1. What is the primary purpose of the project "Cryptography Using DSA in C Programming"?

- A) To build a graphical interface for encryption

- B) To implement data structures for cryptographic functions

- C) To create network-based cryptographic communication

- D) To visualize cryptographic algorithms

**Correct Answer: B) To implement data structures for cryptographic functions**

2. Which data structure is primarily used to store key materials and ciphertext in this project?

- A) Linked List

- B) Stack

- C) Array

- D) Queue

**Correct Answer: C) Array**

3. Which mathematical concept is fundamental in this project for encryption and decryption?

- A) Linear Algebra

- B) Number Theory

- C) Calculus

- D) Trigonometry

**Correct Answer: B) Number Theory**

4. What is the role of modular arithmetic in this cryptography project?

- A) To generate user interfaces

- B) To manage memory allocation

- C) To perform encryption and decryption operations

- D) To handle file input and output

**Correct Answer: C) To perform encryption and decryption operations**

5. Which algorithm is implemented in this project for encryption and decryption?

- A) DES

- B) AES

- C) RSA

- D) Blowfish

**Correct Answer: C) RSA**

6. In this project, what does DSA stand for?

- A) Data Structure Algorithm

- B) Digital Signature Algorithm

- C) Distributed System Algorithm

- D) Dynamic Security Algorithm

**Correct Answer: B) Digital Signature Algorithm**

7. What is the purpose of the hashing function in this project?

- A) To encrypt data

- B) To generate unique signatures

- C) To sort data

- D) To store data in memory

**Correct Answer: B) To generate unique signatures**

8. Which library is primarily used for handling large integer arithmetic in this project?

- A) math.h

- B) stdlib.h

- C) gmp.h

- D) string.h

**Correct Answer: C) gmp.h**

9. What is a suggested future enhancement for the "Cryptography Using DSA in C Programming" project?

- A) Integrating a graphical user interface

- B) Removing the encryption feature

- C) Adding more data structures

- D) Limiting encryption to small data sizes only

**Correct Answer: A) Integrating a graphical user interface**

10. Which type of validation is essential for ensuring correct key input in this project?

- A) Network validation

- B) File-based validation

- C) Client-side validation only

- D) Range and type validation

**Correct Answer: D) Range and type validation**

11. Which operation is crucial for generating public and private keys in this project?

- A) Matrix multiplication

- B) Prime number generation

- C) String concatenation

- D) File handling

**Correct Answer: B) Prime number generation**

12. What is the purpose of digital signatures in this project?

- A) To encode data for network transmission

- B) To authenticate the identity of the sender

- C) To store encrypted passwords

- D) To compress large files

**Correct Answer: B) To authenticate the identity of the sender**

13. In the context of this project, which of the following is a suitable use case for hashing?

- A) Encrypting messages

- B) Verifying data integrity

- C) Sorting key values

- D) Compressing data

**Correct Answer: B) Verifying data integrity**

14. Which key length is considered more secure in the RSA algorithm implemented in this project?

- A) 64 bits

- B) 128 bits

- C) 256 bits

- D) 2048 bits

**Correct Answer: D) 2048 bits**

15. Which of the following is a common challenge addressed by this project in cryptographic systems?

- A) Slow data retrieval

- B) Key management and storage

- C) Displaying graphics

- D) Network latency

**Correct Answer: B) Key management and storage**