CHOITHRAM SCHOOL MANIKBAGH INDORE
CLASS X Session : 2017-18

SUBJECT: MATHS   ASSIGNMENT No: 1

Allotment Date: 21/07/17   Submission Date: 26/07/17

Q.no	Question	Marks	Levels
1.	If n^2-1 is divisible by 8, then what is n?	1	Knowledge
2.	The product of three consecutive positive integers is divisible by 6.Is this statement true or false? Justify your answer.	1	Knowledge
3	If one zero of the polynomial $(a^2+x)x^2+13x+6a$ is reciprocal of the other ,then find the value of a.	1	Knowledge
	SHORT ANWSERS		
4	A and B each have a certain number of mangoes .A says to B ,if you give 30 of your mangoes ,I will have twice as many as left with you. B replies, if you give me 10, Iwill have thrice as many as left with you .How many mangoes does each have.	2	Logic
5	Find the values of k for which the system of equations Kx- y=2;6x-2y=3 has (i) a unique solution (ii) no solution	2	Multi conceptual
6	Find the greatest number which on dividing 1657 and 2037 leaves remainder 6 and 5,respectively	2	Knowledge
7	If α and β are the zeroes of the quadratic polynomial $f(x) = x^2-2x + 1$, then find a quadratic polynomial whose zeroes are $\frac{2\alpha}{\beta}$ and $\frac{2\beta}{\alpha}$	2	Hots
8	A vessel contains a mixture of 24L milk and 6L water and second vessel contains a mixture of 15L and 10L water. How much mixture of milk and water should be taken from the first and the second vessel separately and kept in a third vessel so that the third vessel may contain a mixture of 25L milk and 10L water	3	Understanding
9	There is a rectangular park around a public school. Ram takes 24 min to drive one round of the public school, while Priyanka takes 18min to drive one round of the public school .Suppose; they both start at the same time and go in the same direction. (i) After how many minutes will they meet again at the starting point? (ii) What are the advantages of walking in a park?	3	Value base
10	Find the zeroes of the following quadratic polynomials $F(x) = x-(\sqrt{2}+1) x+\sqrt{2}$, verify the relationship between the zeroes and their coefficients.	3	Understanding
	LONG ANSWERS		
11	X takes 3h more than Y to walk 30 km.But if X doubles his pace, he is ahead of Y by $1\frac{1}{2}$ an hour .Find their speed of walking	5	Logic
12	Graphically solve the following pair of equations 2x+y=6 and 2x-y+2=0. Find the areas of the two triangles formed by the lines representing these equations with the X- axis and Y-axis	5	Multi Conceptual