

Sri Jayabharathi English Medium School, Attibele
Objective Type Questions – Paper 1
Mathematics

Class: 10th std

Marks: 40

- 1] The circumference of a cylinder is 22cm and its height is 10cm, then its CSA is _____
- 2] If two triangles are equiangular, then their corresponding sides are _____
- 3] The value of $\sin 90^\circ - \cos 0^\circ$ is _____
- 4] The formula to calculate the median of grouped data is _____
- 5] If $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$, then the system of linear equation have _____ solution(s).
- 6] The value of 'x' if 4, x, 8 are in AP is _____
- 7] If $\tan \theta = \sqrt{3}$, then the value of θ is _____
- 8] The value of $1 + \tan^2 \theta$ is _____
- 9] The 10th term of an AP 2, 5, 8..... is _____
- 10] The nature of roots of the quadratic equation $2x^2 + 5x - 3 = 0$ is _____
- 11] The pair of equations $2x + 3y = 5$ and $4x + 6y = 15$ forms _____ lines.
- 12] The largest chord drawn in a circle is _____
- 13] The value of $\sin 60^\circ$ is _____
- 14] The formula to find the CSA of a frustum is _____
- 15] The number of tangents that can be drawn to a circle from an external point _____
- 16] The distance of A(5, 12) from the origin is _____
- 17] The mean of the first 10 natural numbers is _____
- 18] If $\sin A = 6/10$, then the value of $\operatorname{cosec} A$ is _____
- 19] If one root of the quadratic equation $x^2 - 7x + k = 0$ is 2, then the value of k is _____
- 20] The common difference in 4, 7, 10..... is _____
- 21] The formula to find the nth term of an AP is _____
- 22] A point on the x axis is represented as _____
- 23] The radius drawn to a circle from the point of contact is _____ to the tangent.

- 24] The distance between (2, 4) and (6, 5) is _____
- 25] The median of first 8 prime numbers is _____
- 26] The roots of the quadratic equation $2x^2 - x - 6 = 0$ are _____
- 27] The lengths of a vertical rod and its shadow are in the ratio $1 : \sqrt{3}$. The angle of elevation of the sun is _____
- 28] If three points are collinear, then the area of triangle joining these points is _____
- 29] The number of all 2 digit numbers divisible by 6 is _____
- 30] The empirical relationship between the three measures of central tendency is _____
- 31] The height of an equilateral triangle having each side 12cm is _____
- 32] The general form of pair of linear equations in two variables is _____
- 33] The product of two consecutive natural numbers is 132, express this statement in equation form.
- 34] If the areas of two similar triangles are 169cm^2 and 121cm^2 respectively.
If one side of the 1st triangle is 5cm, then the corresponding side of 2nd triangle is _____
- 35] The value of $\operatorname{cosec}^2 60^\circ$ is _____
- 36] The nature of roots of the quadratic equation $3x^2 - 2x + 8 = 0$ is _____
- 37] The sum of three numbers in AP is 15, then the middle number is _____
- 38] A line intersecting a circle in two distinct points is called a _____
- 39] The distance of the point (-3, 4) from x-axis is _____
- 40] In ΔABC , $DE \parallel BC$, if $AD = 6\text{cm}$, $BD = 9\text{cm}$, $AE = 8\text{cm}$, then CE is _____

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Objective Type Questions – Paper 2
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- 1] Sides of two similar triangles are in the ratio 4 : 9, then their areas are in ratio ____
- 2] The mean and mode of a data are 24 and 12 respectively, then its median is ____
- 3] The formula to find the volume of a sphere is _____
- 4] If the angle of elevation of a tower from a distance of 100m from its foot is 60° , then the height of the tower is _____
- 5] The value of $\tan^2 60^\circ$ is _____
- 6] The common difference in the AP: 3, 6, 9..... is
- 7] The mode in the given set of frequencies: 3, 5, 2, 7, 3, 8, 1, 3 is _____
- 8] The formula to find the TSA of a cylinder is _____
- 9] The value of $\frac{\cos 42^\circ}{\sin 48^\circ}$ is _____
- 10] The lengths of the two tangents drawn from an external point to a circle are ____
- 11] The number of tangents a circle can have is _____
- 12] In ΔABC , if $DE \parallel BC$ and $AD = 6\text{cm}$, $DB = 9\text{cm}$, $AE = 8\text{cm}$ then AC is ____
- 13] The midpoint of the line joining the points $A(8, 2)$ and $B(4, 4)$ is _____
- 14] If $a_n = 4n - 1$, then the value of a_4 is _____
- 15] The quadratic equation whose roots are 3 and 4 is _____
- 16] The cost of 7 pens and 5 pencils is Rs.52. Express in equation form
- 17] If $\Delta > 0$, then the roots of the quadratic equation are _____
- 18] If $x = 3$, then the value of y in the equation $4x + 3y = 0$ is _____
- 19] The distance between the points $A(4, 8)$ and $B(6, 5)$ is _____
- 20] The value of $\tan 45^\circ - \cot 45^\circ$ is _____
- 21] The discriminant of the quadratic equation $3x^2 - x + 4 = 0$ is ____
- 22] The formula to find the roots of the quadratic equation is _____

- 23] If the radius of a hemisphere is 7cm, then its curved surface area is _____
- 24] If the radius of a circle is 3cm, then the length of tangent when the distance from the external point and the centre is 5cm is _____
- 25] If the height of a cone is 8cm, the radius of its base is 6cm, then slant height is _____
- 26] The degree of a quadratic equation is _____
- 27] The value of x and y in the pair of linear equations $2x - y = 10$ & $x + y = 2$ are _____
- 28] If the equation $x^2 + 4x + k = 0$ has real and equal roots, then the value of k is _____
- 29] The value of 'x' if $x^2 - 143 = 1$ _____ and _____
- 30] If the 6th and 17th terms of AP are 19 and 41 respectively, then the c.d. is _____
- 31] The coordinates of any point on y-axis are of the form _____
- 32] All _____ triangles are similar.
- 33] The angle between tangent at a point on a circle and the radius through the point is _____
- 34] The value of $1 + \cot^2 \theta$ is _____
- 35] The value of $(1 - \cos^2\theta)\operatorname{cosec}^2\theta$ is _____
- 36] If h is the height, l is the slant height and r_1 and r_2 are the radii of the circular bases of a frustum of a cone, then the formula to find slant height (l) is _____
- 37] If the height of a vertical pole is equal to the length of its shadow on the ground, then the angle of elevation of the sun at that time is _____
- 38] The value of $\operatorname{cosec} (90^\circ - \theta)$ is _____
- 39] The formula to find the area of a triangle if three vertices (x_1, y_1) , (x_2, y_2) and (x_3, y_3) are given _____
- 40] The formula to find the sum of first n terms of an AP is _____

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Objective Type Questions – Paper 3
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- 1] A system of two linear equations is said to be inconsistent, if it has ____ solution.
- 2] If the pair of linear equation has unique solution, then the ratio of their co-efficients is _____
- 3] The value of k if the pair of linear equations: $x + 2y = 5$, $3x + ky = -15$ has no solutions.
- 4] The cost of 8 chairs and 5 tables is Rs.10,500. Represent in equation form.
- 5] In ΔABC , $DE \parallel BC$, $AD = 3.6\text{cm}$, $AB = 10\text{cm}$, $AE = 4.5\text{cm}$, then EC is ____
- 6] The areas of two similar triangles are in the ratio 1 : 16, then the ratio of their corresponding sides are _____
- 7] In a right angled triangle, the square of the ____ is equal to the sum of the squares of the other two sides.
- 8] In ΔABC , $\angle B = 90^\circ$, $BD \perp AC$, then $AB^2 =$ _____
- 9] If $\sin A = 8/17$, then the value of $\operatorname{cosec} A$ is _____
- 10] The value of $\sin 32^\circ - \cos 58^\circ$ is _____
- 11] The value of $\tan A \times \cot A$ is _____
- 12] The value of $\cos 45^\circ \times \sec 45^\circ$ is _____
- 13] The value of $9\sec^2\theta - 9\tan^2\theta$ is _____
- 14] The mode of a frequency distribution is obtained graphically from ____
- 15] The modal class in the given set of frequencies is ____
- | | | | | |
|----|--------|---------|---------|---------|
| CI | 0 - 10 | 10 - 20 | 20 - 30 | 30 - 40 |
| F | 3 | 9 | 15 | 5 |
- 16] If $\text{mode} = x(\text{median}) - y(\text{mean})$, then the value of x and y are respectively ____
- 17] The formula to find the roots of the quadratic equation $ax^2 + bx + c = 0$ _____
- 18] The discriminant of $2x^2 + x - 4 = 0$ is _____
- 19] If $b^2 - 4ac < 0$, then the roots are _____
- 20] The quadratic equation whose roots are 5 and -1 is _____
- 21] The common difference of the AP 14, 9, 4..... is _____

- 22] The 12th term of the AP 3, 5, 7.....
- 23] The formula to find the sum of first 'n' odd natural numbers is _____
- 24] If 18, a, (b - 3) are in AP, then the value of (2a - b) is _____
- 25] The next term of the AP $\sqrt{7}$, $\sqrt{28}$, $\sqrt{63}$ is _____
- 26] If PA and PB are two tangents to a circle with centre O such that $\angle AOB = 110^\circ$ then $\angle APB =$ _____
- 27] A line which intersects a circle in two points is called _____
- 28] In a circle of radius 5cm, if two tangents drawn to it from an external point are perpendicular to each other, then the length of the tangent is _____
- 29] A parallelogram circumscribing a circle is a _____
- 30] The shadow of a 5m long stick is 2m, at the same time the length of the shadow of a 12.5m high tree is _____
- 31] If the length of the shadow of a tower is $\sqrt{3}$ times the length of its shadow on the ground, then the angle of elevation of the sun at that time is _____
- 32] The distance of the point P(6, 8) from the origin is _____
- 33] The midpoint of the line joining the points A(5, 3) and B(3, 7) is _____
- 34] The formula to find the distance between two points is _____
- 35] The area of the triangle with vertices (0, 4), (0, 0) and (3, 0) is _____
- 36] The formula to find the volume of the cylinder is _____
- 37] If the area of the circular base of a hemisphere is 20cm^2 , then its TSA is _____
- 38] If the radii and the height of a cone and cylinder are same and the volume of cone is 100c.c. , then the volume of the cylinder is _____
- 39] The radius of the base of a cone is 5cm and its height is 12cm, then its curved surface area is _____ (express in terms of π)
- 40] A funnel is the combination of _____