

# Pedophile Case – James Carl Liboon

Acquired using: ADI3.1.5.0

Case Number: 101024-10

Evidence Number: 101024

Submitted by: Jomar Leaño

The screenshot displays the FTK Imager 3.1.5.0 interface. On the left, a tree view shows the contents of a USB drive (drive 0:1) with a FAT16 file system. The drive contains a folder named '2020 files' and several files including 'beautiful', 'data', 'My Files', 'Religion', 'System Volume Information', 'temp', and 'Unallocated space'. The main pane shows a list of files and folders with columns for Name, Size, Type, and Date Modified. Below the file list, the 'Properties' pane shows details for the selected file '2020 files', including its name, file class (Directory), file size (16,384), physical size (16,384), and actual file (True). At the bottom, a hex dump shows the raw data of the selected file, with columns for address, hex values, and ASCII representation.

1. Source Drive: **Generic Flash Disk USB Device**
2. The capacity of the source disk in # of bytes: **246 MB**
3. Type of Forensic Tool Used: **AccessData® FTK® Imager 3.1.5.0**
4. Destination Location: **C:\Users\Godwin Monserate\Desktop\2ND Sem 2020-2021\Information Assurance and Security\Digital Forensics\Photo Crime\Pedophile\**
5. Target Filename: **Pedophile-Case.001**
6. Estimated time to finish developing the image: **3 minutes, and 58 seconds**
7. Hash Value MD5: **514cad8d821a1404ece56c78ebc62b9d**
8. Hash Value SHA1: **a8f7f7387396ef06a9eb0c73ee5b3ac96067cebb**

## Pedophile Case – James Carl Liboon

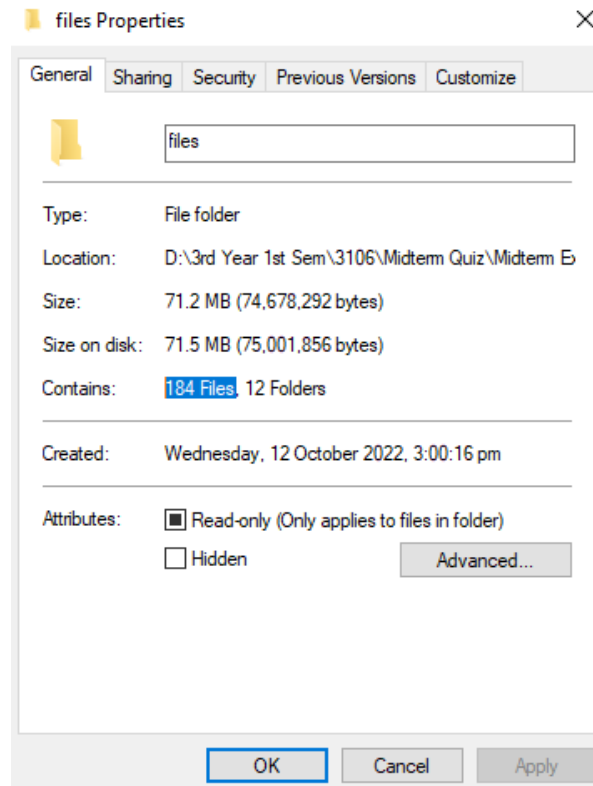
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### Disk Analysis



1. Number of Files in the Source Drive: **184 Files**
2. Number of Files in the Target Image: **203 Files**
3. Number of Folders in the Source Drive: **12 Folders**
4. Number of Folders in the Target Image: **12 Folders**
5. Number of Deleted Files: **8 Files**
6. Number of Deleted Folders: **0 Folders**

### Data Recovery

1. Extract the Deleted Files in the Root  
Number of Files Extracted? **4 Files**
2. Extract the Deleted Folders  
Number of Folders Extracted? **0 Folders**  
Number of Files Extracted in the Folder (Specify folder and number of files) : **0**

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### Data Analysis

1. Examine the contents of the file if it is an image file or a document file  
Number of JPEG Files: 17 files
2. Number of Document (.doc) Files: 2 files
3. After Examining the signature format of the files, Identify the following:  
What is the signature Format of JPEG files? vøvâ  
how many jpeg files have been altered?: None  
have you recovered the file back to its original format? Nothing to be recovered  
What is the signature format of a word document file? ĐĬ.à;±.á and PK  
how many doc files have been altered? None  
have you recovered the file back to its original format? Nothing to be recovered
4. After recovering the file into its original form.  
Number of JPEG Files: 17 files  
Number of Document (.doc) Files: 2 files
5. Use HASH calculator for the image file and the source file, and compare both hash values.

#### Source:

MD5 value: 514cad8d821a1404ece56c78ebc62b9d

SHA1 value : a8f7f7387396ef06a9eb0c73ee5b3ac96067cebb

#### Target:

MD5 value: 514cad8d821a1404ece56c78ebc62b9d

SHA1 value : a8f7f7387396ef06a9eb0c73ee5b3ac96067cebb

Does the output between the source and the target image render a similar value? Yes, it has the same hash value

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### Report Conclusion

#### Evidence Table

Fig #	Image Name:	Image	Date Deleted	Date Recovered
1	baby-wearing.jpg		3/21/2021	10/12/2022
2	baby1.jfif		3/20/2021	10/12/2022
3	baby2.jfif		3/21/2021	10/12/2022
4	baby3.jfif		3/21/2021	10/12/2022





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5	daughter janine at school.jfif		3/21/2021	10/12/2022
6	father daughter love.jfif		3/21/2021	10/12/2022
7	i love my little girl.jfif		3/21/2021	10/12/2022
8	me and janine.jfif		3/21/2021	10/12/2022

# Pedophile Case – James Carl Liboon


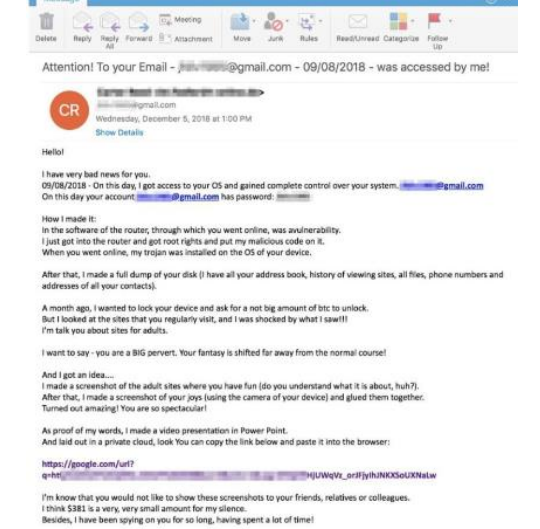
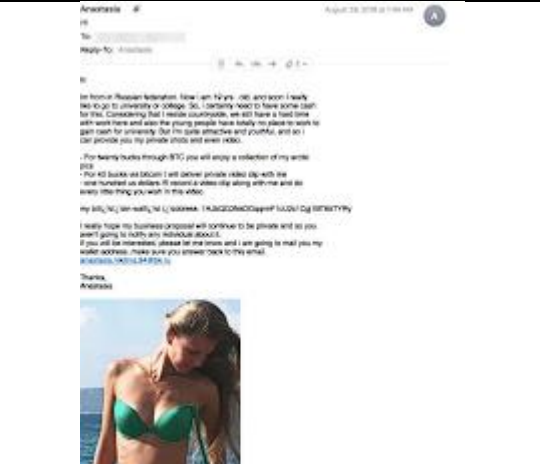
Acquired using: ADI3.1.5.0

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Using FTK Imager and all the available evidence, an image copy of the data was made in order to preserve the evidence. A laptop underwent considerable and thorough analysis using a digital forensic process. A major number of the 8 crucial photographs that were discovered after extensive file searching and the recovery of lost files—including those of James Carl Liboon, his wife, Janine, and their daughter—are displayed here. Other photographs also appear to be youngsters, although these kids have no connection to the people who were detained.

Fig #	Image Name:	Image	Date Deleted	Date Recovered
1	Screenshot-2020-04-20-at-15.59.04.png		3/21/2021	10/12/2022
2	sei_43779174-e47e.jpg		3/21/2021	10/12/2022
3	!image13.png		3/21/2021	10/12/2022

## **Pedophile Case – James Carl Liboon**

Acquired using: ADI3.1.5.0

Case Number: 101024-10

Evidence Number: 101024

Submitted by: Jomar Leaño

Although deleting pictures of oneself, one's wife, one's daughter, as well as other pictures of kids who aren't your own seems highly suspicious, it doesn't offer sufficient proof for one to be found guilty of pedophilia. Despite this, additional proof that points to sextortion was found in Mr. Liboon's laptop's erased files.

### **Report Recommendation**

Screenshots of emails that the sender is using for sextortion were on his laptop. There is not enough evidence to prove that James Carl Liboon is a pedophile based on the information found on his work laptop. He might simply be a devoted father who has no sexual or evil intentions. He may be devoted to his family, but there is evidence that he has been involved in numerous sextortion cases, indicating that he does not have the same regard for other women. As a result, James Carl Liboon might not be found guilty in this pedophilia case, but his sextortion-related activities need to be looked at more thoroughly.

After analyzing the data, the examiner has acquired sufficient evidence to bring charges against Kushiro Yamamoto from many drug case incidents. A trial is scheduled for the guilty, and we firmly support the harsh penalty of the accused based on the proof of several crimes that has been revealed.

# SF Quiz #4

**Due** No due date      **Points** 45      **Questions** 17  
**Available** after Nov 21 at 3pm      **Time Limit** 25 Minutes

## Instructions

Answer the quiz according to what is needed, this quiz is composed of multiple choice with multiple answers, fill in the blanks and Essay question. Take note that the quiz is time limited so make the most of your time, you cannot return to the previous questions, therefore make sure of your answers. If you cannot submit the quiz on time, the system will automatically submit your scores. Good luck!!!

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	24 minutes	31.5 out of 45

❗ Correct answers are hidden.

Score for this quiz: **31.5** out of 45

Submitted Nov 21 at 3:25pm

This attempt took 24 minutes.

### Question 1

12 / 12 pts

In order to be issued an SSL Certificate, you need to purchase one from a web service provider and then go through a process that entails the following:

**Purchasing SSL**

Place an order for an SS ▾

**Private Key and CSR  
Generation**

Prior to applying/enrollin ▾



<b>Private Key and CSR Generation</b>	Digital IDs make use of $e$ ✓
<b>Private Key and CSR Generation</b>	The Private Key will rem ✓
<b>Private Key and CSR Generation</b>	hosting server will gener ✓
<b>Enrollment</b>	Generated a minimum o ✓
<b>Enrollment</b>	This process is done froi ✓
<b>Enrollment</b>	The contact details that ✓
<b>Verification Process &amp; Certificate Issue</b>	After submitting the requ ✓
<b>Verification Process &amp; Certificate Issue</b>	This process is much fas ✓
<b>Verification Process &amp; Certificate Issue</b>	Ffter the CA is satisfied ✓
<b>Verification Process &amp; Certificate Issue</b>	After you have done the ✓

Partial

**Question 2****6 / 7 pts**

Identify the following prime numbers. choose all that apply.

☒ 751

☒ 347☒ 491☐ 720☐ 770☒ 421☒ 491☐ 910☐ 330☐ 6☒ 19**Question 3****1 / 1 pts**

Process of converting electronic data into another form, called cipher text, which cannot be easily understood by anyone except the authorized parties. This assures data security.

☒ Encryption☐ Hashing☐ Decryption☐ Digital Certificate

Incorrect

**Question 4****0 / 1 pts**

Type of cryptography also known as public-key cryptography. It uses public and private keys to encrypt and decrypt data.

Answer in lowercase only. No shortcuts, No abbreviation, No acronyms.

Incorrect

**Question 5****0 / 1 pts**

These are whole numbers greater than 1 whose only factors are 1 and itself. A factor is a whole number that can be divided evenly into another number.

Answer in lowercase only. No shortcuts, No abbreviation, No acronyms.

Incorrect

**Question 6****0 / 1 pts**

What type of encryption that the sender and receiver use different keys (aka two-key, and public-key)?

Answer in lowercase only. No shortcuts, No abbreviation, No acronyms

**Question 7****1 / 1 pts**

It is the process of attempting to discover the plain text or the key of an encrypted file.

- ☒ cryptanalysis
- ☐ steganography
- ☐ imaging
- ☐ acquisition

**Incorrect****Question 8****0 / 1 pts**

Basin on the figure below, this is an example of a \_\_\_\_\_?

Answer in lowercase only. No shortcuts, No abbreviation, No acronyms.

```

Data:
Version: 3 (0x2)
Serial Number: 1 (0x1)
Signature Algorithm: md5WithRSAEncryption
Issuer: C=ZA, ST=Western Cape, L=Cape Town, O=Thawte Consulting cc,
      OU=Certification Services Division,
      CN=Thawte Server CA/Email=server-certs@thawte.com
Validity
Not Before: Aug  1 00:00:00 1996 GMT
Not After : Dec 31 23:59:59 2020 GMT
Subject: C=ZA, ST=Western Cape, L=Cape Town, O=Thawte Consulting cc,
      OU=Certification Services Division,
      CN=Thawte Server CA/Email=server-certs@thawte.com
Subject Public Key Info:
  Public Key Algorithm: rsaEncryption
  RSA Public Key: (1024 bit)
    Modulus (1024 bit):
      00:d3:a4:50:6e:c0:ff:56:6b:e6:cf:5d:b6:ea:0c:
      68:75:47:a2:aa:c2:da:84:25:fc:a8:f4:47:51:da:
      85:b5:20:74:94:86:1e:0f:75:c9:e9:08:61:f5:06:
      6d:30:6e:15:19:02:e9:52:c0:62:db:4d:99:9e:e2:
      6a:0c:44:38:cd:fe:be:c3:64:09:70:c5:fe:b1:6b:
      29:b6:2f:49:c0:3b:d4:27:04:25:10:97:2f:e7:90:
      6d:c0:28:42:99:d7:4c:43:de:c3:f5:21:6d:54:9f:
      5d:c3:58:e1:c0:e4:d9:5b:b0:b8:dc:b4:7b:df:36:
      3a:c2:b5:66:22:12:d6:87:0d
    Exponent: 65537 (0x10001)
  X509v3 extensions:
    X509v3 Basic Constraints: critical
    CA:TRUE
Signature Algorithm: md5WithRSAEncryption
07:fa:4c:69:5c:fb:95:cc:46:ee:85:83:4d:21:30:8e:ca:d9:
a0:6f:49:1a:e6:da:51:e3:60:70:6c:04:61:11:a1:1a:c0:40:
3e:59:43:7d:4f:95:3d:a1:8b:b7:0b:62:98:7a:75:8a:dd:88:
4e:4e:9e:40:db:a8:cc:32:74:b9:6f:0d:c6:e3:b3:44:0b:d9:
8a:6f:9a:29:9b:99:18:28:3b:d1:e3:40:28:9a:5a:3c:d5:b5:
e7:20:1b:8b:ca:a4:ab:8d:e9:51:d9:e2:4c:2c:59:a9:da:b9:
b2:75:1b:f6:42:f2:cf:c7:f2:18:f9:89:bc:a3:ff:8a:23:2e:
70:47

```

rivest-shamir-adleman

## Question 9

1 / 1 pts

A type of cryptography that uses public and private keys to encrypt and decrypt data. The keys are simply large numbers that have been paired together but are not identical. One key in the pair can be shared with everyone; it is called the public key, while the other key serves as the private key used to decipher the encrypted data.

- ☒ asymmetric cipher
- ☐ advance encryption standard

- ☐ symmetric cipher
- ☐ data encryption standard

**Question 10****1 / 1 pts**

It is the assurance that someone cannot deny the validity of something. It is also a legal concept that is widely used in information security and refers to a service, which provides proof of the origin of data and the integrity of the data.

- ☐ integrity
- ☐ hashing
- ☒ non-repudiation
- ☐ authenticity

**Question 11****1 / 1 pts**

It is a widely accepted type of digital certificated by international public key infrastructure standards to verify that a public key belongs to the user, computer, or service identity contained within the certificate.

Answer in lowercase only. No shortcuts, No abbreviation, No acronyms

**Question 12****1 / 1 pts**

It is a cryptographic algorithm that can be used to protect electronic data, its main strength rests in the option for various key lengths, a 128-bit, 192-bit or 256-bit key, the algorithm is a symmetric block cipher that can encrypt (encipher) and decrypt (decipher) information.

- ☐ symmetric cipher
- ☐ asymmetric cipher
- ☐ data encryption standard
- ☒ advance encryption standard

**Partial****Question 13****2.5 / 5 pts**

Identify the different types of Digital Certificates by Matching Column A with Column B

**Server Certificates**Allows visitors to exchan **▼****Server Certificates**are used by corporate er **▼****Personal Certificates**Prove authorship and rel **▼****Personal Certificates**These are perfect for bu: **▼****Corporate Certificates**Client Certificates or Dig **▼**

Corporate Certificates	These are perfect for bu: ▼
Developers Certificates	Prove authorship and rel ▼
Developers Certificates	Used to sign software or ▼

Partial

Question 14

3 / 5 pts

Identify the 2 different types of SSL Certificates by Matching Column A with Column.

Basic SSL certificate	It allows you to secure o ▼
Basic SSL certificate	This certificate is quite w ▼
Basic SSL certificate	If you want to also anoth ▼
Wildcard SSL certificate	allows you to secure you ▼
Wildcard SSL certificate	This is best suited for lar ▼



**Question 15****2 / 2 pts**

Which of the following are the basic SSL Certificates?

Choose all that applies.

- ☐ Wildcard Server
- ☐ SSL 256
- ☐ Positive SSL Wildcard
- ☐ SSL 128
- ☒ SSL123
- ☒ Positive SSL

**Incorrect****Question 16****0 / 2 pts**

What are the 2 things does SSL Certificates do?

- ☒ Authenticate your website's identity.
- ☒ Encrypt the information sent from your website visitor's browser to your website
- ☒ encrypting communication between the website and its users.
- ☒ used when a website wants to accept sensitive information like passwords, credit card details and other sensitive information.



protects your customer's personal data including passwords, credit cards and identity information.

Incorrect

### Question 17

0 / 2 pts

What are the 3 Popular Forms of Encryption? answer in lowercase only

advanced encryptic

\_\_\_\_\_

data encryption stal

\_\_\_\_\_

rivest-shamir-aldeir

\_\_\_\_\_

**Answer 1:**

advanced encryption standard

**Answer 2:**

data encryption standard

**Answer 3:**

rivest-shamir-aldeman

Quiz Score: **31.5** out of 45

# SF-Quiz #5: Test 1

**Due** No due date      **Points** 45      **Questions** 30  
**Available** after Nov 23 at 3pm      **Time Limit** 45 Minutes

## Instructions

Answer the quiz according to what is needed, this quiz is composed of multiple choice with multiple answers, fill in the blanks and Essay question. Take note that the quiz is time limited so make the most of your time, you cannot return to the previous questions, therefore make sure of your answers. If you cannot submit the quiz on time, the system will automatically submit your scores. Good luck!!!

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	34 minutes	30.3 out of 45

❗ Correct answers are hidden.

Score for this quiz: **30.3** out of 45

Submitted Nov 23 at 3:35pm

This attempt took 34 minutes.

### Question 1

1 / 1 pts

It is an electronic attachment document used for security purposes that is used to identify an individual, a server, a company, or some other entity, and to associate that identity with a public key.

☐ private key infrastructure

☒ digital certificate

- ☐ digital signature
- ☐ public key infrastructure

**Question 2****1 / 1 pts**

It is a set of roles, policies, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates and manage public-key encryption. Its purpose is to facilitate the secure electronic transfer of information for a range of network activities such as e-commerce, internet banking and confidential email.

- ☐ digital certificate
- ☐ digital signature
- ☒ public key infrastructure
- ☐ private key infrastructure

**Question 3****1 / 1 pts**

It is a mathematical technique used to validate the authenticity and integrity of a message, software or digital document. It guarantees that the contents of a message have not been altered in transit.

- ☐ advance encryption standard
- ☐ data encryption standard
- ☐ digital certificate

- ☒ digital signature

**Question 4****1 / 1 pts**

It is a cryptographic algorithm that can be used to protect electronic data, its main strength rests in the option for various key lengths, a 128-bit, 192-bit or 256-bit key, the algorithm is a symmetric block cipher that can encrypt (encipher) and decrypt (decipher) information.

- ☐ data encryption standard
- ☒ advance encryption standard
- ☐ asymmetric cipher
- ☐ symmetric cipher

**Incorrect****Question 5****0 / 1 pts**

The oldest and most used cryptographic ciphers, the key that decipheres the cipher text is the same key enciphers the plaint text, this key is often referred to as the secret key..

- ☐ asymmetric cipher
- ☒ stream cipher
- ☐ symmetric cipher
- ☐ block cipher

**Question 6****1 / 1 pts**

It is a pioneering encryption algorithm that helped revolutionize encryption, it is symmetric type encryption method developed in 1975 and standardized by ANSI in 1981 as ANSI X. It uses 56 bit and 48 bit key and 64 bit block cipher.

- ☒ data encryption standard
- ☐ symmetric cipher
- ☐ asymmetric cipher
- ☐ advance encryption standard

**Question 7****1 / 1 pts**

A type of cryptography that uses public and private keys to encrypt and decrypt data. The keys are simply large numbers that have been paired together but are not identical. One key in the pair can be shared with everyone; it is called the public key, while the other key serves as the private key used to decipher the encrypted data.

- ☐ symmetric cipher
- ☐ data encryption standard
- ☒ asymmetric cipher
- ☐ advance encryption standard

**Question 8****1 / 1 pts**

These are whole number greater than 1 whose only factors are 1 and itself. A factor is a whole numbers that can be divided evenly into another number.

answer in lowercase only.

prime number

**Incorrect****Question 9****0 / 1 pts**

It is one of the first public-key cryptosystems and is widely used for secure data transmission, in such a cryptosystem, the encryption key is public and it is different from the decryption key which is kept secret or private. It is widely used for securing sensitive data, particularly when being sent over an insecure network such as the Internet.

☐ dsa

☐ aes

☐ rsa

☒ des

**Question 10****1 / 1 pts**

These are number of positive integers that are relatively prime to (or do not contain any factor in common with the given numbers) and where 1 is counted as being relatively prime to all numbers.

**Incorrect****Question 11****0 / 1 pts**

Write the formula of the euler's function:

totient = ?

answer in lowercase only, no spacing.

**Question 12****1 / 1 pts**

It is an art and science of transforming messages so as to make them secure and immune to attacks.

answer in lowercase only



cryptography

**Question 13****2 / 2 pts**

What are the two basic principles of encryption? answer in lowercase only

substitution

transposition

**Answer 1:**

substitution

**Answer 2:**

transposition

**Question 14****1 / 1 pts**

What type of encryption that the sender and receiver use the same key (aka single-key, and secret-key)?

answer in lowercase only.

symmetric

**Question 15****1 / 1 pts**

What type of encryption that the sender and receiver use different keys (aka two-key, and public-key)?

answer in lowercase only.

**Question 16****1 / 1 pts**

Type of encryption processing that processes the input in a block of elements at a time (typically 64-bits)?

- ☐ symmetric cipher
- ☐ asymmetric cipher
- ☐ stream cipher
- ☒ block cipher

**Question 17****1 / 1 pts**

It is the process of attempting to discover the plain text or the key of an encrypted file.

- ☒ cryptanalysis

- ☐ imaging
- ☐ aquisition
- ☐ steganography

**Question 18****1 / 1 pts**

It is a standalone malware computer program that replicates itself in order to spread to other computers. Often, it uses a computer network to spread itself, relying on security failures on the target computer to access it.

- ☐ malware
- ☒ worm
- ☐ trojan
- ☐ virus

**Question 19****1 / 1 pts**

It is any malicious computer program which is used to hack into a computer by misleading users of its true intent, it does not have the ability to replicate itself however, it can lead to viruses being installed on a machine since they allow the computer to be controlled by the its creator.

- ☐ worm viruses
- ☐ worm replicator
- ☒ trojan horse virus

☐ malware**Question 20****1 / 1 pts**

It is a trial and error method used by application programs to decode encrypted data such as passwords or Data Encryption Standard (DES) keys, through exhaustive effort rather than employing intellectual strategies.

answer in lowercase only

**Partial****Question 21****2.8 / 4 pts**

Identify the following prime numbers. choose all that apply.

☒ 19☒ 491☐ 770☐ 910☐ 720☒ 751☐ No answer text provided.

☐ 6☒ 347☒ 421☒ 7☐ No answer text provided.☐ 330☒ 643

Incorrect

**Question 22****0 / 3 pts**

What are the 3 Popular Forms of Encryption? answer in lowercase only

des

rsa

aes

**Answer 1:**

des

**Answer 2:**

rsa

**Answer 3:**

aes

**Question 23****1 / 1 pts**

Find the N value in the formula  $c = m^e \bmod N$ , if  $p = 389$ ;  $q = 719$ .

answer in plain numbers, no commas

**Partial****Question 24****4 / 5 pts**

Find the totient or  $\phi N$ .

$p=283$ ;  $q=101$ ; \_\_\_\_\_

$p=22$ ;  $q=313$ ; \_\_\_\_\_

$p=917$ ;  $q=179$ ; \_\_\_\_\_

$p=907$ ;  $q=881$ ; \_\_\_\_\_

$p=241$ ;  $q=887$ ; \_\_\_\_\_

answer in plain number no commas

---

**Answer 1:**28200

---

**Answer 2:**6552

---

**Answer 3:**163048

---

**Answer 4:**797280

---

**Answer 5:**212640

---

**Partial****Question 25****1.5 / 2 pts**

Using the steps in RSA algorithm, find the possible number for  $e$  or the encryption key.

if  $p = 2$ ;  $q = 13$

---

☐ 13

---

☐ 9

---

☒ 11

---

☐ 3

---

☐ 19

---

☐ 15☒ 5☒ 7

Incorrect

**Question 26****0 / 1 pts**

Using the steps in RSA algorithm, find the possible number for **e** or the encryption key.

if  $p = 2$ ;  $q = 13$ ;  $e = 11$

☐ 41☒ 7☒ 11☐ 37☐ 23**Question 27****1 / 1 pts**

It is widely accepted type of digital certificated by international public key infrastructure standards to verify that a public key belongs to the user, computer or service identity contained with in the certificate.

answer in lowercase only



**Question 28****1 / 1 pts**

Is a trusted entity that manages and issues security certificates and public keys that are used for secure communication in a public network. Its job is to issue certificates, to verify the holder of a digital certificate, and to ensure that holders of certificates are who they claim to be.

answer in lowercase only, no abbreviation.

**Incorrect****Question 29****0 / 1 pts**

Find the co-primes of the result and given numbers, if  $p = 3$  and  $q = 7$

1. what is the  $\phi(N) = [a]$  \_\_\_\_\_

**Partial****Question 30****1 / 5 pts**

Find the co-primes of the result and given numbers, if  $p = 3$  and  $q = 7$

1. What are the co-primes?

☐ 12

☐ 19

☐ 20

☐ 9

☐ 15

☒ 7

☒ 17

☒ 13

☐ 6

☐ 18

☐ 10

☐ 3

Quiz Score: **30.3** out of 45

# SF Quiz #5: Test 2

**Due** No due date

**Points** 26

**Questions** 7

**Available** after Nov 23 at 3:30pm

**Time Limit** 30 Minutes

## Instructions

Answer the quiz according to what is needed, this quiz is composed of multiple choice with multiple answers, fill in the blanks and Essay question. Take note that the quiz is time limited so make the most of your time, you cannot return to the previous questions, therefore make sure of your answers. If you cannot submit the quiz on time, the system will automatically submit your scores. Good luck!!!

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	12 minutes	20 out of 26

❗ Correct answers are hidden.

Score for this quiz: **20** out of 26

Submitted Nov 23 at 3:53pm

This attempt took 12 minutes.

Incorrect

### Question 1

0 / 2 pts

Write the formula of the euler's function:

totient = ?

Answer in lowercase only. No shortcuts, No abbreviation, No acronyms

phi(n)

**Question 2****2 / 2 pts**

Find the N value in the formula  $c = m^e \bmod N$ , if  $p = 389$ ;  $q = 719$ .

answer in plain numbers, no commas

**Partial****Question 3****8 / 10 pts**

Find the totient or  $\phi N$ .

$p=283$ ;  $q=101$ ; \_\_\_\_\_

$p=22$ ;  $q=313$ ; \_\_\_\_\_

$p=917$ ;  $q=179$ ; \_\_\_\_\_

$p=907$ ;  $q=881$ ; \_\_\_\_\_

$p=241$ ;  $q=887$ ; \_\_\_\_\_

answer in plain number no commas

---

**Answer 1:**

28200

**Answer 2:**

6552

**Answer 3:**

163048

**Answer 4:**

797280

**Answer 5:**

212640

**Partial**

#### **Question 4**

**1 / 3 pts**

Using the steps in RSA algorithm, find the possible number for **e** or the encryption key.

if  $p = 2$ ;  $q = 13$

☐ 19

☒ 11

☒ 5

☒ 7

☐ 13

☐ 9

☐ 15

☐ 3

### Question 5

2 / 2 pts

Using the steps in RSA algorithm, find the possible number for **e** or the encryption key.

if  $p = 2$ ;  $q = 13$ ;  $e = 11$

☐ 7

☒ 11

☐ 37

☐ 41

☐ 23

### Question 6

2 / 2 pts

Find the co-primes of the result and given numbers, if  $p = 3$  and  $q = 7$

1. what is the  $\phi(N) = [a]$  \_\_\_\_\_

12

### Question 7

5 / 5 pts

Find the co-primes of the result and given numbers, if  $p = 3$  and  $q = 7$

1. What are the co-primes?

☐ 12

☐ 3

☐ 18

☐ 7

☒ 10

☒ 17

☐ 6

☒ 20

☒ 13

☒ 19

☐ 15

☐ 9

Quiz Score: **20** out of 26