

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI - 600 086**  
**(For candidates admitted during the academic year 2019 – 2020)**

**SUBJECT CODE: 19CS/MC/SC65**

**B. C. A. DEGREE EXAMINATION, APRIL 2022**  
**SIXTH SEMESTER**

**COURSE : MAJOR CORE**  
**PAPER : SECURITY CONCEPTS**  
**TIME : 3 HOURS**

**MAX. MARKS: 100**

**SECTION A**

**ANSWER ALL QUESTIONS:**

**(20 X 1 = 20)**

**Fill in the blanks:**

1. Asynchronous token also called as \_\_\_\_\_ provides a new onetime password with each use of the token.
2. \_\_\_\_\_ is the process of identifying physical assets and assigning criticality and value to them.
3. The boundary between an organization's network and the Internet or a peered network, much akin to a parcel property line, is known as an \_\_\_\_\_.
4. Operating system security model is also known as \_\_\_\_\_.
5. \_\_\_\_\_ was designed to provide confidentiality through encryption, authentication of endpoints, and secure key management.
6. A client connecting to more than one remote network at a time is commonly referred to as \_\_\_\_\_.
7. The most common approach to securing the data in a database is \_\_\_\_\_.
8. \_\_\_\_\_ services are often the most common functions of databases in organizations and are responsible for receiving and storing information.
9. Schemes used for encryption constitute the area of study known as \_\_\_\_\_.
10. \_\_\_\_\_ of a finite set of elements is an ordered sequence of all the elements, with each element appearing exactly once.

**Choose the correct option:**

11. \_\_\_\_\_ involves modification of data stream or creation of false stream.  
a. Passive attack    b. Active attack    c. Masquerade    d. Reply of message
12. A \_\_\_\_\_ channel is established by defining a route through the Internet from source to destination and by the cooperative use of communication protocols.  
a. Logical information    b. Gateway    c. Secret information    d. Third party
13. Second-generation firewalls were able to keep track of active network sessions and therefore referred as \_\_\_\_\_  
a. Circuit gateways    b. Stateless firewalls    c. Stateful firewalls    d. VOIP
14. The Windows \_\_\_\_\_ is responsible for validating Windows process access permissions against the security descriptor for a given object.  
a. Tamperproof    b. Security Reference Monitor    c. TCB    d. Subject to pre-emption

15. \_\_\_\_\_ can be either a purposed appliance or a piece of software that runs on a common or specialized server operating system.  
 a. VoIP system    b. IDS system    c. firewall-based system    d. VPN based system
16. Virtual private network is referred to as a \_\_\_\_\_ because the client does not know or care about the actual path between the two endpoints.  
 a. Principals    b. Intrusions    c. Tunnel\_    d. mean points
17. \_\_\_\_\_ can live anywhere, in any format, and on any device, and can move across any network.  
 a. Structured data    b. Unstructured data  
 c. Structured segmented data    d. Semi unstructured data
18. Isolating data traffic between LANs via the switch is accomplished through the use of \_\_\_\_\_.  
 a. Tamper proofing    b. Zoning    c. Mantrap    d. Routing
19. In \_\_\_\_\_, attacker tries every possible key on a piece of cipher-text until an intelligible translation into plaintext is obtained.  
 a. Masquerade attack    b. man in middle attack    c. replay attack    d. Brute-force attack
20. \_\_\_\_\_ is essentially a development process that includes security practices and decision-making inputs.  
 a. Secure development lifecycle    b. Secure Application Design    c. Protocol design  
 d. None of the mentioned

### SECTION - B

Answer **ALL** the questions

(5 X 2 = 10)

21. What are the three key objectives of computer security?  
 22. Define cryptanalysis.  
 23. What is articulated from a well-formed transaction?  
 24. What is Intrusion detection?  
 25. Illustrate simplified model of symmetric encryption.

### SECTION - C

Answer any **EIGHT** questions

(8 X 5 = 40)

26. Brief about common types of tokens.  
 27. Explain the concept of Reference monitor.  
 28. How does a Virtual private network work?  
 29. Brief about Cryptography and Brute-Force Attack  
 30. Write about storage networks in connection with modern storage security.  
 31. Brief about the capabilities of a firewall.  
 32. Explain the concept of Steganography  
 33. Brief about any two components of VOIP.  
 34. Discuss about any two wireless vulnerabilities and mitigations.  
 35. Explain the network security model.

**SECTION – D**

**Answer any THREE questions**

**(3 X 10 = 30)**

36. Elaborate on Computer security and different types of attacks.
37. Explain about IPSec as a protocol for VPN.
38. Explain about database security layers.
39. Explain the various types of IDS and detection models.
40. Elaborate on Symmetric Cipher Model.

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