CHOITHRAM SCHOOL MANIKBAGH INDORE
CLASS X Session: 2018-19

SUBJECT: MATHEMATICS ASSIGNMENT No: 1
Assignment date: 25/04/18 Submission date: 15/06/18

Q. No	Question	Marks	Level
	VERY SHORT ANWSER TYPE		
1.	Find a polynomial with the sum, sum of the product of its zeros taken two at a time, and product its zeros as 3, -1 and 3 respectively.	1	Knowledge
2.	Find a quadratic polynomial whose zeros are $5+\sqrt{2}$ and $5-\sqrt{2}$	1	Knowledge
3	Sum and product of zeros of quadratic polynomial are 5 and 17 respectively. Find the polynomial.	1	Knowledge
	SHORT ANWSER TYPE I		
4	Find the zeros of the quadratic polynomial $f(x) = x^2 - 2x - 8$ and verify the relationship between the zeros and their coefficients	2	Logic
5	In a cyclic quadrilateral ABCD, $\angle A = (2x + 11)°$, $\angle B = (y + 12)°$, $\angle C = (3y + 6)°$ and $\angle D = (5x - 25)°$, find the angles of the quadrilateral.	2	Multi conceptual
6	If $x = \frac{4}{3}$ is a root of the polynomial $f(x) = 6x^3 - 11x^2 + kx - 20$ then find the value of k.	2	Knowledge
7	Determine the value of k so that the following linear equations have no solution. $(3x + 1)x + 3y - 2 = 0$ $(k^2 + 1)x + (k - 2)y - 5 = 0$	2	H.O.T
	SHORT ANWSER TYPE II		
8	Solve each of the following pair of simultaneous equations. a) $0.2x + 0.3y = 0.11 = 0$, $0.7x - 0.5y + 0.08 = 0$ b) $3\sqrt{2}x - 5\sqrt{3}y + \sqrt{5} = 0$ $2\sqrt{3}x + 7\sqrt{2}y - 2\sqrt{5} = 0$	3	Understanding
9	A boat goes 12 km upstream and 40 km downstream in 8 hrs. It can go 16 km. upstream and 32 km downstream in the same time. Find the speed of the boat it still water and the speed of the stream.	3	H.O.T
10	Solve the following system of linear equations graphically : $x - y = 1$, $2x + y = 8$. Shade the area bounded by these two lines and y-axis. Also, determine this area.	3	Understanding
	LONG ANSWER TYPE		
11	Find all the zeros of the polynomial $f(x) = 2x^4 - 2x^3 - 7x^2 + 3x + 6$, if two of its zeros are $-\sqrt{\frac{3}{2}}$ and $\sqrt{\frac{3}{2}}$.	5	Logic
12	Points A and B are 90 km apart from each other on a highway. A car starts from A and another from B at the same time. If they go in the same direction, they meet in 9 hrs and if they go in opposite direction, they meet in $\frac{9}{7}$ hrs. Find their speeds.	5	Multi Conceptual