

Enrollment No.....



Faculty of Engineering
End Sem Examination Dec 2024
CS3EO08 Network Security

Programme: B.Tech.

Branch/Specialisation: CSE All

Duration: 3 Hrs.**Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

		Marks	BL	PO	CO	PSO
Q.1	i. The process of converting plain text to cipher text is called-	1	01	01	01	01
	(a) Decryption (b) Translation					
	(c) Conversion (d) Encryption					
	ii. AES uses a _____bit block size and a key size of _____ bits.	1	01	01	01	01
	(a) 128; 128 or 256					
	(b) 64; 128 or 192					
	(c) 256; 128,192 or 256					
	(d) 128; 128,192 or256					
	iii. Symmetric Encryption is also known as:	1	01	01	0	01
	(a) Public key encryption					
	(b) Asymmetric Encryption					
	(c) Hybrid Encryption					
	(d) Conventional Encryption					
	iv. Pretty Good privacy (PGP) is used in_____.	1	02	01	02	02
	(a) Wi-Fi security (b) Browser Security					
	(c) FTP Security (d) Email Security					
	v. Knowing the password of a user for hacking is called-	1	01	02	02	02
	(a) Sneaking (b) Cyber–stalking					
	(c) Spamming (d) Spoofing					
	vi. A digital signature needs a/an _____ system.	1	02	02	02	02
	(a) Symmetric key (b) Asymmetric key					
	(c) Both (a) and (b) (d) None of these					

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vii.	Dynamic packet filter firewall are fourth generation firewalls that work at-	1	03	03	03	03
	(a) Application layer (b) TCP					
	(c) UDP (d) TCP, UDP					
viii.	IPsec is designed to provide security at the ____.	1	04	03	03	02
	(a) Transport layer					
	(b) Application layer					
	(c) Session layer					
	(d) Network layer					
ix.	In computing _____ is a network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.	1	03	04	02	04
	(a) Spyware (b) Cookie					
	(c) Spam (d) Firewall					
x.	Key loggers are a form of _____?	1	04	05	03	03
	(a) Social Engineering (b) Trojan					
	(c) Shoulder surfing (d) Spyware					
Q.2	i. What do you understand by Security attacks?	2	03	06	03	03
	ii. Briefly explain the concept of secret key cryptography?	3	04	06	0	01
	iii. Explain the concept of Block Cipher with design diagram?	5	04	06	05	04
OR	iv. Elaborate the concept of S-DES algorithm?	5	04	06	01	04
Q.3	i. What do you mean by symmetric key cryptography?	2	04	06	02	03
	ii. Explain the concept of asymmetric cryptography with special reference to RSA algorithm?	8	04	06	02	04
OR	iii. What is the concept of elliptic curve cryptography? Explain by giving an example.?	8	04	06	02	04
Q.4	i. What is Message Authentication Code (M.A.C)?	3	04	06	03	04
	ii. Why MD5 is faster than the SHA-1? Write down the difference between MD5 and SHA-1.	7	04	08	03	034
OR	iii. What is Kerberos system? How does it work? Why it is important for authentication?	7	04	04	02	04

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Q.5	i. What is IP security policy?	4	04	06	04	04
	ii. Write short notes on-	6	04	04	04	03
	(a) Web security					
	(b) Internet key exchange					
OR	iii. Write a short note on-	6	04	02	03	04
	(a) Electronic mail security					
	(b) HTTPS standard					
Q.6	Attempt any two:					
	i. Explain the term virus, worms, backdoors, keyloggers and phishing.	5	04	02	03	03
	ii. What is distributed denial of service attack? What is intrusion detection system?	5	04	04	05	02
	iii. What is the concept of firewall? Why firewall is important? How will you configure it?	5	04	05	04	04

Marking Scheme

CS3EO08 Network Security

- Q.1 i. The process of converting plain text to cipher text is called- **1**
(d) Encryption
- ii. AES uses a _____bit block size and a key size of _____ bits. **1**
(d) 128; 128,192 or256
- iii. Symmetric Encryption is also known as: **1**
(d) Conventional Encryption
- iv. Pretty Good privacy (PGP) is used in_____. **1**
(d) Email Security
- v. Knowing the password of a user for hacking is called- **1**
(d) Spoofing
- vi. A digital signature needs a/an _____ system. **1**
(b) Asymmetric key
- vii. Dynamic packet filter firewall are fourth generation firewalls that work at- **1**
(d) TCP, UDP
- viii. IPsec is designed to provide security at the _____. **1**
(d) Network layer
- ix. In computing _____ is a network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules. **1**
(d) Firewall
- x. Key loggers are a form of _____? **1**
(d) Spyware

- Q.2 i. What do you understand by Security attacks? **2**
- ii. Briefly explain the concept of secret key cryptography? **3**
- iii. Explain the concept of Block Cipher **5**
with design diagram? **3** marks
- OR iv. Elaborate the concept of S-DES algorithm? **5**
Design + Algo steps **3** marks

- Q.3 i. Symmetric key cryptography? **2**
- ii. Explain the concept of asymmetric cryptography **8**
Special reference to RSA algorithm? **4** marks

- OR iii. What is the concept of elliptic curve cryptography **8**
Explain by giving an example **4** marks

- Q.4 i. What is Message Authentication Code (M.A.C)? **3**
- ii. Why MD5 is faster than the SHA-1? **7**
Difference between MD5 and SHA-1. **5** marks

- OR iii. What is Kerberos system **7**
How does it work **3** marks
Why it is important for authentication **2** marks

- Q.5 i. What is IP security policy? **4**
- ii. Write short notes on- **6**
(a) Web security **3** marks
(b) Internet key exchange **3** marks

- OR iii. Write a short note on- **6**
(a) Electronic mail security **3** marks
(b) HTTPS standard **3** marks

- Q.6 Attempt any two: **5**
- i. Explain the term virus, worms, backdoors, keyloggers and phishing. **5**
1 mark for each
- ii. What is distributed denial of service attack? **5**
What is intrusion detection system? **2.5** marks
2.5 marks
- iii. What is the concept of firewall **5**
Why firewall is important **2** marks
How will you configure it **1** mark
2 marks
