubic polynomial

(c) Linear polynomial (d) biquadratic

Answer:- (b) Cubic polynomial

Q 8. What is number of zeroes in the figure?

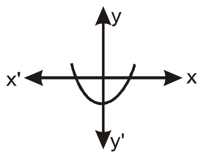


(a) 1 (b) 2

(c) 3 (d) 0

Answer:- (d) 0

Q 9. What is number of zeroes in the figure?



(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (c) 2

Chapter-3

Q 1. If $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ then which of the following will be applicable to the pair of linear equations?

(a) An unique solution (b) No solutions

(c) Infinitely many solution (d) None of these

Answer:- (c) Infinitely many solution

Q 2. If $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ then which of the following will be applicable to the pair of linear equations?

(a) An unique solution (b) No solutions

(c) Infinitely many solution (d) None of these

Answer:- (b) No solutions

Q 3. If $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ then which of the following will be applicable to the pair of linear equations?

(a) An unique solution (b) No solutions

(c) Infinitely many solution (d) None of these

Answer:- (a) An unique solution

Q 4. While solving linear pair of equations graphicaly, if lines intersect at a point then which of the following will be applicable to the pair of linear equations?

(a) One solution (b) No solutions

(c) Many solution (d) Four solutions

Answer:- (a) An unique solution

Q 5. While solving pair of linear equations graphically, if lines are parallel, which of the following will be a applicable?

(a) One solution (b) No solutions

(c) Many solution (d) Four solutions

Answer:- (b) No solutions

Chapter-4

Q 1. Which of the following is not a method of solving a quadratic equation?

(a) Factorisation method (b) completing square method

(c) Discriminat method (d) Addition method

Answer:- (d) Addition method

Q 2. $D = b^2 - 4ac$ is used for calculating?

(a) Discriminat (b) Factorisation

(c) Perfect square (d) Subtraction

Answer:- (a) Discriminat

Q 3. Nature of roots of a quadratic equation is not real if:

(a) $D < 0$ (b) $D > 0$

(c) $D = 0$ (d) $D = 2$

Answer:- (a) $D < 0$

Q 4. Nature of roots of a quadratic equation is real and equal if:

(a) $D < 0$ (b) $D > 0$

(c) $D = 0$ (d) $D = 2$

Answer:- (c) $D = 0$

Q 5. Which of the following is a quadratic equation?

(a) $x^3 - x^2 + 1 = 0$ (b) $x^3 - 5 = 0$

(c) $x^4 - 1 = x^2 + 2$ (d) $x^2 - x + 4 = 0$

Answer:- (d) $x^2 - x + 4 = 0$

Q 6. Which of the following is a quadratic formula?

(a) $-b + 2a$ (b) $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

(c) $\frac{-a \pm \sqrt{b^2 - 4ac}}{2b}$ (d) $-b \times 2a$

Answer:- (b) $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Chapter-5

Q 1. In AP: $2, 4, 6, 8 \ldots \ldots \ldots$, which is the first term?

(a) 2 (b) 4

(c) 6 (d) 8

Answer:- (a) 2

Q 2. In AP: $3, 5, 7, 9 \ldots \ldots \ldots$, what is common difference?

(a) 2 (b) 3

(c) 4 (d) 5

Answer:- (a) 2

Q 3. What is common difference of an AP: $3,3,3,3$..........?

(a) 1 (b) 2

(c) 3 (d) 0

Answer:- (d) 0

Q 4. How many terms are there in AP: $3,5,7,9,11$..........?

(a) 2 (b) 3

(c) 5 (d) 7

Answer:- (c) 5

5. What is the last term of an AP: $4,6,8,10,12$..........?

(a) 4 (b) 8

(c) 1 (d) 12

Answer:- (d) 12

Q 6. Which is the next term of an AP: $10,20,30,40$............?

(a) 10 (b) 20

(c) 50 (d) 55

Answer:- (c) 50

Q 7. Which is the next term of an AP: $5,7,9,11,13$..........?

(a) 5 (b) 13

(c) 11 (d) 9

Answer:- (d) 9

Q 8. If first term of an AP is 2 and common difference is 3 then second term will be:-

(a) 2 (b) 3

(c) 5 (d) 7

Answer:- (c) 5

Q 9. What is the next term of an AP: $5,7,9,11,$ ....?

(a) 5 (b) 9

(c) 13 (d) 15

Answer:- (c) 13

Q 10. Common difference of an AP can be

(a) Positive (b) Negative

(c) Zero (d) All of these

Answer:- (d) All of these

Q 11. What is common difference of an AP: $5,3,1,-1$............?

(a) 4 (b) 0

(c) -2 (d) 1

Answer:- (c) -2

Q 12. In an AP: $3,5,\square, 9,$ .... , find the missing term?

(a) 1 (b) 7

(c) 10 (d) 5

Answer:- (b) 7

Q 13. In an AP: $1,2, 3,4,$ .... , what is the 10th term?

(a) 2 (b) 3

(c) 10 (d) 5

Answer:- (c) 10

Q 14. In an AP, if 2nd term is 6 and common difference is 4, then first term is

(a) 4 (b) 2

(c) 6 (d) 8

Answer:- (b) 2

Q 15. What is called a finite A.P. ?

(a) Which has finite number of terms (b) Infinite terms

(c) equal terms (d) more terms

Answer:- (a) Which has finite number of terms

Chapter-6

Q 1. All equilateral triangles are ....?

(a) Congruent (b) Similar

(c) Equal (d) Corrosponding

Answer:- (b) Similar

Q 2. What does the symbol ≅ represents?

(a) Congruent (b) Similar

(c) Equal to (d) Corrosponding

Answer:- (b) Similar

Q 3. What does the symbol represents?

(a) Congruent (b) Similar

(c) Equal to (d) Corrosponding

Answer:- (a) Congruant

Q 4. All squares are

(a) Congruent (b) Similar

(c) Equal to (d) Corrosponding

Answer:- (b) Similar

Q 5. All circle are

(a) Congruent (b) Similar

(c) Equal to (d) Corrosponding

Answer:- (b) Similar

Q 6. If $\Delta ABC \sim \Delta DEF$ then $\frac{AB}{DE} =$ ....

(a) AB (b) DE

(c) $\frac{BC}{EF}$ (d) $\frac{BC}{AC}$

Answer:- (c) $\frac{BC}{EF}$

Q 7. If $\Delta ABC \cong \Delta DEF$ then $\angle A =$............

(a) $\angle D$ (b) $\angle E$

(c) $\angle F$ (d) $\angle B$

Answer:- (a) $\angle D$

Q 8. How many angles of a right triangle is of 90^0 ?

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (b) 1

Q 9. How many sides of a isosceles triangle are equal?

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (c) 2

Q 10. The side opposite to right angle of a right triangle is called

(a) Base (b) Hypotenuse

(c) perpendicular (d) None of these

Answer:- (b) Hypotenuse

Chapter-7

Q 1. What are the cordinates of origin?

(a) $(0,0)$ (b) $(0,1)$

(c) $(1,0)$ (d) $(1,1)$

Answer:- (a) $(0,0)$

Q 2. On which axis point $(x,0)$ lies?

(a) y-axis (b) x -axis

(c) on none-axis (d) both x -axis and y-axis

Answer:- (b) x -axis

Q 3. On which axis, point $(0,y)$ lies?

(a) y-axis (b) x -axis

(c) on none-axis (d) both x -axis and y-axis

Answer:- (a) y-axis

Q 4. How many quadrants are there in coordinate plane?

(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (d) 4

Q 5. In which quadrant, the point (2,3) lies ?

(a) First (b) Second

(c) Third (d) Fourth

Answer:- (a) First

Q 6. In which quadrant, the point (-2,3) lies ?

(a) First (b) Second

(c) Third (d) Fourth

Answer:- (b) Second

Q 7. In which quadrant, the point (-2,-3) lies ?

(a) First (b) Second

(c) Third (d) Fourth

Answer:- (c) Third

Q 8. In which quadrant, the point (2,-3) lies ?

(a) First (b) Second

(c) Third (d) Fourth

Answer:- (d) Fourth

Q 9. The squares formed by intersection of $x-axis$ and $y-axis$ on the XY plane are called

(a) Quadrants (b) $y-axis$

(c) $x-axis$ (d) Insecting point

Answer:- (a) Quadrants

Q 10. Which axis is called a horizontal line?

(a) $x-axis$ (b) Quadrants

(c) $y-axis$ (d) Intersecting point

Answer:- (a) $x-Axis$

Q 11. What is the formula to find the distance of a point $P(x,y)$ from the origin?

(a) x^2-y^2 (b) x^2+y^2

(c) $\sqrt{x^2+y^2}$ (d) None of these

Answer:- (c) $\sqrt{x^2+y^2}$

Chapter-8

Q 1. To which type of triangle the Trigonometery is applied?

(a) Right Triangle (b) isosceles Triangle

(c) Acute Angled Triangle (d) Obtuse Angled Triangle

Answer:- (a) Right Triangle

Q 2. $\sin\theta$ is equal to?

(a) $\frac{Base}{Hypotenuse}$ (b) $\frac{Perpendicular}{Hypotenuse}$

(c) $\frac{Perpendicular}{Base}$ (d) $\frac{Hypotenuse}{Base}$

Answer:- (b) $\frac{Perpendicular}{Hypotenuse}$

Q 3. $\cos\theta$ is equal to?

(a) $\frac{Base}{Hypotenuse}$ (b) $\frac{Perpendicular}{Hypotenuse}$

(c) $\frac{Perpendicular}{Base}$ (d) $\frac{Hypotenuse}{Base}$

Answer:- (b) $\frac{Perpendicular}{Hypotenuse}$

Q 4. $\tan\theta$ is equal to?

(a) $\frac{Base}{Hypotenuse}$ (b) $\frac{Perpendicular}{Hypotnuse}$

(c) $\frac{Perpendicular}{Base}$ (d) $\frac{Hypotenuse}{Base}$

Answer:- (c) $\frac{Perpendicular}{Base}$

Q 5. $\tan\theta$ =............

(a) $\frac{\sin\theta}{\cos\theta}$ (b) $\frac{\cos\theta}{\sin\theta}$

(c) $\frac{1}{\sin\theta}$ (d) $\frac{1}{\cos\theta}$

Answer:- (a) $\frac{\sin\theta}{\cos\theta}$

Q 6. $\cot\theta$ =..............

(a) $\frac{\sin\theta}{\cos\theta}$ (b) $\frac{1}{\tan\theta}$

(c) $\frac{1}{\sin\theta}$ (d) $\frac{1}{\cos\theta}$

Answer:- (b) $\frac{1}{\tan\theta}$

Q 7. What is the value of $\sin 0^0$?

(a) 0 (b) 1

(c) $\frac{1}{2}$ (d) $\frac{1}{3}$

Answer:- (a) 0

Q 8. What is the value of $\cos 0^0$?

(a) 0 (b) 1

(c) $\frac{1}{2}$ (d) $\frac{1}{3}$

Answer:- (b) 1

Q 9. What is the value of $\tan 0^0$?

(a) 0 (b) 1

(c) $\frac{1}{2}$ (d) $\frac{1}{3}$

Answer:- (a) 0

Q 10. What is the value of $\tan 45^0$?

(a) 0 (b) 1

(c) $\frac{1}{2}$ (d) $\frac{1}{3}$

Answer:- (b) 1

Q 11. $sin^2\theta + cos^2\theta = ?$

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (b) 1

Q 12. $\tan\ (90^0 - \theta) = ?$

(a) $\sin\theta$ (b) $\cos\theta$

(c) $\cot\ \theta$ (d) $\tan\theta$

Answer:- (c) $\cot\ \theta$

Q 13. $\sin\ (90^0 - \theta) = ?$

(a) $\sin\theta$ (b) $\cos\theta$

(c) $\cot\ \theta$ (d) $\tan\theta$

Answer:- (b) $\cos\theta$

Q 14. What is the value of $\sin 30^0$?

(a) 0 (b) 1

(c) $\frac{1}{2}$ (d) $\frac{1}{\sqrt{2}}$

Answer:- (c) $\frac{1}{2}$

Q 15. What is the value of $\cos 60^0$?

(a) 0 (b) 1

(c) $\frac{1}{2}$ (d) $\frac{1}{\sqrt{2}}$

Answer:- (c) $\frac{1}{2}$

Q 16. What is the value of $2\ sin^2\mathrm{A} + 2\ cos^2\mathrm{A}$?

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (c) 2

Q 17. As degree of θ increases, the value of $\sin\theta$ ... ...

(a) Decreses (b) Increases

(c) Remains the same (d) None of these

Answer:- (b) Increases

Q 18. As degree of θ increases, the value of $\cos\theta$ ... ...

(a) Decreses (b) Increases

(c) Remains the same (d) None of these

Answer:- (a) Decreses

Chapter-9

Q 1. The line drawn from eye of the obsever to the location of the object is called

(a) Line of sight (b) Horizontel line

(c) angle of elevation (d) angle of depression

Answer:- (a) Line of sight

Q 2. The angle above the horizontal line is called

(a) angle of elevation (b) angle of depression

(c) Line of sight (d) Right angle

Answer:- (a) angle of elevation

Q 3. Name the angle between line of sight and horizontal line when line of sight is below the horizontal line ?

(a) Acute angle (b) Right angle

(c) angle of depression (d) angle of elevation

Answer:- (c) angle of depression

Chapter-10

Q 1. Circle and sphere are the two names of same shape.

(a) yes (b) No

(c) Two dimensional shapes (d) Three dimensional shape

Answer:- (b) No

Q 2. A Circle is a collaction of all points_______

(a) In a plane (b) On a line

(c) On a ray (d) On a Triangle

Answer:- (a) In a plane

Q 3. How many tangents a circle can have?

(a) 0 (b) 1

(c) Infinite (d) 5

Answer:- (c) Infinite

Q 4. On how many points a tangent may touch the circle?

(a) finite (b) one

(c) two (d) three

Answer:- (b) one

Q 5. What is a line called, intersecting a circle in two points ?

(a) tangent (b) secant

(c) horizontal line (d) lateral line

Answer:- (b) secant

Q 6. How many parallel tangents can be there to a circle?

(a) One (b) Infinite

(c) Three (d) Four

Answer:- (b) Infinite

Q 7. A common point of a circle and its tangent is called...........

(a) Point (b) Perpendicular

(c) Point of contact (d) and point

Answer:- (c) Point of contact

Q 8. How many radii are there in a circle?

(a) No one (b) Three

(c) Two (d) Infinite

Answer:- (d) Infinite

Q 9. How many tangents can be there on a point on a circle?

(a) Infinite (b) one

(c) two (d) three

Answer:- (b) one

Q 10. What is the length of the tangents drawn from an external point to the circle?

(a) equal (b) Not equal

(c) one cm (d) One meter

Answer:- (a) equal

Q 11. How many centre(s) are there of two concentric circles?

(a) only one centre (b) two centre

(c) different centre (d) No centre

Answer:- (a) only one centre

Q 12. A tangent to the circle at the point of contact is .... to the radius.

(a) perpendicular (b) diameter

(c) median (d) mid-point

Answer:- (a) only one centre

Q 13. How many circle can pass through three non collinear points?

(a) One (b) Two

(c) None (d) Infinite

Answer:- (a) one

Q 14. A diameter is.............to the radius.

(a) twice (b) thrice

(c) four times (d) equal

Answer:- (a) twice

Q 15. If radius of a circle is 5cm. then diameter will be

(a) 8 cm (b) 5 cm

(c) 10 cm (d) 12 cm

Answer:- (c) 10 cm

Chapter-12

Q 1. Area of a circle is equal to................

(a) $2\pi r$ (b) $2\pi rh$

(c) πr^2 (d) πrl

Answer:- (c) πr^2

Q 2. The cirumference of circle is ....

(a) πr^2 (b) $2\pi r$

(c) $l \times b$ (d) $2\pi rh$

Answer:- (b) $2\pi r$

Q 3. The perimeter of circle is called ....

(a) Circumference (b) Area

(c) lateral surface area (d) diameter

Answer:- (a) Circumference

Q 4. The ratio of circumference to the diameter of a circle is

(a) $2:3$ (b) π

(c) $2:1$ (d) $1:2$

Answer:-(b) π

Q 5. What is area of sector of a circle?

(a) $\frac{\pi r\theta}{180}$ (b) $\frac{\pi r^2\theta}{360}$

(c) $2\pi r$ (d) πr^2

Answer:- (b) $\frac{\pi r^2\theta}{360}$

Q 6. Formula for the length of an arc of a circle?

(a) $\frac{\pi r^2\theta}{360}$ (b) $2\pi r$

(c) πr^2 (d) $\frac{\pi r\theta}{180}$

Answer:- (d) $\frac{\pi r\theta}{180}$

Q 7. Which of the following is 3D shape ?

(a) circle (b) rectangle

(c) sphere (d) square

Answer:- (c) sphere

Q 8. Which is the longest-chord of a circle?

(a) Raduis (b) diameter

(c) centres (d) tangent

Answer:- (b) daimeter

Q 9. How many chords are there of a circle?

(a) 1 (b) daimeter

(c) centres (d) infinite

Answer:- (d) infinite

Q 10. How many chords are there of a circle?

(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (b) 2

Q 11. Part of a circle bounded by chord and arc of a circle is called

(a) segment (b) sector

(c) diameter (d) centre

Answer:- (a) segment

Q 12. A sector is bounded between

(a) two chord (b) chord and diameter

(c) two diameter (d) two radii

Answer:- (d) two radii

Q 13. The larger segment of a circle is the

(a) major segment (b) minor segment

(c) chord (d) centre

Answer:- (a) major segment

Q 14. What is the alternative name of a chord ?

(a) centre (b) Radius

(c) arc segment (d) line

Answer:- (c) arc segment

Chapter-13

Q 1. Write the formula for volume of a sphere ?

(a) $4\pi r^2$ (b) $2\pi r^2$

(c) $5\pi r^2$ (d) $\frac{4}{3}\pi r^3$

Answer:- (d) $\frac{4}{3}\pi r^3$

Q 2. The volume of an object is:

(a) Area (b) capacity

(c) diameter (d) Height

Answer:- (b) capacity

Q 3. Total surface area of a cuboid is:

(a) $4a^2$ (b) $6a^2$

(c) $2\ (l\ \times b + b \times h + h \times l)$ (d) $(l\ \times b \times h)$

Answer:- (c) $2\ (l\ \times b + b \times h + h \times l)$

Q 4. Write the formula for volume of a cylinder

(a) $\frac{1}{3}\pi r^2 h$ (b) 2π

(c) πr^2 (d) $\pi r^2 h$

Answer:-(d) $\pi r^2 h$

Q 5. Write the formula for curved surface area of a cone

(a) πrl (b) $\frac{1}{3}\pi r^2 h$

(c) $2\pi r$ (d) $\pi r^2 h$

Answer:-(a) πrl

Q 6. Lateral surface area of a cylinder

(a) $\pi r^2 h$ (b) $2\pi rh$

(c) πrl (d) $\frac{1}{3}\pi r^2 h$

Answer:- (b) $2\pi rh$

Q 7. Formula for the volume of a cone

(a) $\pi r^2 h$ (b) $2\pi rh$

(c) πrl (d) $\frac{1}{3}\pi r^2 h$

Answer:- (d) $\frac{1}{3}\pi r^2 h$

Q 8. Lateral surface area of a cube

(a) $l \times b \times h$ (b) $2 \times h \times (l + b)$

(c) $4 \times (side)^2$ (d) $6 \times (side)^2$

Answer:- (c) $4 \times (side)^2$

Q 9. What is the formula for the volume of a cube?

(a) $(Edge)^2$ (b) $(Edge)^3$

(c) $Edge$ (d) None of these

Answer:-(b) $(Edge)^3$

Q 10. How many heights of a cone are there ?

(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (a) 1

Chapter-14

Q 1. In a class-interval the small number in that class internal is called

(a) upper limit (b) lower limit

(c) size of class internal (d) class-mask

Answer:- (b) lower limit

Q 2. In a class-interval, the larger number in class internal is called

(a) lower limit (b) upper limit

(c) mean (d) median

Answer:- (b) upper limit

Q 3. Formula for the mean

(a) $\pi r^2 h$ (b) upper limit - lower limit

(c) $\frac{\Sigma f_i x_i}{\Sigma f_i}$ (d) $\frac{x+1}{2}$

Answer:- (c) $\frac{\Sigma f_i x_i}{\Sigma f_i}$

Q 4. What is the size of class internal ?

(a) upper limit - lower limit (b) upper limit

(c) $\frac{\Sigma f_i x_i}{\Sigma f_i}$ (d) lower limit

Answer:- (a) upper limit - lower limit

Q 5. Formula for mode

(a) $\left(\frac{n+1}{2}\right)^{th}$ term (b) $\frac{\Sigma f_i x_i}{\Sigma f_i}$

(c) $l + \left[\frac{f_1 - f_0}{2f_1 - f_0 - f_2}\right] \times h$ (d) $l + \left(\frac{\frac{n}{2} - c.f}{f}\right) \times h$

Answer:- (c) $l + \left[\frac{f_1 - f_0}{2f_1 - f_0 - f_2}\right] \times h$

Q 6. Formula for median

(a) mean of $\left(\frac{n}{2}\right)^{th}$ and $\left(\frac{n+1}{2}\right)^{th}$ term (b) $\frac{\Sigma f_i x_i}{\Sigma f_i}$

(c) $l + \left[\frac{fi + xi}{2f_1 - f_0 - f_2}\right] \times h$ (d) $l + \left(\frac{\frac{n}{2} - c.f}{f}\right) \times h$

Answer:- (d) $l + \left(\frac{\frac{n}{2} - c.f}{f}\right) \times h$

Q 7. What is mode of $2, 5, 3, 1, 3, 7, 3$?

(a) 1 (b) 2

(c) 3 (d) 4

Answer:-(c) 3

Q 8. What is mean of $2, 3, 4,$?

(a) 2 (b) 3

(c) 4 (d) 1

Answer:-(b) 3

Q 9. What is median of $2, 3, 5, 7, 9$?

(a) 2 (b) 3

(c) 5 (d) 9

Answer:- (c) 5

Q 10. Mode is the number

(a) which occures maximum times (b) which occures minimum times

(c) occurs once (d) none of these

Answer:- which occures maximum times

Q 11. Mode + 2 Median =?

(a) Mode (b) 3 Median

(c) Mean (d) none of these

Answer:- (b) 3 Median

Chapter-15

Q 1. $P(E) + P(not\ E) =$ ……….

(a) 0 (b) 1

(c) 2 (d) 4

Answer:- (b) 1

Q 2. Probability of an event that cannot hapen is

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (a) 0

Q 3. Probabilty of sure event

(a) 0 (b) 1

(c) 2 (d) 3

Answer:- (b) 1

Q 4. The probabilty of an event is greater than or equal ....and less than or equal to.......

(a) $1, 2$ (b) $2, 3$

(c) $0, 1$ (d) $1, 1$

Answer:- (a) $0, 1$

Q 5. When a coin is tossed once, what is the probability of getting a head or a tail

(a) $\frac{1}{1}$ (b) $\frac{2}{3}$

(c) $\frac{0}{1}$ (d) $\frac{1}{2}$

Answer:- (d) $\frac{1}{2}$

Q 6. How many cards are there in a deck of playing card

(a) 13 (b) 26

(c) 52 (d) 39

Answer:- (c) 52

Q 7. No. of cards of black colour in a deck of playing card are

(a) 4 (b) 8

(c) 13 (d) 26

Answer:- (d) 26

Q 8. No. of cards of Red colour in a deck of playing card are

(a) 4 (b) 8

(c) 12 (d) 26

Answer:- (d) 26

Q 9. No. of face cards in a deck of playing card are

(a) 12 (b) 16

(c) 26 (d) 52

Answer:- (a) 12

Q 10. When a die is thrown, probability of getting a composite number is ....

(a) $\frac{2}{3}$ (b) $\frac{1}{3}$

(c) $\frac{1}{2}$ (d) $\frac{1}{6}$

Answer:-(c) $\frac{1}{3}$

Q 11. When two dice are thrown at the same time, what is the probability of getting a doublet

(a) $\frac{1}{2}$ (b) $\frac{1}{3}$

(c) $\frac{1}{6}$ (d) $\frac{1}{12}$

Answer:- (c) $\frac{1}{6}$

Q 12. Digits $1,2,3,4,5,6,7,8,9$ are written on 9 cards. What is probability of getting a odd number when a card is drawn radomly ?

(a) $\frac{4}{9}$ (b) $\frac{5}{9}$

(c) $\frac{1}{9}$ (d) $\frac{2}{3}$

Answer:- (b) $\frac{5}{9}$

Q 13. The coordinates of an origin are

(a) $(1,1)$ (b) $(0,0)$

(c) $(1,0)$ (d) $(0,1)$

Answer:- (b) $(0,0)$

Questions, relating fill in blanks

Chapter-1

Q 1. Euclid's division algorithm is used to find ....of numbers

(a) $L.C.M$ (b) $H.C.F$

(c) Prime factors (d) factorization

Answer:- (b) $H.C.F$

Q 2. The prime factors of 15 are

(a) 3×2 (b) 3×3

(c) 3×5 (d) 3×4

Answer:- (c) 3×5

Q 3. H.C.F of 12 and 15 is

(a) 5 (b) 3

(c) 4 (d) 1

Answer:- (b) 3

Q 4. $\sqrt{5}$ is a/ an .... number.

(a) Irrational number (b) rational number

(c) prime number (d) whole number

Answer:- (a) Irrational number

Q 5. 3 is a/an .... number.

(a) Irrational number (b) perfect square

(c) rational number (d) least prime number

Answer:- (c) rational number

Q 6. Product of two numbers = ...

(a) $HCF \times HCF$ (b) $HCF \times LCM$

(c) $LCM \times LCM$ (d) $HCF \times 1$

Answer:- (b) $HCF \times LCM$

Q 7. Rational form of 0.3 is

(a) $\frac{3}{10}$ (b) $\frac{3}{100}$

(c) $\frac{30}{10}$ (d) $\frac{3}{1000}$

Answer:- (a) $\frac{3}{10}$

Q 8. In a rational number $x = \frac{p}{q}$, in which q is a prime factor in the form of ....then decimal form of x will be terminating

(a) $2^n \, 3^m$ (b) $2^n \, 7^m$

(c) $2^n . 5^m$ (d) $3^m \times 5^n$

Answer:- (c) $2^n . 5^m$

Q 9. The decimal form of a rational number $\frac{17}{8}$ will be

(a) Terminating (b) Non terminating

(c) Not possible (d) Not difined

Answer:- (a) Terminating

Q 10. If $x = \frac{p}{q}$ is a rational number and the prime factorisation of q is not ni the form $2^n . 5^m$, then the decimal expansion of x will be..........repeating

(a) Terminating (b) Non- terminating

(c) Not- defined (d) None of these

Answer:- (b) Non- terminating

Q 11. Number $7 \times 11 \times 13 + 13$ is

(a) composite number (b) prime number

(c) perfect square (d) square number

Answer:- (a) composite number

Chapter-2

Q 12. Which of the following is a quadratic polynomial?

(a) $ax + b, a \neq 0$ (b) $ax^2 + bx + c, a \neq 0$

(c) $ax^3 + bx^2 + cx + d, a \neq 0$ (d) ax

Answer:-(b) $ax^2 + bx + c, a \neq 0$

Q 13. A quadratic polynomial has maximum....zeroes

(a) 2 (b) 1

(c) 3 (d) 4 **Answer:-** (a) 2

Q 14. Sum of the zeroes of a quadratic polynomial $= -\frac{\dots}{a}$

(a) c (b) a

(c) b (d) None of these

Answer:- (c) b

Q 15. The product of zeros of a quadratic polynomial $= \frac{\cdots}{a}$

(a) c (b) a

(c) b (d) 1

Answer:-(a) c

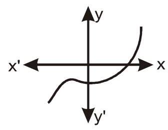
Q 16. In a quadratic polynomial, highest power of the variable is ....

(a) One (b) Two

(c) Three (d) Four

Answer:- (b) Two

Q 17. In the given graph of polynomial $y = p\,(x)$, number of zeros is

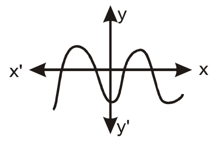


(a) 1 (b) 2

(c) 3 (d) 4

Answer:-(a) 1

Q 18. In the given graph of polynomial $y = p\,(x)$, number of zeros are

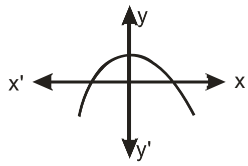


(a) 2 (b) 3

(c) 4 (d) 1

Answer:- (c) 4

19. In the given graph of polynomial $y = p\,(x)$, number of zeros are

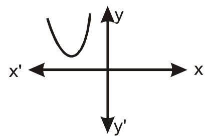


(a) 1 (b) 2

(c) 3 (d) 4

Answer:- (b) 2

Q 20. In the given graph of polynomial $y = p\,(x)$, number of zeros are



(a) 1 (b) 2

(c) 0 (d) 3

Answer:- (c) 0

Q 21. Equation $x\,(2x+3) = x^2 + 1$ is a

(a) linear equation (b) quadratic equation

(c) Cubic equation (d) none of these

Answer:- (b) quadratic equation

Q 22. In quadratic equation $ax^2 + bx + c = 0$, formula for the discriminent $D = b^2$ - ......

(a) $2ac$ (b) $3ac$

(c) $4ac$ (d) ac

Answer:- (c) $4ac$

Q 23. Quadratic equation $ax^2 + bx + c = 0$, has two different- real roots if

(a) $D > 0$ (b) $D < 0$

(c) $D = 0$ (d) $D = 1$

Answer:- (a) $D > 0$

Chapter-3

Q 24. System of equations $a_1 x + b_1 y + c_1 = 0$, $a_2 x + b_2 y + c_2 = 0$ is called

(a) pair of quadratic equation (b) pair of linear equation in two variables

(c) pair of cubic equation (d) pair of equation of four degree

Answer:- (b) pair of linear equation in two variables

Q 25. What does relation $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ of coefficients of linear pair of equations.

$a_1 x + b_1 y + c_1 = 0$, and $a_2 x + b_2 y + c_2 = 0 \; implies$

(a) Intersecting lines (b) parallal lines

(c) co-incident lines (d) none of these

Answer:- (a) Intersecting lines

Q 26. What does relation $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ show for the linear pair

$a_1 x + b_1 y + c = 0, a_2 x + b_2 y + c_2 = 0$, implies

(a) Intersecting lines (b) parallal lines

(c) co-incident lines (d) none of these

Answer:- (b) parallal lines

Q 27. In pair of linear equations the relation $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ between the coefficients $a_1, \; b_1, \; c_1$ and $a_2 , \; b_2, \; c_2$ shows..............

(a) Intersecting lines (b) parallal lines

(c) co-incident lines (d) none of these

Answer:- (a) Intersecting lines

Q 28. If graph of the lines $a_1 x + b_1 y + c_1 = 0$ and $a_2 x + b_2 y + c_2 = 0$ are coincedent then its solutions are

(a) only one solution (b) infinitely many

(c) no solutions (d) two solutions

Answer:- (b) infinitely many

Q 29. The equations $3x - 5y = 20, \; 6x - 10y = 40$ has ....solutions

(a) many solution (b) one solution

(c) no solution (d) only two solution

Answer:- (a) many solution

Q 30. For the equations $x - 3y - 3 = 0, \; 3x - 9y - 2 = 0,$ graph shows

(a) intersecting lines (b) parallal lines

(c) coincedent lines (d) none of these

Answer:- (b) parallal lines

Q 31. For unique solution of linear equations $4x + Py + 8 = 0, \; 2x + 2y + 2 = 0$ we get

(a) $P = 4$ (b) $P \neq 4$

(c) $P = 3$ (d) $P \neq 3$

Answer:- (b) $P \neq 4$

Chapter-4

Q 32. Quadratic equation $ax^2 + bx + c = 0$, has two equal and real roots if

(a) $D > 0$ (b) $D < 0$

(c) $D = 0$ (d) $D = 2$

Answer:- (c) $D = 0$

Q 33. The real roots of quadratic equation are not possible if

(a) $D > 0$ (b) $D < 0$

(c) $D = 0$ (d) None of these

Answer:- (b) $D < 0$

Q 34. To find the roots of the quadratic equation, the quadratic formula is $x = \frac{\_\_\_\_\_\_ \pm \sqrt{b^2 - 4ac}}{2a}$

(a) $-b$ (b) b

(c) a (d) $-a$

Answer:- (a) $-b$

Chapter-5

Q 35. Fomula for the n^{th} term of an AP is $a_n = a + (\dots\dots)d$

(a) n (b) $n - 1$

(c) $n + 1$ (d) n^2

Answer:- (b) $n - 1$

Q 36. Write the missing term of an AP: $18, 13, ----, 3$

(a) 8 (b) -5

(c) 10 (d) 15

Answer:- (a) 8

Q 37. In an AP: 2, 4, 6, 8 ...., the common difference is

(a) 2 (b) 4

(c) -2 (d) 1

Answer:- (a) 2

Q 38. The first term and common difference of an AP:2,7,12 .... are

(a) $2, 5$ (b) $2, 7$

(c) $2, -5$ (d) $-2, -5$

Answer:- (a) $2, 5$

Q 39. The sum of n terms of an AP whose first term is 'a' and common difference is 'd' is $S_n = \frac{n}{2}\,[\cdots\cdots + (n-1)\,d]$

(a) a (b) $3\,a$

(c) $2\,a$ (d) $4\,a$

Answer:- (c) $2\,a$

Q 40. If last term of an AP is l, then sum of its all terms is $S = \frac{n}{2}$ (................)

(a) $a + d$ (b) $a + l$

(c) $a + (n-1)\,l$ (d) $a + nl$

Answer:- (b) $a + l$

Chapter-6

Q 41. All circles are............

(a) Congruent (b) Similar

(c) Equal (d) None of these

Answer:- (b) Similar

Q 42. All squares are............

(a) Congruent (b) Similar

(c) Equal (d) None of these

Answer:- (b) similar

Q 43. All equilateral triangles are............

(a) Congruent | (b) Similar

(c) Equal | (d) Not equal

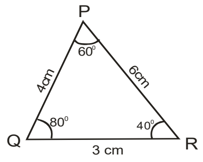
Answer:- (b) Similar

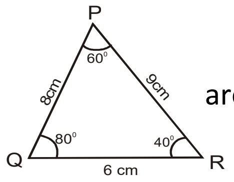
Q 44. The polygons with same number of sides are similar if (1) corresponding angles are..........(2) corresponding sides are..........

(a) Equal, proportional | (b) Proportional, equal

(c) Equal, equal | (d) Proportional, proportional

Answer:-(a) Equal, proportional

Q 45. fig 

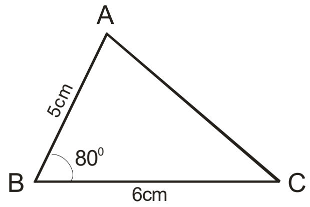


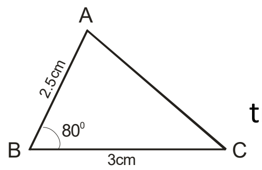
are.....

(a) Congruent | (b) Similar

(c) Equal | (d) None of these

Answer:- (b) Similar

Q 46. 



triangles are

(a) Congruent | (b) Similar

(c) Equal | (d) None of these

Answer:- (b) Similar

Q 47. In a triangle, if square of one side is equal to the sum of the squares of the other two sides, then the angle opposite to first side is

(a) $30°$ | (b) $60°$

(c) $90°$ | (d) $100°$

Answer:- (c) $90°$

Q 48. In a right triangle, the square of the hypotenuse is equal to the sum of squares of other two sides. It is called..........theorem

(a) Pythagoras | (b) Thales

(c) Similarity | (d) Basic proportionality

Answer:- (a) Pythagoras

Q 49. Two figures whose shapes are same but conditionally measurments are not equal, are called........

(a) Congruent | (b) Similar

(c) Equal, | (d) None of these

Answer:- (b) Similar

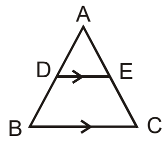
Q 50. If a line is drawn parallal to one side of a triangle to intersect the other two sides in distinct points, other two sides are divided in the same ratio. This theorem is called....

(a) Pythagoras | (b) Thales

(c) Similarity | (d) Non-Basic proportionality theorem

Answer:- (b) Thales

Q 51. In the fig $DE \parallel BC$ *and* $\frac{AD}{DB}$ =............



(a) $\frac{AB}{AC}$ (b) $\frac{DE}{BC}$

(c) $\frac{AE}{EC}$ (d) $\frac{AC}{AE}$

Answer:- (c) $\frac{AE}{EC}$

Chapter-7

Q 52. The co-ordinates of origin are

(a) $(0,0)$ (b) $(0,1)$ (c) $(1,0)$ (d) $(2,0)$

Answer:- (a) $(0,0)$

Q 53. The distance formula for the points $A\ (x_1, y_1)\ and\ B\ (x_2,\ y_2)\ is\ \sqrt{(x_2 - x_1)^2 + (\dots\dots)^2}$

(a) $y_2 - 1$ (b) $y_1 - 1$ (c) $y_2 - y_1$ (d) $y_1 - y_2$

Answer:- (c) $y_2 - y_1$

Q 54. Co-ordinates of a point lying on $x - axis$ are

(a) $(x, 0)$ (b) $(0, x)$ (c) $(0, 0)$ (d) $(0, y)$

Answer:- (a) $(x, 0)$

Q 55. Co-ordinates of a point lying on $y - axis$ are

(a) $(0, y)$ (b) $(y, 0)$ (c) $(0, 0)$ (d) $(x, 0)$

Answer:- (a) $(0, y)$

Q 56. Co-ordinates of mid-point are $\left(\frac{x_1 + \dots\dots}{2}, \frac{y_1 + \dots\dots}{2}\right)$

(a) x_2, y_1 (b) x_2, y_2 (c) $(0, 0)$ (d) $1, 1$

Answer:- (b) x_2, y_2

Q 57. The co-ordinates of a point dividing the line joining the points $A\ (x_1, y_1)\ and\ B(x_2, y_2)$ are $\left(\frac{mx_2 + nx_1}{\dots\dots}, \frac{my_2 + xy_1}{\dots\dots}\right)$

(a) $m - n$ (b) $m + n$ (c) $n - m$ (d) $m^2 - n^2$

Answer:- (b) $m + n$

Q 58. The distance between origin and (x, y) is

(a) $\sqrt{x^2 + 0^2}$ (b) $\sqrt{x^2 + 0^2}$ (c) $\sqrt{x^2 + y^2}$ (d) xy

Answer:- (c) $\sqrt{x^2 + y^2}$

Chapter- H, I

Q 59. $\sin 30^0 =$ ....

(a) $\frac{1}{2}$ (b) $\sqrt{\frac{3}{2}}$ (c) 1 (d) 2

Answer:- (a) $\frac{1}{2}$

Q 60. $\sin 60^0 = \ldots\ldots\ldots\ldots$

(a) $\frac{1}{2}$ (b) $\frac{\sqrt{3}}{2}$ (c) 0 (d) 1

Answer:- (b) $\frac{\sqrt{3}}{2}$

Q 61. $cos\ 60^0 = \ldots\ldots\ldots\ldots$

(a) $\frac{1}{2}$ (b) $\frac{\sqrt{3}}{2}$ (c) 1 (d) 0

Answer:- (a) $\frac{1}{2}$

Q 62. $\cos 30^0 = \ \ldots\ldots\ldots\ldots$

(a) $\frac{1}{2}$ (b) $\frac{\sqrt{3}}{2}$ (c) 1 (d) 2

Answer:- (b) $\frac{\sqrt{3}}{2}$

Q 63. $\tan 30^0 = \ldots\ldots\ldots\ldots$

(a) $\frac{1}{\sqrt{3}}$ (b) $\sqrt{3}$ (c) 1 (d) 3

Answer:- (a) $\frac{1}{\sqrt{3}}$

Q 64. $\tan 60^0 = \ \ldots\ldots\ldots\ldots$

(a) $\frac{1}{\sqrt{3}}$ (b) $\sqrt{3}$ (c) 1 (d) 2

Answer:- $\sqrt{3}$

Q 65. $\sin^2\theta + \cos^2\theta = \ \ldots\ldots\ldots\ldots$

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

Answer:- (c) 1

Q 66. $\operatorname{cosec}^2\theta - \cot^2\theta = \ \ldots\ldots\ldots\ldots$

(a) -1 (b) 1 (c) 0 (d) $\frac{1}{2}$

Answer:- (b) 1

Q 67. $\sec^2\theta - \tan^2\theta = \ \ldots\ldots\ldots\ldots$

(a) 1 (b) -1 (c) 0 (d) $\frac{1}{3}$

Answer:- (a) 1

Q 68. $\sin\theta = \frac{Perpendicular}{}$

(a) $Hypotenuse$ (b) $Base$ (c) $Perpendicular$ (d) 1

Answer:- (a) $Hypotenuse$

Q 69. $\cos\theta = \frac{}{Hypotenuse}$

(a) $Hypotenuse$ (b) $Base$ (c) $Perpendicular$ (d) 1

Answer:- (b) $Base$

Q 70. $\tan\theta = \frac{Perpendicular}{}$

(a) $Hypotenuse$ (b) $Base$ (c) $Perpendicular$ (d) 1

Answer:- (b) $Base$

Q 71. $\sin^2\theta = 1 - \ldots\ldots\ldots\ldots\ldots$

(a) $tan^2\theta$ (b) $sec^2\theta$ (c) $cos^2\theta$ (d) $cot^2\theta$

Answer:- (c) $cos^2\theta$

Q 72. $\sec^2\theta = 1 + \ldots\ldots\ldots\ldots\ldots$

(a) $tan^2\theta$ (b) $sec^2\theta$ (c) $cos^2\theta$ (d) $sin^2\theta$

Answer:- (a) $tan^2\theta$

Q 73. $sin45^0 = \cdots\cdots$

(a) $\frac{1}{\sqrt{2}}$ (b) 1 (c) $\frac{1}{2}$ (d) 2

Answer:- (a) $\frac{1}{\sqrt{2}}$

Q 74. $cos45^0 = \cdots\cdots$

(a) 1 (b) $\frac{1}{\sqrt{2}}$ (c) $\frac{1}{2}$ (d) $\frac{1}{\sqrt{3}}$

Answer:- (b) $\frac{1}{\sqrt{2}}$

Q 75. $tan45^0 = \ldots\ldots\ldots\ldots\ldots$

(a) $\frac{1}{2}$ (b) $\frac{1}{\sqrt{2}}$ (c) 1 (d) $\frac{2}{\sqrt{3}}$

Answer:- (c) 1

Q 76. $(Hypotenuse)^2 = (Base)^2 + (\underline{\hspace{2cm}})^2$

(a) $Base$ (b) $Perpendicular$ (c) $Hypotenuse$ (d) 1

Answer:- (b) $Perpendicular$

Q 77. $\sin(90^0 - \theta) = \ldots\ldots\ldots\ldots\ldots$

(a) $sin\theta$ (b) $cos\theta$ (c) $tan\theta$ (d) $cot\theta$

Answer:- (b) $cos\theta$

Q 78. $cos\ (90^0 - \theta) = \ldots\ldots\ldots\ldots\ldots$

(a) $sin\theta$ (b) $cos\theta$ (c) $tan\theta$ (d) $cot\theta$

Answer:- (a) $sin\theta$

Q 79. $tan\ (90^0 - \theta) = \ldots\ldots\ldots\ldots\ldots$

(a) $sin\theta$ (b) $sec\theta$ (c) $cot\theta$ (d) $cos\theta$

Answer:- (c) $cot\theta$

Q 80. $sec\ (90^0 - \theta) = \ldots\ldots\ldots\ldots\ldots$

(a) $cosec\theta$ (b) $sec\theta$ (c) $cot\theta$ (d) $sin\theta$

Answer:- (a) $cosec\theta$

Q 81. $cosec\ (90^0 - \theta) = \ldots\ldots\ldots\ldots\ldots$

(a) $cosec\theta$ (b) $sec\theta$ (c) $cot\theta$ (d) $sin\theta$

Answer:- (b) $sec\theta$

Q 82. $\frac{sin18^0}{cos72^0} = \ldots\ldots\ldots\ldots\ldots$

(a) 0 (b) 1 (c) 90^0 (d) 2

Answer:- (b) 1

Q 83. $sin18^0 - cos72^0 = \ldots\ldots\ldots\ldots\ldots$

(a) 1 (b) 9 (c) 0 (d) 2

Answer:- (c) 0

Q 84. $9sec^2A - 9tan^2A = \ldots\ldots\ldots\ldots\ldots$

(a) 1 (b) 9 (c) 0 (d) 2

Answer:- (b) 9

Q 85. $\frac{1+tan^2A}{1+cot^2A} = \ldots\ldots\ldots\ldots\ldots$

(a) 1 (b) cot^2A (c) tan^2A (d) sin^2A

Answer:- (c) tan^2A

Q 86. $cosecA = \frac{1}{\dots\dots}$

(a) $sinA$ (b) $cosA$ (c) $tanA$ (d) $cotA$

Answer:- (a) $sinA$

Q 87. $secA = \frac{1}{\dots\dots}$

(a) $sinA$ (b) $cosA$ (c) $tanA$ (d) $cotA$

Answer:- (b) $cosA$

Q 88. $cotA = \frac{1}{\dots\dots}$

(a) $sinA$ (b) $cosA$ (c) $tanA$ (d) $cotA$

Answer:- (c) $tanA$

Chapter- 10

Q 89. Tangent of a circle touches the circle at .... point(s).
(a) 1 (b) 2 (c) 0 (d) 03
Answer:- (a) 1

Q 90. Line intersecting the circle at two points is called................
(a) Tangent (b) Secant (c) Intesecting line (d) Parallel line
Answer:- (b) Secant

Q 91. A circle can have .... number of parallel tangents
(a) 1 (b) 0 (c) Infinite (d) 4
Answer:- (c) Infinite

Q 92. Common point of a circle and a tangent is called.............
(a) Point of contact (b) Secant point
(c) Common point (d) Origin
Answer:- (a) Point of contact

Q 93. The longest chord of a circle is called.............
(a) Radius (b) Diameter
(c) Secant (d) Parallel line
Answer:- (b) Diameter

Q 94. Tangents drawn from an external point to the circle are ....in length
(a) equal (b) parallel
(c) less or more (d) none of these
Answer:- (a) equal

Q 95. .... tangent(s) can be drawn from a point inside of the circle
(a) One (b) Two
(c) None (d) Three
Answer:- (c) None

Q 96. From a point on a circle ....tangent/ tangents can be drawn
(a) Only one (b) Two
(c) None (d) Three
Answer:- (c) None

Q 97. From an external point to the circle, maximum........ tangent/ tangents can be drawn.
(a) Only one (b) Two
(c) None (d) Three
Answer:- (b) Two

Q 98. Tangents makes an angle of...........at the point of contact to the radius.

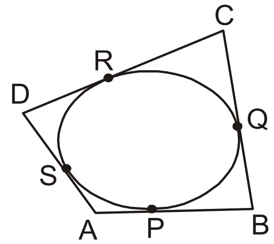
(a) 30^0 (b) 0^0 (c) 90^0 (d) 60^0

Answer:- (c) 90^0

Q 99. In the fig, a quadrilateral is drawn touching a circle externally then $AB + CD =$.............

(a) $AD + BC$ (b) $BC + AB$

(c) $DC + BC$ (d) $AB + BC$



Answer:- (a) $AD + BC$

Q 100. A parallelogram circumseribing the circle is a............

(a) Square (b) Rectangle

(c) Rhombus (d) Trapezium

Answer:- (c) Rhombus

Chapter-12

Q 101. In a circle with radius r and angle of the sector θ, the length of an arc is

(a) $\frac{\theta}{360}\ (\pi r)$ (b) $\frac{\theta}{360}\ (2\pi r)$

(c) $\frac{\theta}{360}\ (\pi r^2)$ (d) $\frac{(2\pi r^2)\,\theta}{360}$

Answer:- (b) $\frac{\theta}{360}\ (2\pi r$

Q 102. In a circle with radius r and angle of the sector θ, the area of the sector is

(a) $\frac{\theta}{720}\ (\pi r^2)$ (b) $\frac{\theta}{360}\ (2\pi r^2)$

(c) $\frac{\theta}{360}\ (\pi r^2)$ (d) $\frac{3\pi r^2\theta}{360}$

Answer:- (c) $\frac{\theta}{360}\ (\pi r^2)$

Q 103. If the circumfrence of a circle and area of the circle are numerically equal, then the radius of the circle is

(a) Two units (b) π units

(c) 4 units (d) 5 units

Answer:- (a) Two units

Q 104. $\pi = \frac{circumference\ of\ circle}{\text{.....................}of\ the\ circle}$

(a) volume (b) diameter

(c) area (d) radius

Answer:- (b) diameter

Q 105. The area of major sector $= \pi r^2 -$ ....

(a) radius (b) diameter

(c) area of minor sector (d) area of minor segment

Answer:- (c) area of minor sector

Q 106. The minute hand of the clock covers an angle of..........in one minute

(a) $5°$ (b) $60°$

(c) $6°$ (d) $50°$

Answer:- (c) $6°$

Q 107. Area of segment = Area of corresponding sector - area of corresponding............

(a) circle (b) triangle

(c) radius (d) diameter

Answer:- (b) triangle

Chapter-13

Q 108. Circumferences of a circle of radius *r* is?

(a) πr^2 (b) $2\pi r$

(c) $4\pi r^2$ (d) $3\pi r$

Answer:- (b) $2\pi r$

Q 109. If *r* is radius and *h* is height of the cylinder then volume of cylinder is

(a) $2\pi rh$ (b) $2\pi r^2 h$

(c) $\pi r^2 h$ (d) $3\pi r^2 h$

Answer:- (c) $\pi r^2 h$

Q 110. If *r* is radius and *h* is height of cone then volume of cone is

(a) πrl (b) $\frac{1}{3}\pi r^2 h$

(c) $\pi r^2 h$ (d) $2\pi r^2 h$

Answer:- (b) $\frac{1}{3}\pi r^2 h$

Q 111. If *r* is radius and *l* is slant height of cone then curved surface area of cone is

(a) πrl (b) $2\pi r^2$

(c) πr^2 (d) $3\pi r^2$

Answer:- (a) πrl

Q 112. If *r* is radius of sphere then its volume is

(a) $4\pi r^2$ (b) $2\pi r^2$

(c) $\frac{4}{3}\pi r^3$ (d) $\frac{2}{3}\pi r^3$

Answer:- (c) $\frac{4}{3}\pi r^3$

Q 113. If *r* is radius of sphere then its surface area is

(a) $4\pi r^2$ (b) $2\pi r^2$

(c) $3\pi r^2$ (d) πr^2

Answer:- (a) $4\pi r^2$

Q 114. If *r* and *h* are radius and height of cylinder then its lateral surface area is

(a) πrl (b) $2\pi rh$

(c) $\pi r^2 h$ (d) $\frac{1}{3}\pi r^2 h$

Answer:- (b) $2\pi rh$

Q 115. Volume of a cuboid is

(a) lbh (b) $2(l+b)\times h$

(c) $2\ (lb+bh+hl)$ (d) $\sqrt{l^2+b^2+h^2}$

Answer:- (a) lbh

Q 116. Lateral surface area of a cuboid is

(a) lbh (b) $2(l+b)\times h$

(c) $2\ (lb+bh+hl)$ (d) $\sqrt{l^2+b^2+h^2}$

Answer:- (b) $2(l+b)\times h$

Q 117. The volume of a cube is

(a) $a\times a\times a$ (b) $4\times a\times a$

(c) $6\times a\times a$ (d) a^2

Answer:- (a) $a\times a\times a$

Q 118. The total surface area of a cube is

(a) $a \times a \times a$ (b) $4 \times a \times a$

(c) $6 \times a \times a$ (d) a^2

Answer:- (c) $6 \times a \times a$

Q 119. The volume of a frustum of cone is

(a) $\frac{1}{3}\pi r_1^2 h$ (b) $\frac{1}{3}\pi r_2^2 h$

(c) $\frac{1}{3}\pi(r_1^2 + r_2^2 + r_1 r_2)h$ (d) $\pi r_1^2 h$

Answer:- (c) $\frac{1}{3}\pi(r_1^2 + r_2^2 + r_1 r_2)h$

Q 120. The curved surface area of a frustum of cone is

(a) $\pi r_1 l$ (b) $\pi r_2 l$

(c) $\pi(r_1 + r_2)l$ (d) $2\pi r_1 l$

Answer:-(c) $\pi(r_1 + r_2)l$

Q 121. Volume of solid made of combination of two solids is equal to the

(a) sum of volumes (b) substraction of volumes

(c) multiplication of volumes (d) division of volumes

Answer:- (a) sum of volumes

Chapter-14

Q 122. 3 Median = ...+ 2 Mean

(a) Medien (b) Mode

(c) Mean (d) Frequency

Answer:- (b) Mode

Q 123. Class mark = $\frac{upper\ class\ limit + lower\ class\ limit}{\boxed{}}$

(a) 1 (b) 2 (c) 3 (d) 4

Answer:- (b) 2

Q 124. Mode = $l + \left(\frac{f_1 - f_o}{2f_1 - f_o - f_2}\right) \times h\ where\ l\ is$ ....

(a) Lower limit of modal class

(b) Upper limit of modal class

(c) Length

(d) Breath

Answer:- (a) Lower limit of modal class

Q 125. Madia $= l + \frac{\frac{n}{2} - c.f}{f} \times h\ where\ c.f =$ ....

(a) Cummulative frequency of class preceding the median class

(b) Frequency of median class

(c) Cummulative frequency of class succeeding the median class

(d) Frequency

Answer:- (a) Cummulative frequency of class preceding the median class

Q 126. Formula for the computation of mean by step deviation method is...........

(a) $\bar{x} = a + \frac{\Sigma f_i u_i}{\Sigma f_i} \times h$ (b) $\bar{x} = a + \frac{\Sigma f_i d_i}{\Sigma f_i}$

(c) $\bar{x} = \frac{\Sigma f_i x_i}{\Sigma f_i}$ (d) $\bar{x} = a\frac{\Sigma f_i d_i}{\Sigma f_i}$

Answer:- (a) $\bar{x} = a + \frac{\Sigma f_i u_i}{\Sigma f_i} \times h$

Chapter-15

Q 127. $P(E) + P(\bar{E}) = \cdots\cdots$

(a) 1 (b) 2 (c) 3 (d) 4

Answer:- (a) 1

Q 128. The Probability of an event is greater than or equal to.......and less than or equal to...........

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

Answer:- (b) 0,1

Q 129. The Probability of an event that is certain to happen is ...... such an event is called ....

(a) 1, sure event (b) 0, impossible event

(c) 0, possible event (d) 1, impossible event

Answer:- (a) 1, sure event

Q 130. Which number cannot be the probability of an event?

(a) $\frac{2}{3}$ (b) 15% (c) -1.5 (d) 0.2

Answer:- (c) -1.5

Q 131. $P(E) = \frac{Number\ of\ outcomes\ favourable\ to\ E}{\boxed{\qquad\qquad}}$

(a) Number of outcomes not favourable to E

(b) Number of all impossible outcomes

(c) Number of outcomes favourable to E

(d) Number of all possible outcomes of E

Answer:- (d) Number of all possible outcomes of E

Q 132. In a deck of 52 cards, number of face cards are.............

(a) 8 (b) 12 (c) 16 (d) 4

Answer:- (b) 12

Q 133. A coin is tossed once, the probability of getting Head is.............

(a) 0 (b) $\frac{1}{2}$ (c) $\frac{1}{3}$ (d) $\frac{1}{4}$

Answer:- (b) $\frac{1}{2}$

Q 134. A die is thrown once, probability of getting 6 is.............

(a) 1 (b) 0 (c) $\frac{1}{6}$ (d) $\frac{1}{5}$

Answer:- (c) $\frac{1}{6}$

Q 135. The sum of the probability of all elementary events of an experiment is............

(a) 0 (b) 2 (c) 1 (d) $\frac{1}{2}$

Answer:- (c) 1

Q 136. If $P(E) = 0.9$ then $P(\bar{E}) = \boxed{\qquad}$

(a) 1 (b) 0 (c) 0.1 (d) 0.9

Answer:- (c) 0.1

Q 137. A box contains 5 red marbles, 8 white marbles and 4 green marbles. What is the probability of a getting red marble if a marble is drawn at random from the box.

(a) $\frac{5}{17}$ (b) $\frac{8}{17}$ (c) $\frac{4}{17}$ (d) $\frac{5}{17}$

Answer:- (a) $\frac{5}{17}$