

FACULTY OF INFORMATICS

B.E. 4/4 (IT) I – Semester (Suppl) Examination, June 2013

Subject : Information Security (Elective - III)

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.**PART – A (25 Marks)**

1. How do worms differ from viruses? (2)
2. Differentiate between subject of attack and object of attack. (3)
3. What is a risk and how is it identified? (3)
4. State the impact of cultural differences in ethics of information security. (2)
5. Define SPP. (2)
6. Outline the purpose of vulnerability scanners. (3)
7. Differentiate between DES and AES. (3)
8. Write about transposition ciphers. (2)
9. Comment on the need for digital signatures. (2)
10. List the services provided by SSL. (3)

PART – B (50 Marks)

- 11.a) Discuss about the security systems development life cycle. (6)
- b) Outline any four threat groups. (4)
12. Explain how risk should be controlled. (10)
- 13.a) What is the typical relationship between the untrusted network, the firewall and the trusted network. (4)
- b) Write about the evolution of firewalls. (6)
14. With necessary diagrams explain AES encryption and decryption. (10)
15. Briefly explain the process of generating a 160-bit message digest using SHA-1 algorithm. (10)
16. Summarize (10)
 - a) Ethical issues involved in the formulation of information security procedures in an organization.
 - b) Information asset classification and valuation.
17. Write about (10)
 - a) Components of Information system.
 - b) Common form of violation of intellectual property and how organizations protect against it.

FACULTY OF INFORMATICS**B.E. 4/4 (IT) I – Semester (Suppl) Examination, June 2013****Subject : Software Reuse techniques (Elective - III)****Time : 3 hours****Max. Marks : 75****Note: Answer all questions from Par-A. Answer any FIVE questions from Part-B.****PART – A (25 Marks)**

1. How are object components and variants packaged and documented? (3)
2. Write the generic structure / template that lends a uniform structure for different design patterns. (3)
3. Define abstract subsystems. (2)
4. Give differences between abstract factory pattern and builder pattern. (3)
5. What are structural patterns? Give example. (2)
6. Write short notes on behavioural patterns. (3)
7. How is observer pattern related to mediator and singleton patterns? (3)
8. What are the consequences of applying iterator pattern? (2)
9. Give an example of model-view-controller pattern. (2)
10. What is Micro-Kernel architecture? (2)

PART – B (50 Marks)

- 11.a) Explain in detail concepts of object oriented software engineering. (7)
- b) Write the set of principles that are to be followed to achieve systematic software reuse. (3)
- 12.a) Explain how to apply a design pattern effectively using a step-by-step approach. (5)
- b) Write short notes on builder pattern. (5)
- 13.a) What are the benefits and implementation issues of interpreter pattern? (5)
- b) Explain the concept of publisher-subscriber pattern. (5)
14. Discuss the intent, motivation, applicability and structure of :
 - a) Facade pattern (5)
 - b) Decorator pattern (5)
15. Explain in detail about client-dispatcher-server pattern. (10)
- 16.a) List and explain different types of proxies. (6)
- b) Explain the collaboration and consequences of visitor pattern. (4)
17. Write short notes on :
 - a) Systematic and incremental approach of adopting reuse (5)
 - b) Any four corporations and consortia that help in reuse process and technology developments. (5)
