	BCM SCHOOL BASANT AVENUE DUGRI ROAD LUDHIANA	
	ASSIGNMENT (RELATION AND FUNCTIONS)	
	CLASS XII SC	
1	For real numbers x and y, define x R y iff x-y+ $\sqrt{2}$ is an irrational number. Then the relation R is	1
	(a) reflexive (b) symmetric (c) transitive (d) none of these	
2	If A = {a, b, c} and B = {-3, -1, 0, 1, 3}, then the number of injections that can be defined from A to B is	1
	(a) 125 (b) 243 (c) 60 (d) 120	
3	Show that the relation R in the set of all books in a library of a collage given by $R = \{(x, y) : x \text{ and } y \text{ have same no of pages}\}$, is an equivalence relation.	2
4	Show that the relation R defined by (a, b) R (c, d) \Rightarrow a + b = b + c on the set N × N is an equivalence relation.	2
5	Show that if $f: R - \{\frac{7}{5}\} \rightarrow R - \{\frac{3}{5}\}$ is defining by $f(x) = \frac{3x+4}{5x-7}$ and	2
	g: $R - \{\frac{3}{5}\} \rightarrow R - \{\frac{7}{5}\}$ is define by $g(x) = \frac{7x+4}{5x-3}$ then fog = IA and gof	
	= IB when A= $R - \{\frac{3}{5}\}$ B= $R - \{\frac{7}{5}\}$; IA (x) = x, for all $x \in A$, IB(x) =	
	x, for all $x \in B$ are called identify function on set A and B respectively.	
6	Show that the function f : R \rightarrow R defined by $f(x) = \frac{x}{1+x^2}$, x \in R, is	3
	neither one-one nor onto.	
7	Show that the function $f: R \rightarrow \{x \in R : -1 < x < 1\}$ defined	4
	by. $f(x) = \frac{x}{1+ x }$, $x \in R$ is one-one and onto function.	