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# VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination, April 2020 (2014 Admission Onwards) CORE COURSE IN COMPUTER SCIENCE 6B16CSC:E06: Information Security

Time: 3 Hours

#### PART - A

- 1. a) An attack that threatens confidentiality of information is \_\_\_\_\_\_
  b) The process of converting cipher text to plain text is \_\_\_\_\_\_
  c) The art and science of creating secret code is \_\_\_\_\_\_
  d) An example for block cipher is \_\_\_\_\_\_
  e) Expand DES.
  f) Give an attack on RSA signature.
  - g) RSA stands for \_\_\_\_\_
  - h) Secret key encryption is \_\_\_\_\_ encryption.

 $(8 \times 0.5 = 4)$ 

#### PART - B

# Answer any seven.

- Define integrity.
- 3. What are viruses?
- 4. What are substitution ciphers? Give an example.
- 5. What is a public key?
- 6. Mention any two applications of steganography.
- 7. What are block ciphers?

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- 8. What is message authentication?
- 9. What is a brute force attack?
- 10. What is Non-Repudiation?
- 11. Give an overview of encryption and decryption with DES.

 $(7 \times 2 = 14)$ 

#### PART - C

# Answer any four.

- 12. Which are the keys used in public key cryptosystems? How are they used?
- 13. What are the security goals?
- 14. Explain the permutation steps in DES.
- 15. Explain the properties of a block cipher.
- 16. Compare conventional signatures and digital signatures.
- 17. What is the need for keys in digital signatures?

 $(4 \times 3 = 12)$ 

#### PART - D

## Answer any two.

- 18. Explain transposition ciphers.
- 19. Write notes on Security of DES.
- 20. Explain the applications of key cryptosystems.
- 21. Explain RSA Algorithm.

 $(2 \times 5 = 10)$