COURSE HANDOUT

Course Code	ACSC13
Course Name	Design and Analysis of Algorithms
Class / Semester	IV SEM
Section	A-SECTION
Name of the Department	CSE-CYBER SECURITY
Employee ID	IARE11023
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Topic Covered	Algorithm Properties
Course Outcome/s	Understand the characteristics of an algorithm
Handout Number	4
Date	24 March, 2023

Content about topic covered: Algorithm Properties

Characteristics or Properties of Algorithm

The following five properties (or characteristics) must be satisfied by an algorithm and which are as follows:

1. Input :
An algorithm consists of zero or more number of inputs and which input values are received by externally.

2. Output:
An algorithm produces or displays one or more number of output values.

3. Definiteness:
Every step must be specific, which means that it must be absolutely clear
Examples of definiteness and not definiteness
i. 5/0 is not clear- not definiteness.
ii. add 2 to x is not clear - not definiteness.
iii. 44/22 - is a clear statement - definiteness.
iv. add 45 to 70 - is a clear statement - definiteness.

4. Finiteness:
An algorithm must be terminated after the finite number of steps.

5. Effectiveness:
An algorithm's every step should be possible. In other words, the algorithm's steps must all be completed smoothly.