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13. Differentiate between : 5 each

- (a) Monoalphabetic and polyalphabetic cipher
- (b) Substitution and transposition technique
- (c) Block cipher and stream cipher.

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(20516)

BCA-VI Sem.

Roll No.

18026

B. C. A. Examination, May 2016

Computer Network Security

(BCA-601)

(New)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all the five questions. Each question carries

3 marks. Very short answer is required. $3 \times 5 = 15$

1. What are the various security mechanism ?

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(2)

2. What do you mean by brute force attack and intrusion?
3. Write the three dimensions of cryptographic systems.
4. What is the difference between substitution and transposition technique?
5. What is the difference between threat and attack?

Section-B

(Short Answer Questions)

Attempt any *two* questions out of the following three questions. Each question carries $7\frac{1}{2}$ marks. Short answer is required.

$$7\frac{1}{2} \times 2 = 15$$

6. Explain secure socket layer in detail.
7. What are the properties that digital signature should have?
8. Define briefly the playfair cipher and Ceaser cipher.

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Section-C

(Detailed Answer Questions)

Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail.

$$15 \times 3 = 45$$

9. Explain IP security architecture. Show how ESP works in transport and tunnel mode.
10. What is RSA algorithm? Explain the generation of public and private keys and hence generation of cipher text through RSA with the help of example.
11. What are the various types of firewalls? Explain each of them in detail.
12. What is configuration management and SNMPv3? Explain in detail.

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(Printed Pages 3)

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Roll No.

BCA-VI Sem.

18026

B.C.A. Examination, May 2017

Computer Network Security

(BCA-601)

(New)

Time : Three Hours /

[Maximum Marks : 75]

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt **all** the **five** questions. Each question carries **3** marks. Very short answer is required.

$3 \times 5 = 15$

1. How is digest created?
2. What is IP Sec?

3

3

P.T.O.

3. Describe how a virus is moved on the Internet? 3

4. Why security of web is necessary to protect data from unauthorized user? 3

5. Explain the term 'integrity'. 3

Section-B

(Short Answer Questions)

Note : Attempt any **two** questions.

6. Explain about X.509 Certificate. 7½

7. What is Internet? Why do we need network security & how can it be provided? 7½

8. What is the need of Authentication? Explain various authentication functions. 7½

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Section-C

(Long Answer Questions)

Note : Attempt any **three** questions.

9. How does PGP create a Secure Network? Also explain PGP. 15

10. Discuss different cryptographic algorithms used in S/MIME. Explain how S/MIME is better than MIME? 15

11. What is Firewall? Describe how firewall can be used to protect the Network? 15

12. Explain the SNMP Architecture in detail? 15

13. What do you understand by cryptography? List the various cryptographic techniques with suitable examples. 15

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13. Compare and contrast (5*3):

- (a) Cryptography and Cryptanalysis
- (b) SNMPV1 and SNMPV3
- (c) Active and Passive Attack.

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BCA-VI Sem.

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B. C. A. Examination, May 2018

Computer Network Security

(BCA-601)

(New)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required.

3×5=15

1. Specify the components of encryption algorithm.
2. What are the roles of public and private key ?

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3. What are the advantages and disadvantages of secret key encryption?
4. Difference between HTTP and HTTPS protocol.
5. Name four factors needed for a secure network.

Section-B

(Short Answer Questions)

Attempt any *two* questions out of the following three questions. Each question carries $7\frac{1}{2}$ marks.

Short answer is required. $7\frac{1}{2} \times 2 = 15$

6. What are security protocols? Discuss five benefits of IPSec as a security protocol.
7. Compare Substitution and Transposition cipher techniques.
8. Explain the operation of Secure Socket Layer in detail.

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Section-C

(Detailed Answer Questions)

Attempt any *three* questions out of the following five questions. Each question carries 15 marks.

Answer is required in detail. $15 \times 3 = 45$

9. What do you mean by firewalls? Discuss the need of firewall in VPN along with its types.
10. Discuss the role of digital signatures in modern communication. Also discuss the differences between digital certificates and digital signatures in authentication.
11. What is Kerberos? Explain Kerberos authentication system.
12. Explain the type of encryption/decryption method. Differentiate symmetric and asymmetric encryption.

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Total Questions : 13]

[Printed Pages : 3

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B.C.A. VIth Semester Examination, May-2019

COMPUTER NETWORK SECURITY

(BCA-601)

Time : 3 Hrs.]

[M.M. : 75

Note :- Attempt all the Sections as per instructions.

Section-A

(Very Short Answer Type Questions)

Note :- Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required.

1. Discuss the components of cryptography.
2. How is a secret key different from public key ?
3. Write down principles of security.

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(1)

Turn Over

4. Differentiate Encryption and Decryption.
5. What are the advantages and disadvantages of public key encryption ?

Section-B

(Short Answer Type Questions)

Note :- Attempt any *two* questions. Each question carries 7½ marks.

6. X.509 is a good security protocol. How this protocol is different from IPSec ?
7. Compare and contrast block cipher and stream cipher.
8. Explain SSL Protocol. List the services provided by SSL record protocol.

Section-C

(Long Answer Type Questions)

Note :- Attempt any *three* questions. Each question carries 15 marks.

9. What is Authentication ? What are the various authentication techniques used today for safe business-transaction online ?

10. S/MIME and PGP are sister protocols. Study the two protocols and discuss the quality they share.
11. Explain Kerberos. What are the authentication requirements defined by Kerberos ?
12. Briefly explain the private and public key cryptography. Define public key cryptography with RSA.
13. Write notes on the following :
 - (i) Repudiation
 - (ii) Intrusion detection
 - (iii) VPN
 - (iv) Digital certificate
 - (v) Firewall

3. What is Key distribution? How can it be achieved?
4. What are the benefits and services provided by IP Sec?
5. What is digital signature?

Section - B

(Short Answer Type Questions)

Note : Attempt any **one** question. Each question carries 15 marks.

1×15=15

6. What is the need of Authentication? Explain various Authentication functions.
7. What is Intrusion Detection? Write some measures used for Intrusion Detection.
8. What is Cryptanalysis? Explain various types of cryptanalysis with an example.

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Section - C

(Long Answer Type Questions)

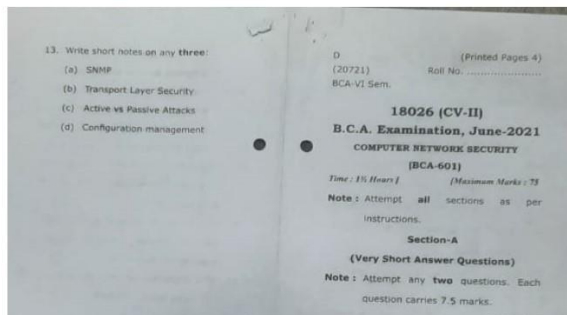
Note : Attempt any **two** questions. Each question carries 22.5 marks.

2×22.5=45

9. (a) Explain RSA Public Key Encryption. In a RSA system the public key of a given user is $c=7$ and $n=33$. What is the private key of this user?
- (b) Describe the technical deficiencies of Kerberos V4 over V5.
10. Discuss various types of Firewalls at different layers on TCP/IP stack along with their advantages and disadvantages.
11. (a) What do you understand by Cryptography? List the various cryptographic with the suitable illustrations.

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P.T.



3. Define/Explain any three terms:
Information, Groupware, Data cube,
Cluster
4. What is group decision making? Explain
with example.
5. How is a data warehouse different from a
database? How are they similar?

Section-B

(Short Answer Questions)

Note : Attempt any **one** question. Each
question is 15 marks. Descriptive
answers should not exceed 200
words. $1 \times 15 = 15$

6. Discuss the relevance of a Decision
Support System in an organization.
7. Write a note on Online Analytical
Processing.
8. Mention the motivation behind the
evolvment of data mining. Give an
example where data mining is crucial to
success of a business.

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Section-C

(Detailed Answer Questions)

Note : Attempt any **two** questions.

question is of 22.5 marks. Ans
required in detail? 2×22.5

9. Write down the objectives of de
an expert system. Give the benef
limitations of expert systems. I
the significance of artificial intel
in an expert system Development
10. (a) Discuss organizational kno
hierarchy.
(b) What is Group Decision S
System? Discuss its usefuln
an organization.
11. (a) Discuss multi-dimensiona
model.

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