M.E. Second Semester (Computer Engineering) (Full Time) (C.G.S.)

13133 : Elective-II : System Security : 2 KMEF 4

P. Pages : 2 | **AW - 3690**

Time : Three Hours | Max. Marks : 80

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Notes : 1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Illustrate your answer necessary with the help of neat sketches.
4. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Discuss following with suitable example. **6**
i) Substitution cipher. ii) Transposition cipher.

b) Write and explain RSA algorithm with suitable example. **7**

OR

2. a) Discuss security goals and their relationship with each other. **6**

b) Discuss AES algorithm in detail along with their different stages and rounds. **7**

3. a) What is boot sector virus? How boot sector virus affects the system? **7**

b) What is malicious code? What are the different types of malicious code? Explain each type of malicious code with example. **7**

OR

4. a) Explain in brief the truths and misconceptions about viruses. **7**

b) Explain in brief, how viruses gains control. **7**

5. a) State the various mechanisms to protect an object. Explain file directory access mechanism. **7**

b) State and explain the problems with biometrics. **6**

OR

6. a) Explain segmentation with logical and physical representation. Explain translation of segment address. **7**

b) What are the guidelines for password selection? Explain them in brief. **6**

7. a) State and explain security features of ordinary operating systems. **6**

b) Discuss security features of trusted operating systems. **7**

OR

8.	a)	Why security functions may be isolated in a security Kernel? Give reasons.	**7**
	b)	What is validation? What are the ways to validate an operating system? Explain them in brief.	**6**
9.	a)	What are the security requirements for databases? Explain in brief.	**6**
	b)	What is sensitive data? Explain two factors that make data sensitive.	**7**

OR

10.	a)	What is the purpose of encryption in multilevel secure database management system?	**7**
	b)	Explain the concept of reliability and integrity in database security.	**6**
11.	a)	What is firewall? Write and discuss different types of firewalls.	**7**
	b)	Discuss DDoS attacks in detail with example.	**7**

OR

12.	a)	Write and explain in detail types of IDSs.	**7**
	b)	Explain end to end encryption in detail.	**7**

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