SECTION B

Q31.Find HCF and LCM of numbers 6 and 20 by prime method.

Q. Find the HCF and LCM of 96 and 404 by prime factorisation method.

Q. If HCF(306,657)=9 then find the LCM(306,657).

Q. Using prime factorization, find the HCF of 12,15 and 20.

Q32. Find the zeros of the quadratic equations $x^2-7x+12=0$.

Q. Find the roots of the quadratic equations

$\sqrt{2}x^2+7x+5\sqrt{2}=0$.

Q. Find the value of k of quadratic equation having equal roots $kx(x-2)+6=0$.

Q. Find the nature of the roots of quadratic equation $2x^2-6x+3=0$

Q. If x=3 is one root o=f the quadratic equation x^2-2kx-6=0,then find the value of k.

Q33.The length of the shadow of a pillar is √3 times the height of the pillar. Find the angle of elevation of the Sun.

Q. From a point on the ground, which is 30m away from the foot of a tower, the angle of elevation of the top of the tower is 30° , find the height of the tower.

Q. A circus artist is climbing a 20m rope,which is tightly stretched and tied from the top of a vertical pole to the ground .Find the height of the pole, if the angle made by the rope with the ground level is 30^{0}.

Q34. If the first term of AP is 2 and common difference is 3 then find the 8th term.

Q. The 17th term of an A.P. exceeds its 10th term by 7. Find the common difference.

Q. Find the 30^{th} term of an AP :10, 7, 4,..... .

Q. How many multiplies of 4 lie between 10 and 250.

Q. Find the 11^{th} term of an AP: -3, -1/2, 2…. .

Q35.A square is made by bending a circular wire of radius 28cm. Find the length of the side of the square.

Q.If the perimeter and area of a circle are numerically equal, then the find radius of that circle .

Q. Find the area of a quadrant of a circle whose circumference is 22 cm.

Q. The length of tangent from a point A at distance 5 cm from the centre of the circle is 4 cm. Find the radius of the circle.

Q36. If R(5, 6) is the mid-point of the line segment AB joining the points A(6, 5) and B(4, y), then find the value of y.

Q. Find the coordinates of the mid-point of the line segment joining the points (2,5) and (4,7) .

Q. Find the ratio in which line segment joining A(1,-5) and B (-4,5) is divided by x-axis.

Q.Find the distance between two points (-5, 7) and (-1, 3).

Q.Find the co-ordinates of the point which divides the join of (-1,7) and (4,-3) in the ratio 2:3 .

Q37. If the height of the lights is 60° and the length of the shadow formed by them is 20m, then what will be the height of the pillar?

Q.If the length of the diagonal of a cube is 6√3 cm, then what will be the area of its entire surface?

Q. What is the length of the largest bamboo that can be placed in a room 12 m long, 9 m wide and 8 m high?

Q. Find the curved surface area of a hemisphere of radius 14 cm .

Q. Find volume of a right circular cylinder having radius 7cm and height 5cm .