SREE VIDYANIKETHAN ENGINEERING COLLEGE

(An Autonomous Institution, Affiliated to JNTUA, Anantapur)

M.C.A. V Semester (SVEC14) Regular/Supplementary Examinations November - 2017

INFORMATION SECURITY

[MASTER OF COMPUTER APPLICATIONS]

Time: 3 hours **Max. Marks: 60**

Answer One Question from each Unit

All questions carry equal marks

UNIT-I

1 a) A bank is performing all its financial transactions over the Internet. What kind of security is required? Illustrate with any example bank. 6 Marks

b) Describe the model for Network Security with a neat diagram. 6 Marks

(OR)

2 a) Explain three substitution techniques with example in each. 6 Marks

b) Using this Playfair matrix : 6 Marks

M	F	H	I/J	K
U	N	O	P	Q
Z	V	W	X	Y
E	L	A	R	G
D	S	T	B	C

Encrypt this Message: 'Must see you over Cadogan West. Coming at once'.

UNIT-II

3 Explain AES algorithm. 12 Marks

(OR)

4 a) In a public key system using RSA, you intercept the cipher text C =10 sent to a user whose public key is e = 5, n = 35. What is the plain text M? 6 Marks

b) Compare link encryption with end to end encryption. 6 Marks

UNIT-III

5 a) Explain Message Authentication requirements. What are the attacks related to message communication? 6 Marks

b) What are the situations in which message authentication code is used and draw the TCP segment with its explanation. 6 Marks

(OR)

6 a) Explain the digital signatures with a real time example and state its merits and demerits. 6 Marks

b) What problem was Kerberos designed to address? What improvements are made in Kerberos V5 over Kerberos V4? 6 Marks

UNIT-IV

7 a) List and explain the types of messages in PGP and their purposes. 6 Marks

b) Explain the MIME content types. 6 Marks

(OR)

8 a) Give examples of IP security applications and its services. 6 Marks

b) Explain IP security architecture and also explain basic combinations of security associations with a neat diagram. 6 Marks

UNIT-V

9 a) Explain the operation of SSL Handshake Protocol. 6 Marks

b) Write short notes on viruses. 6 Marks

(OR)

10 Explain in detail about Secure Electronic Transaction. 12 Marks