

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER –VI • EXAMINATION – SUMMER 2015**

**Subject Code: 361602****Date: 02/05/2015****Subject Name: Information Security (IS)****Time:10:30am to 1:00pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Each question carry equal marks (14 marks)

- Q.1** (a) Answer the following **07**
1. Asymmetric Encryption is also known as \_\_\_\_\_
  2. How can we secure network traffic?
  3. Explain Audit trails
  4. Delivery of master key (in KDC Approach) is \_\_\_\_\_
  5. Construct a Playfair Matrix using key “OCCURRENCFREQUENT”
  6. What is Avalanche effect?
  7. What is CA?
- (b) Answer the following **07**
1. Compare Link to Link Encryption and End to End Encryption
  2. Discuss the Key transformation phase in DES
- Q.2** (a) Write a short note on Security Mechanism **07**
- (b) Discuss the different modes of Block Cipher Algorithm **07**
- OR
- (b) Discuss the Strength of DES **07**
- Q.3** (a) Explain Passive Attack in detail **07**
- (b) Discuss Firewall in detail **07**
- OR
- Q.3** (a) Discuss Diffie-Hellman Key Exchange Algorithm **07**
- (b) Write a short note on Trusted System **07**
- Q.4** (a) What is Digital signature? Explain the types of Digital signature **07**
- (b) Discuss the principles of Public Crypto Systems **07**
- OR
- Q.4** (a) Explain RSA Algorithm **07**
- (b) Discuss Key Distribution Scenario with all the parameter **07**
- Q.5** (a) List and Explain different type of Viruses **07**
- (b) Explain Play fair Cipher using following data **07**
- Key:- “ENTER THE DRAGON”
- Plaintext:- “BALLOONS”
- OR
- Q.5** (a) Explain various Virus Countermeasures **07**
- (b) Write a short note on Transposition Techniques **07**

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## ગુજરાતી

- પ્રશ્ન. ૧ અ નીચેના પ્રશ્નોના જવાબ આપો ૦૭
1. Asymmetric Encryption is also known as \_\_\_\_\_
  2. How can we secure network traffic?
  3. Explain Audit trails
  4. Delivery of master key (in KDC Approach) is \_\_\_\_\_
  5. Construct a Play fair Matrix using key “OCCURRENCEFREQUENT”
  6. What is Avalanche effect?
  7. What is CA?
- બ નીચેના પ્રશ્નોના જવાબ આપો ૦૭
1. Link to Link Encryption અને End to End Encryptionની તુલના કરો
  2. Key transformation phase in DES સમજાવો
- પ્રશ્ન. ૨ અ Security Mechanism પર ટૂંકનોંધ લખો ૦૭
- બ different modes of Block Cipher Algorithm ની વિસ્તાર થી ચર્ચા કરો ૦૭
- અથવા
- બ Strength of DES વિસ્તાર થી સમજાવો ૦૭
- પ્રશ્ન. ૩ અ Passive Attack વિસ્તાર થી સમજાવો ૦૭
- બ Firewall વિસ્તાર થી સમજાવો ૦૭
- અથવા
- પ્રશ્ન. ૩ અ Diffie-Hellman Key Exchange Algorithm સમજાવો ૦૭
- બ Trusted System પર ટૂંકનોંધ લખો ૦૭
- પ્રશ્ન. ૪ અ Digital signature શું છે? Digital signatureના પ્રકાર સમજાવો ૦૭
- બ principles of Public Crypto Systems સમજાવો ૦૭
- અથવા
- પ્રશ્ન. ૪ અ RSA Algorithm સમજાવો ૦૭
- બ Key Distribution Scenario તેના દરેક parameters થી સમજાવો ૦૭
- પ્રશ્ન. ૫ અ અલગ અલગ પ્રકારના Viruses લખો અને સમજાવો ૦૭
- બ નીચેના ડેટા થી Play fair Cipher સમજાવો ૦૭
- Key:- “ENTER THE DRAGON”  
Plaintext:- “BALLOONS”
- અથવા
- પ્રશ્ન. ૫ અ અલગ અલગ Virus Countermeasures સમજાવો ૦૭
- બ અલગ અલગ Transposition Techniques સમજાવો ૦૭

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