

Module 3: Multiple-choice questions

1. Among the benefits from industrial cyber systems are all of the following, except for:
 - a) Efficient and scalable production
 - b) Optimized performance and improved flexibility and speed
 - c) Improved machine intelligence
 - d) All of the answers represent benefits from industrial cyber systems
2. Among the smart agriculture applications are all of the following except for:
 - a) Farm vehicles
 - b) Improved work ethics
 - c) Irrigation systems
 - d) Livestock operation
3. All of the following are true, except for:
 - a) SCADA stands for "Site Control And Data Acquisition"
 - b) DCS stands for "Directed Contribution Systems"
 - c) SCADA and DCS started as separate systems but have grown together
 - d) All of the answers are true
4. Which of the following is not element of SCADA:
 - a) Communication
 - b) Master Terminal Units
 - c) Micro Terminal Units (MTU)
 - d) RTUs/PLCs
5. All of the following are true, except for:
 - a) RTU means Remote Terminal Unit
 - b) RTU means Remote Telemetry Units
 - c) RTUs are electronic devices with intelligent microprocessor
 - d) All of the above are true
6. All of the following are true, except for:
 - a) PLC stands for Programmable Logic Controller
 - b) PLC stands for Programmable Logistic Controller
 - c) PLC controls manufacturing process
 - d) PLC is an industrial digital computer that replaced traditional relays
7. All of the following are true for a SCADA server, except for:
 - a) SCADA server provides data logging
 - b) SCADA server analyzes data
 - c) SCADA server is a real-time decision maker
 - d) SCADA server is ensuring proper communication between two devices
8. Among the security vulnerabilities in engineering systems are all of the following, except for:
 - a) Remote devices are hard to upgrade
 - b) There are few firewall options
 - c) All traffic is on just one port
 - d) All of the above are examples of vulnerabilities in engineering systems
9. Among the advanced authentication methods in engineering systems are:
 - a) Digital certificates
 - b) Biometrics

- c) All of the above
 - d) None of the above
10. All of the following are types of ransomware except for:
- a) Custom ransomware
 - b) Targeted ransomware
 - c) Zero-day ransomware
 - d) Common ransomware
11. All of the following are techniques for data protection in engineering systems, except for:
- a) Cryptology
 - b) Cryptanalysis
 - c) Crypto-mapping
 - d) Cryptography
12. Possible attacks for engineering systems include:
- a) Ciphertext but not known plaintext
 - b) Known plaintext but not chosen plaintext or chosen ciphertext
 - c) Chosen plaintext but not chosen ciphertext
 - d) None of the above are correct answers
13. Which of the following is not true:
- a) Within symmetric key cryptography, there are two types of ciphers: stream ciphers and block ciphers
 - b) Within asymmetric key cryptography, there are two types of ciphers: stream ciphers and block ciphers
 - c) In the stream ciphers the data are fed into the algorithm in small pieces (bits or characters), and the output is produced in corresponding small pieces
 - d) In the Block ciphers, a block of input bits is collected and fed into the algorithm all at once and the output is a block of bits.
14. All of the following about public key communication are true, except for:
- a) They are very powerful, and it might seem that they make the use of symmetric key cryptography obsolete
 - b) A downside of public key communication is that the added flexibility is not free and comes at a computational cost
 - c) Public key methods are good for encrypting large quantities of data
 - d) Public key methods should not be used for encrypting large quantities of data
15. All of the following are cryptographic applications, except for:
- a) Data integrity
 - b) Confidentiality
 - c) Authentication
 - d) All of the above are cryptographic applications
16. All of the following are security design principles, except for:
- a) Least privilege principle
 - b) Fail-safe default
 - c) Maximization of secrets
 - d) Complete mediation