

PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING

Midterm Examination: 1

Academic Year: 2004

Date: 5/8/04

Time: 09.00 – 12.00

Subject Number: 240-425

Room: หัวหิน

Subject Title: Computer Security

ไม้อ่อนญาติ เอกสารทุกชนิด

240-425

1.Explain the differences between I-Security and E-Security for Thailand.
What are advantages of I-Security and applications for Thailand?.(17 marks)

2.For Space Based I-Security systems: (17 marks)

2.1 Why a Space Based I-Security system is a “Global” instead of a “local” system.?

2.2. Explain innovative application areas of Space Based I-Security systems: .

2.2.1.High Resolution Remote sensing [up to a ground resolution of 60 centimeter pixel is nowadays available commercially].

2.2.2.GPS (Global Positioning System) an accuracy of less than 1 meter.

2.2.3.Telecommunication satellites.(example iP star)

2.2.4.A combination of all the three application areas can be integrated and work in integrated fashion.

3.Thailand is now considering a purchase of a military remote sensing satellite for national security applications, for examples, border control, anti-drug monitoring , surveillance and mapping etc.

Explain the four segments of a military remote sensing satellite , namely; space segment, launch segment , ground segment and applications segment. (17 marks)

4.Computer Security Problems (17 marks)

4.1 Explain Vulnerabilities ,and Threats to information Security in Computer Systems

4.2 Explain Four broad areas of Computer Misuse.

-Theft of Computational Resources

-Disruption of Computational Services

-Unauthorized Disclosure of information in a computer

-Unauthorized modification of information in a computer

5. Explain the following: (16 marks)

5.1 Explain characteristics of 4 types of Trojan horses

-Virus,

-time bombs,

-logic bombs,

- worms.

5.2.Explain Six Class of information oriented Misuses

- Human error
- User abuse of authority
- Direct Probing
- Probing with malicious Software
- Direct Penetration
- Subversion of Security Mechanism

6.Explain a proposed I-Security Infrastructure for the “Five Southern Border Provinces” of Thailand (Songkhla, Pattani, Yala, Narathiwat and Satun) (16 marks)