1. If the sets *A* and *B* are defined as



, then

(a)  (b) 

(c)  (d) None of these

1. Let and  then 
2. 400 `(b) 600
3. (c) 300 (d) 200
4. If  then the set  is

(a) 21 *N*  (b) 10 *N*

(c) 4 *N* (d) None

1. A survey shows that 63% of the Americans like cheese whereas 76% like apples. If *x*% of the Americans like both cheese and apples, then

(a)  (b) 

(c)  (d) None

1. Let . Then *P* is

(a) Reflexive (b) Symmetric

(c) Transitive (d) Anti-symmetric

1. Let *R* = {(1, 3), (4, 2), (2, 4), (2, 3), (3, 1)} be a relation on the set *A* = {1, 2, 3, 4}. The relation *R* is

(a) Reflexive (b) Transitive

(c)Not symmetric (d) A function

1. If *A* is the set of even natural numbers less than 8 and *B* is the set of prime numbers less than 7, then the number of relations from *A* to *B* is

(a)  (b) 

(c)  (d) 

1. If 

And *B* =, then  contains

(a) One point (b) Three points

(c) Two points (d) Four points

1. Let *R* be the relation on the set *R* of all real numbers defined by *a R b* iff . Then *R* is

(a) Reflexive and Symmetric (b) Symmetric only

(c) Transitive only (d) Anti-symmetric only

1. If *R* be a relation < from *A* = {1,2, 3, 4} to *B* = {1, 3, 5} *i.e.,*  then  is

(a) {(1, 3), (1, 5), (2, 3), (2, 5), (3, 5), (4, 5)}

(b) {(3, 1) (5, 1), (3, 2), (5, 2), (5, 3), (5, 4)}

(c) {(3, 3), (3, 5), (5, 3), (5, 5)}

(d) {(3, 3) (3, 4), (4, 5)}

1. The value of *b* and *c* for which the identity  is satisfied, where , are

(a)  (b) 

(c)  (d) 

1. Given the function. Then 

(a)  (b) 

(c)  (d) None of these

1. If , then  is equal to

(a) *xy* (b) 

(c)  (d) 

1. If  and then *f* is
2. (a) One-one and onto (b) One-one but not onto

(c) Onto but not one-one (d) None

1. The domain of the function  is

(a) [1, 4] (b) [–4, 1]

(c) [–1, 4] (d) None of these

1. Domain of the function  is

(a) 

(b) 

(c) 

(d) 

1. If the function  is defined by  then (*x*) is

(a)  (b) 

(c)  (d) Not defined

1. If *f* be the greatest integer function and *g* be the modulus function, then 

(a) 1 (b) –1

(c) 2 (d) 4

1. If where and *n* is a positive integer, then 
2. (a)  (b) 

(c)  (d) None of these

1. Let , be a function defined by  then *f* is both one- one and onto when *B* is the interval

(a)  (b) 

(c)  (d) 

1. If  then  is

(a) Even function

(b) An odd function

(c) Neither even nor odd

(d) None of these

1. If , for what value of  is 

(a)  (b) 

(c) 1 (d) 2

1. If  for , then  is
2. (a)  (b) 

(c)  (d) 

1. Range of the function is

(a) (–1, 0) (b) (–1, 1)

(c) [0, 1) (d) (1, 1)

1. The function *f* satisfies the functional equation  for all real . The value of  is

(a) 8 (b) 4

(c) –8 (d) 11

1. If , then *y* =

(a)  (b) 

(c)  (d) 

1. Let  be defined by  then  equals

(a)  (b) 

(c)  (d) 

1. If , then  is equal to

(a)  (b) 

(c)  (d) 

1. Number of Binary Operations on a set {1,2,3} is

(a) 19673 (b) 19683

(c) 81 (d) 27

1. If a Binary Operation ‘\*’ defined on the set R of real numbers by a\*b=L.C.M{ a, b}, then find the value of 3\*(4\*6)=

(a) 3 (b) 4

(c) 6 (d) 12