

13. Write short notes on any **three**:

- (a) SNMP
- (b) Transport Layer Security
- (c) Active vs Passive Attacks
- (d) Configuration management

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B.C.A. Examination, June-2021

COMPUTER NETWORK SECURITY

(BCA-601)

Time : 1½ Hours] [Maximum Marks : 75

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

Section-A

(Very Short Answer Questions)

Note : Attempt any **two** questions. Each question carries 7.5 marks.

2×7.5=15

1. What is Kerberos?
2. Discuss the Role of the digital signatures in modern communication.

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P.T.O.

3. Explain Firewall Design principles.
4. What is the need of Authentication?
5. What is IP. See?

Section-B

(Short Answer Questions)

Note : This section contains **three** questions, attempt any **one** question. Each question carries 15 marks. 1×15=15

6. Explain the operations of secure socket layer in detail.
7. Discuss the RSA Algorithm with an example.
8. Compare secret key encryption & public key encryption. Also find which method gives the better complexity in terms of key distribution.

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Section-C

(Descriptive Answer Questions)

Note : This section contains **six** questions, attempt any **two** questions. Each question carries 22.5 marks. Answer must be descriptive. 2×22.5=45

9. What is the purpose of S/MIME? Discuss the functionality of S/MIME. Also explain delta revocation.
10. What do you understand by virus? What are the various Intrusion detection approaches? Explain all.
11. What is the purpose of X-509 standards? How is an X-509 certificate revoked?
12. Define:
 - (i) PGP
 - (ii) Key Management
 - (iii) Model for Internetwork Security

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P.T.O.

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B.C.A. Examination, May-2024

COMPUTER NETWORK SECURITY

(BCA-601)

Time : Three Hours] [Maximum Marks : 75

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

Section-A

Note : Attempt any **three** questions. Each question carries **3** marks. Very short answer is required.

1. What is the difference between HTTPs & HTTP? 3
2. Discuss about various types of Intruders. 3

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3. What is a proxy firewall? 3
4. What are the roles of Public and Private key? 3
5. Define the term 'Integrity'. 3

Section-B

Note : Attempt any **two** questions.

6. What are the security protocols? Discuss the benefits of IP sec. 7.5
7. What is Authentication? What are the various authentication techniques. 7.5
8. Explain Secure Electronic Transaction. 7.5

Section-C

Note : Attempt any **three** questions.

9. Briefly explain the private & public key cryptography. Define public key cryptography with RSA. 15

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10. Explain Kerberos. What are the authentication requirements defined by Kerberos? 15
11. What is firewall? Describe how firewall can be used to protect the network? 15
12. What is Intruder. Explain Intrusion detection system. Write some measures used for Intrusion detection. 15
13. Write short notes on **three**: $5 \times 3 = 15$
 - (a) SSL
 - (b) X.509
 - (c) Digital signatures
 - (d) SNMP
 - (e) Virus & Related threats

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B.C.A. Examination, June-2023
COMPUTER NETWORK SECURITY
(BCA-601)

Time : 3 Hours] [Maximum Marks : 75

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

Section A

(Very Short Answer Questions)

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

5×3=15

1. Differentiate Encryption and Decryption. 3
2. Write down the principles of Security. 3
3. Explain various types of viruses. 3
4. What is Digital Signature? 3
5. Name four factors needed for a secure network. 3

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Section-B

(Short Answer Questions)

Note : Attempt any *two* questions out of the following three questions. Each question carries 7.5 marks.

6. What is firewall? Describe how firewall can be used to protect the network. 7.5
7. Explain SSL protocol. List the services provided by SSL record protocol. 7.5
8. What is Intrusion Detection? Write some measures used for Intrusion Detection. 7.5

Section-C

(Long Answer Questions)

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

9. Discuss RSA Algorithm with a suitable example. 15
10. What is the purpose of X.509 standard? How is an X.509 certificate revoked? 15

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(3)

11. Discuss different cryptographic Algorithms used in S/MIME. Explain how S/MIME is better than MIME. 15

- 12/ (a) Explain the role of digital Signatures in the Modern Communication. 10

- (b) Explain briefly about SNMPV3. 5

13. Write short notes on any *three* : 3×5=15

(a) Kerberos

(b) YPN

(c) SET

(d) PGP

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**B.C.A. Examination, June-2023
COMPUTER NETWORK SECURITY
(BCA-601)**

Time : 3 Hours]

[Maximum Marks : 75

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

Section A

(Very Short Answer Questions)

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

5×3=15

1. Differentiate Encryption and Decryption. 3
2. Write down the principles of Security. 3
3. Explain various types of viruses. 3
4. What is Digital Signature? 3
5. Name four factors needed for a secure network. 3

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Section-B

(Short Answer Questions)

Note : Attempt any *two* questions out of the following three questions. Each question carries 7.5 marks.

6. What is firewall? Describe how firewall can be used to protect the network. 7.5
7. Explain SSL protocol. List the services provided by SSL record protocol. 7.5
8. What is Intrusion Detection? Write some measures used for Intrusion Detection. 7.5

Section-C

(Long Answer Questions)

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

9. Discuss RSA Algorithm with a suitable example. 15
10. What is the purpose of X.509 standard? How is an X.509 certificate revoked? 15

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(3)

11. Discuss different cryptographic Algorithms used in S/MIME. Explain how S/MIME is better than MIME. 15

- 12/ (a) Explain the role of digital Signatures in the Modern Communication. 10

- (b) Explain briefly about SNMPV3. 5

13. Write short notes on any *three* : 3×5=15

(a) Kerberos

(b) VPN

(c) SET

(d) PGP

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B.C.A. Examination, May-2025

COMPUTER NETWORK SECURITY

(BCA-601)

Time : Three Hours] [Maximum Marks : 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. $3 \times 5 = 15$

1. Define Attacks. What is the difference between active and passive attacks?
2. What is the purpose of Kerberos in network security?
3. Write short notes on Authentication Header (AH) in IP Security.

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4. What are the primary security requirements for web security?
5. Define firewall. What are the main functions of a firewall in network security?

Section-B

(Short Answer Type Questions)

Note : Attempt any **two** questions. Each question carries **7½** marks. $7\frac{1}{2} \times 2 = 15$

6. Describe the working of Kerberos authentication protocol and its advantages in network security.
7. What are the key differences between Secure Socket Layer (SSL) and Transport Layer Security (TLS)? Explain their importance in web security.
8. What are the different types of firewalls? Explain their design principles and functionality in ensuring system security.

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Section-C

(Long Answer Type Questions)

Note : Attempt any **three** questions. Each question carries **15** marks. $15 \times 3 = 45$

9. Explain the different types of security services and mechanisms used to protect network communication.
10. Explain the working of the X.509 authentication framework. How does it ensure secure communication?
11. Describe the components of IPsec and explain how it provides authentication and confidentiality in network communication.
12. Explain the working of the Secure Socket Layer (SSL) and its role in ensuring secure web communication.
13. Explain the different types of intrusion detection system (IDS). How do they help in securing a network?