Quiz: Encryption and Decryption (Remotely Proctored)

Due Jan 27 at 3:30pm **Points** 9 **Questions** 9 **Time Limit** 10 Minutes
Exam Requirements A webcam is required to take this exam.
Exam Security This exam will be monitored by **Proctorio**. Learn more about Proctorio (https://proctorio.zendesk.com/hc/articles/200972514) .

Instructions

This is an individual quiz with a 10 minutes limit. The quiz will be proctored using Proctorio.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	4 minutes	9 out of 9

Score for this quiz: **9** out of 9
Submitted Jan 26 at 9:34pm
This attempt took 4 minutes.

Question 1

1 / 1 pts

What is symmetric key encryption?

- It is an encryption method where the parties involved have the same information.
- It is an encryption method where only symmetric messages are encrypted.

Correct!

- (selected) It is an encryption method where both parties use the same common secret key. to encrypt and decrypt messages.
- It is a encryption method where the key that is symmetric left-to-right and right-to-left..

Question 2

1 / 1 pts

What is asymmetric key encryption?

- An encryption method that encrypt only asymmetric messages.
- The same as symmetric key encryption.
- An encryption method where the key is asymmetric.

Correct!

- An encryption method where the key to encrypt messages is different from the key to decrypt messages.

Question 3

1 / 1 pts

How many symmetric keys are needed if a group of 10 people need to communicate among themselves?

- 50
- 100
- 20

Correct!

- 45

n(n-1)/2=45

Here is the intuition: we need as many symmetric keys as possible pairs in a group of 10 people. How many possible pair exist among 10 people? The first person can pair up with 9 others. The second person with 8. The third with 7 ...

9+8+7+6+.....+1 = 45

Question 4

1 / 1 pts

How many asymmetric keys are needed if a group of 10 people need to communicate among themselves?

Correct!

- (selected) 20

  2n. Each person need to develop 1 private and 1 public key.

- 45
- 50
- 100

Question 5

1 / 1 pts

What is a public key?

Correct!

- (selected) It is a key that you can distribute publicly. Anyone who wants to send you an encrypted message, can use the public key to do it.
- It is a key that people can use to decrypt your public messages.
- It is the inverse of the private key.
- It is a key that you can use to decrypt any public message you receive.

Question 6

1 / 1 pts

What is a private key?

It is a key that you can distribute publicly. Anyone who wants to send you an encrypted message, can use the public key to do it.

It is a key that no-one, including you, know what it is.

It is a key that you use to encrypt messages.

Correct!

It is a key that you need to keep private, and you can use to decrypt messages encrypted using your public key.

Question 7

1 / 1 pts

What is the main reason why the RSA asymmetric encryption method works?

Because the method is being kept a secret, and no-one knows how it works.

Because multiplying very large prime numbers is hard to do, even with super-computers.

Correct!

Because factorization (finding prime numbers of very large numbers) is very hard even for super computers.

Because it is very complicated.

Question 8

1 / 1 pts

What is 54 modulo 10

10

Correct!

- 4
- 50
- 54

Question 9

1 / 1 pts

What does it mean to sign a message?

Correct!

- It means to prove that you know the private key that generated the public key.
- It means to encrypt a message using a signature key.
- It means to provide a signature so that encryption is legally enforceable.
- It means to decrypt a message using a signature key.

Quiz Score: **9** out of 9