**Assignment 01**

**Total Marks:20 Cyber Security**

**Directions:**

● Students will work together in a group of **four** or less members, to explore a topic of “Cyber Security” and the group is required to perform the following tasks.

**Task 01 Marks (05)**

o Select research papers based on the selected topics.

▪ Research papers (Publication date of research paper should be 2018 to onwards).

**Task 02 Marks (15)**

o Prepare a presentation on the research topic (Min slides 30 )

o The presentation should focus on the topic. While the

presentation involves collaborative analysis of the topic.

o Presenters will use visual aids (PowerPoint, film clips, images, and handouts) to structure their remarks and highlight key points.

o Proper referencing is required.

Check List:

Groups are required to submit following items.

i. Selected Research Papers

ii. Presentation (PowerPoint)

***Note:*** *The assignment contents should be logically, systematically, and succinctly structured to create a cohesive and coherent work, using formal academic language and should adhere to grammatical conventions.*

*Each group is required to select a unique topic within the class.*

**Topics**

• Cryptographic Protocols

• SQL Injection

• Penetration Testing

• Cryptography and Coding

• Untraceability

• Privacy and Authentication

• Key Management

• Trust Management

• Quantum Cryptography

• Computational Intelligence in Security

• Artificial Immune Systems

• Biological and Evolutionary Computation

• Intelligent Agents and Systems

• Reinforcement and Unsupervised Learning

• Autonomy-Oriented Computing

• Co-evolutionary Algorithms

• Fuzzy Systems

• Biometric Security

• Trust Models and Metrics

• Regulation and Trust Mechanisms

• Data Integrity

• Models for Authentication, Trust and

Authorization

• Wireless Network Security

• Information Hiding

• Data and System Integrity

• Access Control and Intrusion Detection

• Intrusion Detection and Vulnerability Assessment • Authentication and Non-repudiation

• Identification and Authentication

• Insider Threats and Countermeasures

• Intrusion Detection & Prevention

• Secure Cloud Computing

• Security Information Systems Architecture and Design and • Security Patterns

• Security Management

• Security Requirements (Threats, Vulnerabilities, Risk, Formal Methods, etc.) • Sensor and Mobile Ad Hoc Network Security

• Service, Systems Design and QoS Network Security

• Software Security

• Security and Privacy in Mobile Systems

• Security and Privacy in Pervasive/Ubiquitous Computing

• Security and Privacy in Web Services

• Security and Privacy Policies

• Security Area Control

• Security Deployment

• Security Engineering

• Security for Grid Computing

• Security in Distributed Systems