

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER- V EXAMINATION –Summer- 2019**

**Subject Code: 3350704****Date: 16-05-2019****Subject Name: Computer And Network Security****Time: 02:30 PM to 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

**Q.1**

Answer any seven out of ten. દશમાંથી કોઇપણ સાતના જવાબ આપો.

**14**

1. What is Trojan Horse?
૧. Trojan Horse શું છે?
2. Define: Intruder , Misfeasor
૨. વ્યાખ્યા આપો: Intruder , Misfeasor
3. Explain Piggybacking in brief.
૩. Piggybacking ટૂંકમાં સમજાવો.
4. Enlist components of good password.
૪. Components of good password ની યાદી આપો.
5. Justify: “One time pad is unbreakable”
૫. “One time pad is unbreakable” ની યથાર્થતા સાબીત કરો.
6. Define: Substitution cipher, Transposition cipher
૬. વ્યાખ્યા આપો: Substitution cipher, Transposition cipher
7. What are the issues in a symmetric encryption model?
૭. Symmetric encryption model ની issues શું છે?
8. Differentiate: Internet Vs. Intranet
૮. Internet Vs. Intranet વચ્ચે નો તફાવત આપો.
9. Give the name of two protocols defined by IPsec.
૯. IPsec ની બે protocols ની નામ આપો.
10. Differentiate between SSL and SET.
૧૦. SSL અને SET વચ્ચે નો તફાવત આપો.

**Q.2**

(a) Explain DOS and DDOS attack.

**03****પ્રશ્ન. ૨**

(અ) DOS and DDOS attack સમજાવો.

**૦૩**

OR

(a) Explain Phishing attack with example.

**03**

(અ) Phishing attack ઉદાહરણ સાથે સમજાવો.

**૦૩**

(b) What is difference between Passive and Active security attacks?

**03**

(બ) Passive અને Active security attacks વચ્ચે નો તફાવત આપો.

**૦૩**

OR

- (b) Define: Logic bomb and Explain with one example. 03
- (બ) વ્યાખ્યા આપો: Logic bomb. અને એક ઉદાહરણ સાથે સમજાવો. 03
- (c) List and define categories of Security services. 04
- (ક) Security services ની categories ની યાદી બનાવો અને સમજાવો. 04

OR

- (c) What is a worm? What is difference between a worm and virus? 04
- (ક) Worm શું છે? Worm અને virus વચ્ચે નો તફાવત આપો. 04
- (d) How does Biometric work? What are the advantages of Biometric authentication? 04
- (ડ) Biometric કઈ રીતે કામ કરે છે? અને Biometric authentication ની ફાયદા શું છે? 04

OR

- (d) Explain Password selection strategies. 04
- (ડ) Password selection strategies સમજાવો. 04

**Q.3** (a) Differentiate between Symmetric-key cryptography and Asymmetric-key cryptography. 03

**પ્રશ્ન. 3** (અ) Symmetric-key cryptography અને Asymmetric-key cryptography વચ્ચે નો તફાવત આપો. 03

OR

- (a) Explain the terms Cryptography and Cryptanalysis. 03
- (અ) Cryptography અને Cryptanalysis સમજાવો. 03
- (b) Explain Rail fence technique with example. 03
- (બ) Rail fence technique ઉદાહરણ સાથે સમજાવો 03

OR

- (b) Briefly discuss the concept of Steganography. 03
- (બ) Steganography નો concept ટૂંકમાં સમજાવો. 03
- (c) For given plain text='I LOVE INDIA' & Key= 'HINDUSTAN' find cipher text using Play-fair cipher. 04
- (ક) આપેલ plaintext = 'I LOVE INDIA' & key= 'HINDUSTAN' માટે Play-fair Cipher નો ઉપયોગ કરીને Cipher Text શોધો. 04

OR

- (c) For given plain text='I LOVE INDIA' & Key= 'HINDUSTAN' find cipher text using Vigenere cipher. 04
- (ક) આપેલ plaintext = 'I LOVE INDIA' & key= 'HINDUSTAN' માટે Vigenere Cipher નો ઉપયોગ કરીને Cipher Text શોધો. 04
- (d) Explain Brute-force attack and Man in the middle attack. 04
- (ડ) Brute-force attack અને Man in the middle attack સમજાવો. 04

OR

- (d) What are requirements of Digital Signature? List properties a Digital Signature should have. 04
- (ડ) Digital Signature ની જરૂરીયાત શું છે? Digital Signature ની properties ની યાદી બનાવો. 04

<b>Q.4</b>	(a)	What are advantages of Digital Certificates over Symmetric/Asymmetric cryptographic model?	<b>03</b>
<b>પ્રશ્ન. ૪</b>	(અ)	Digital Certificates ની Symmetric/Asymmetric cryptographic model ની સાપેક્ષ માં ફાયદા શું છે?	<b>૦૩</b>
		OR	
	(a)	Explain contents of X.509 Digital Certificate.	<b>03</b>
	(અ)	X.509 Digital Certificate ની contents સમજાવો.	<b>૦૩</b>
	(b)	Explain the steps to verify a Digital Certificate.	<b>04</b>
	(બ)	Digital Certificate ને verify કરવા માટે ની steps સમજાવો.	<b>૦૪</b>
		OR	
	(b)	Explain any two Trust Models.	<b>04</b>
	(બ)	કોઈ પણ બે Trust Models સમજાવો.	<b>૦૪</b>
	(c)	Explain working of SHA-1 algorithm with neat sketch. Also discuss details of single SHA-1 Iteration.	<b>07</b>
	(ક)	SHA-1 algorithm નું કાર્ય સુઘડ આકૃતિ સાથે સમજાવો. SHA-1 ની એક Iteration ને વિસ્તૃત માં ચર્ચો.	<b>૦૭</b>
<b>Q.5</b>	(a)	Explain working principal of the Kerberos protocol.	<b>04</b>
<b>પ્રશ્ન. ૫</b>	(અ)	Kerberos protocol નો working principal સમજાવો.	<b>૦૪</b>
	(b)	What is Secure Electronic Transaction (SET)? Explain SET Components with neat sketch.	<b>04</b>
	(બ)	Secure Electronic Transaction (SET) શું છે? SET Components ને સુઘડ આકૃતિ સાથે સમજાવો.	<b>૦૪</b>
	(c)	Distinguish HIDS and NIDS.	<b>03</b>
	(ક)	HIDS and NIDS નો તફાવત આપો.	<b>૦૩</b>
	(d)	Explain Packet filtering firewall in brief.	<b>03</b>
	(ડ)	Packet filtering firewall ને ટૂંકમાં સમજાવો.	<b>૦૩</b>

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