Aliah University

End-Semester Examination (Even Semester) - 2022

(B.Tech. CSE 4th Year 8th Semester)

Subject Name: Cryptography and Network Security **Full Marks: 80**
Subject Code: CSE402 **Time: 3hrs**

Group-A
(Answer all questions) **5 × 2 = 10**

1. Define Cryptography.
2. Differentiate between threats and attacks.
3. What is block cipher?
4. What is nonce?
5. What is passive attack?

Group-B
(Answer any five questions) **5*5= 25**

1. Encrypt the following message using monoalphabetic substitution with key 4.
   TODAY IS MONDAY. 5
2. Describe digital signature. 5
3. Explain Transpositional cipher with example. 5
4. Explain various types of passive attack. 5
5. Explain various types of firewall. 5
6. Explain roll of Security Association in IPSec. 5

Group-C
(Answer any three questions) **3 × 15 = 45**

1. Explain the RSA algorithm, Perform encryption and decryption to the system with P=7; q=11; e=17; M=8. [7+8]
2. Describe the DES algorithm with neat diagram and explain the steps. 15
3. Explain PGP Protocol. 15
4. Write short note on HTTPS, S/MIME and AH Protocol. 15

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End Semester Examination (Sping Semester) 2022
(For 4th Year 8th Semester B.Tech(CSE))

Paper Name: Distributed Systems **Full Marks: 80**
Paper Code: CSE404B **Time: 3 hours**

Group A (Answer all the questions) **5X2 =10**

1. What are the differences between tightly coupled and loosely coupled systems?
2. Differentiate local state and global state.
3. Explain Access transparency and Naming transparency.
4. What are the advantages of distributed systems over centralized systems?
5. Explain mutually consistent local states.

Group B (Answer any 5 questions) **5X6=30**

1. Discuss about fault tolerance in distributed systems.
2. What are the conditions for correctness of distributed control algorithms?
3. Explain with the help of an example why the Chandy-Lamport algorithm requires the channels to be FIFO.
4. With suitable examples explain in brief about logical clocks.
5. Write short notes on:
   i) Replication transparency.
   ii) Event ordering.
6. Discuss the workstation model briefly.

Group C (Answer any 4 questions) **4X 10=40**

1. Explain the Election algorithm in detail.
2. Explain the Diffusion Computation based Algorithm for Distributed deadlock detection.
3. How are the classifications of Mutual Exclusion algorithms done? Explain any two algorithms in detail.
4. What are the conditions for Distributed Termination Detection? Explain the Credit-Distribution based Termination Detection Algorithm.
5. Discuss the different approaches for distributed load balancing.

Even (Spring) Semester Examination 2022

Paper Code: MS 432; Paper name: Professional Values & Ethics

B Tech Computer Science and Engineering

VIIIth Semester 2022

Full Marks: 80; Time: 3Hrs.

(The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as possible)

GROUP: A (Answer all the questions) **(1 x 10 = 10)**

1. I. Which of the following philosophical principles in ethics emphasises the consequences of action, rather than following the rules?

(a) Imperative principle (b) Utilitarianism principle

(c) Generalization principle (d) Moral principle

II. A written statement of policies and principles that guides the behaviour of all employees is called:

(a) Code of ethics (b) Word of ethics (c) Ethical dilemma (d) None of the above

III. Competence in professional ethics refers to:

(a) Ability to utilize power effectively (b) Ability to augment the universal human order

(c) Ability to make a profit (d) Both b and c

IV. Many human values seem good or right due to:

(a) Positive feelings (b) Internal happiness (c) Natural acceptance (d) All the above

V. The purpose of value education is to:

(a) Foster universal core values (b) Make the syllabus easy

(c) Develop values in individuals (d) both (a) and (c)

VI. The general and abstract concepts of right and wrong behaviour culled from philosophy, theology, and professional societies are:

(a) Ethics (b) Morals (c) Etiquette (d) Law

VII. A moral theory that seeks to create the best for the most people

(a) Whistleblowing (b) Utilitarianism (c) Morals (d) Rights analysis

VIII. A situation in which an engineer's loyalty and obligations may be compromised because of self-interests or other loyalties and obligations is:

(a)Conflict of interest (b) Conceptual issue (c) Concern of interest (d) Interaction rules

IX. Expected sets of behaviour (etiquette, law, morals, and ethics) between the engineer, other individuals and society as a whole are:

(a) Conceptual issue (b) Application issue (c) Legal rights (d) Interaction rules

X. The accepted standards of right and wrong that are usually applied to personal behaviour are:

(a) Morals (b) Law (c) Etiquette (d) Ethics

GROUP: B (Answer any five questions) **(5 x 5 = 25)**

2. Why is engineering ethics important?

3. Corporate Social Responsibility makes companies more sustainable. Explain.

4. Discuss in detail the employee rights.

5. What are the different types of problems in 'computer ethics'?

6. What are the several responsibilities an engineer owes to society as an experimenter?

7. Discuss briefly environmental ethics.

8. Discuss the role of ethics in corporate excellence.

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GROUP: C (Answer any three questions) **(15 x 3 = 45)**

9. Explain the moral development theories.

10 "A good professional is not merely a hired gun." Explain.

11. Explain the ethical theories in detail.

12. What do you mean by code of ethics? Why is it important? Also mention some of the limitations of the code of ethics.

13. What do you mean by Intellectual Property Rights? Explain the types of IPR in detail.

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