United College of Engineering and Research, Prayagraj
Department of Computer Science

B.Tech(2020-21)
Discrete Structures and Theory of Logic(KCS 303)
Assignment-1

QNo.	Question	CO Type	Bloom's level
1	Show that the relation R on the set Z of integers given by R = {(a,b): 3 divides (a-b)}, is an equivalence relation.	CO1	L3
2	Let R be a relation on the set of natural numbers N, as R = {(x,y) ! x,y ∈ N, 3x+y = 19}. Find the domain and range of R. Verify whether R is reflexive.	CO1	L2
3	Prove that $\frac{1}{1.2} + \frac{1}{2.3} + \frac{1}{3.4} + \ldots\ldots\ldots\ldots\ldots\ldots + \frac{1}{n.(n+1)} = \frac{n}{(n+1)}$	CO1	L4
4	If set A has 3 elements then find the number of symmetric relations defined on set A.	CO1	L3
5	If f : A → B is one-one onto mapping, then prove that f^{-1}: B → A will be also one-one onto mapping.	CO1	L4

Bloom's Taxonomy levels (1- Remembering, 2- Understanding, 3- Applying, 4- Analyzing, 5- Evaluating, 6- Creating)

CO - Course Outcome