

4012 Points

Courses
CIS 444: Computer Networking
CIS 521/421: Introduction to Information Assurance
CIS 522/422: Computer Forensics and Incidence Response
CIS 523/423: Disaster Recovery and Business Continuity
CIS 524/424: Information Assurance Risk Assessment
CIS 525/425: Principles of Cryptography

* = Can include a summary justification for that section.

FUNCTION 1 - GRANT FINAL ATO

A. Responsibilities

1. Aspects of Security

*Explain the importance of SSM role in Information Assurance (IA)

X

2. Accreditation

*Discuss accreditation

X

Discuss the certification process leading to successful accreditation

X

Explain the importance of accreditation

X

Explain types of accreditation

X

Facilitate the certification process leading to successful accreditation

X

Discuss the significance of NSTISSP No. 6

X

B. Approvals

1. Approval to Operate (ATO)

*Explain ATO

X

Discuss purpose and contents of ATO

X

Explain the importance of risk assessment to support granting an ATO

X

2. Interim Approval to Operate (IATO)

*Describe IATO

X

Explain the purpose and contents of IATO

X

Explain the importance of risk assessment to support granting an IATO

X

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Facilitate implementation of risk mitigation strategies necessary to obtain IATO		X				
3. Recertification						
*Describe recertification		X				
Direct the recertification effort		X				
Explain the importance of the recertification process		X				
Identify characteristics of information systems that need re-certification		X				
Initiate the recertification effort		X				
4. Systems Security Authorization Agreement (SSAA)						
*Discuss the Systems Security Authorization Agreement (SSAA)		X				
Explain the importance of the SSAA		X				
5. Waive Policy to Continue Operation						
*Discuss justification for waiver		X				
Discuss risk mitigation strategies necessary to obtain waiver		X				
Ensure risk assessment supports granting waiver		X				
FUNCTION 2 - REVIEW ACCREDITATION						
A. Threats						
1. Attacks						
*Discuss threats/attacks to systems		X			X	
Explain the importance of threats/attacks on systems		X			X	
2. Environmental/Natural Threats						
*Discuss environmental/natural threats		X		X		
3. Human Threats						
*Explain the importance of intentional and unintentional human threats		X				
4. Theft						
*Explain the importance of theft		X	X			

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5. Threat							
*Explain threat			X			X	
Explain the importance of organizational threats			X			X	
6. Threat Analysis							
*Explain the importance of threat analysis			X			X	
7. Threat Assessment							
*Explain the importance of threat assessment			X			X	
B. Countermeasures							
1. Education, Training, and Awareness as Countermeasures							
*Explain the importance of educational training, and awareness as countermeasures			X			X	
Ensure educational training, and awareness countermeasures are implemented			X			X	
2. Procedural Countermeasures							
*Explain the importance of procedural/administrative countermeasures			X			X	
Ensure procedural/administrative countermeasures are implemented			X				
3. Technical Countermeasures							
*Explain the importance of automated countermeasures/deterrents			X			X	
Explain the importance of technical countermeasures/deterrents			X			X	
Ensure technical/automated countermeasures/deterrents are implemented			X				
C. Vulnerability							
1. Vulnerability							
*Explain vulnerability			X			X	
2. Vulnerability Analysis							
*Explain the importance of vulnerability analysis			X			X	

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3. Network Vulnerabilities							
*Explain the importance of network vulnerabilities						X	
4. Technical Vulnerabilities							
*Explain the importance of technical vulnerabilities						X	
D. Risk Management							
1. Cost/Benefit Analysis of Information Assurance							
*Explain the importance of cost/benefit analysis of information assurance						X	
2. Documentation							
*Explain the importance of documentation role in reducing risk						X	
3. Risk							
*Explain risk			X				
Discuss principles of risk			X			X	
4. Risk Assessment							
*Explain the importance of risk assessment			X			X	
5. Risk Management							
*Explain the importance of risk management			X			X	
6. Residual Risk							
*Explain residual risk			X			X	
7. Risk Acceptance Process							
*Explain the importance of the risk acceptance process			X				
8. Systems Security Authorization Agreement (SSAA)							
*Explain the importance of the certification and accreditation (C&A) effort leading to accreditation			X				
Discuss the contents of SSAA			X				
Discuss the purpose of SSAA			X				
Ensure the certifier understands the mission and it is reflected in SSAA the C&A effort leading to SSAA			X				
Facilitate effort leading to SSAA			X				

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Explain the importance of implications of the Freedom of Information Act and Electronic Freedom of Information Act				X			
Explain the importance of Public Law 107-347, E-Government Act Of 2002, Title III, Federal Information Security Management Act (FISMA), 17 Dec 02			X	X			
Explain the importance of implications of the legal responsibilities of senior systems managers			X				
Explain the importance of implications of the Privacy Act			X	X			
Discuss implications of Public Law 107-347 regarding certification and accreditation			X				
7. Legal and Liability Issues							
*Explain the importance of legal and liability issues as they apply to system and mission			X				
8. Ethics							
*Discuss ethics			X				
B. Policy Direction							
1. Access Control Policies							
*Explain the importance of access control policies			X				X
2. Administrative Security Policies And Procedures							
*Explain the importance of administrative security policies/procedures			X				
3. Audit Trails and Logging Policies							
*Explain the importance of audit trail policy						X	
Explain the importance of logging policies						X	
4. Documentation Policies							
*Explain the importance of documentation policies						X	
5. Evidence Collection and Preservation Policies							
*Explain the importance of evidence collection/preservation policies				X			
6. Information Security Policy							

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*Define information security policy			X				
Explain the importance of information security policy			X				
7. National Information Assurance (IA) Certification & Accreditation (C&A) Process Policy							
*Explain the importance of the National Information Assurance (IA) Certification & Accreditation (C&A) Policy			X				
8. Personnel Security Policies & Guidance							
Explain the importance of personnel security guidance			X				
C. Security Requirements							
1. Access Authorization							
*Explain the importance of access authorization			X				
2. Auditable Events							
*Explain auditable events						X	
3. Authentication							
*Explain authentication			X				X
4. Background Investigations							
*Explain the importance of background investigations			X				
5. Countermeasures							
*Explain the importance of countermeasures			X				
6. Delegation of Authority							
*Discuss the importance of delegation of authority			X				
Ensure that individuals are assigned to perform IA functions			X				
7. Education, Training, and Awareness							
*Explain the importance of education, training, and awareness as countermeasures			X			X	
Ensure educational, training, and awareness countermeasures are implemented			X			X	
8. Electronic Records Management							
*Discuss electronic records management			X				
Explain the importance of electronic records management			X				
9. Electronic-Mail Security							

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*Discuss electronic-mail security						X
Explain the importance of electronic-mail security						X
10. Information Classification						
*Discuss information classification		X		X		
Explain the importance of information classification		X		X		
11. Investigative Authorities						
*Discuss investigative authorities			X			
Explain the importance of investigative authorities			X			
12. Key Management Infrastructure						
*Discuss key management infrastructure						X
13. Information Marking						
*Discuss information marking		X		X		
14. Non-repudiation						
*Discuss non-repudiation					X	
Explain the importance and role of non-repudiation					X	
15. Public Key Infrastructure (PKI)						
Explain the importance and role of PKI		X				X
FUNCTION 4 - ENSURE ESTABLISHMENT OF SECURITY						
A. Administration						
1. Accountability for Classified/Sensitive Data						
*Explain the importance of accountability for sensitive data		X		X		
Discuss classification and declassification of information		X		X		
2. Automated Security Tools						
*Explain the importance of automated security tools					X	
3. Backups						
*Discuss backups		X		X		
Explain the importance of backups		X		X		
4. Change Control/Configuration Management						
*Discuss change control		X				
Discuss configuration management		X				
Explain the importance of configuration management		X				

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5. Declassification/Downgrade of Media							
*Explain the importance of downgrade of media			X		X	X	
Discuss the importance of downgrade of information			X		X	X	
6. Destruction/Purging/Sanitization of Classified/Sensitive Information							
*Explain the importance of destruction/purging/sanitization procedures for classified/sensitive information			X		X	X	
B. Access							
1. Access Controls							
*Define manual/automated access controls			X				
Explain the importance of manual/automated access controls			X				
2. Access Privileges							
*Explain the importance of access privileges			X				
3. Discretionary Access Controls							
*Discuss discretionary access controls			X				
Explain the importance of discretionary access controls			X				
4. Mandatory Access Controls							
*Define mandatory access controls			X				
Explain the importance of mandatory access controls			X				
5. Biometrics/Biometric Policies							
*Explain biometric policies			X				
6. Separation of Duties							
*Define the need to ensure separation of duties where necessary			X				
Explain the importance of the need to ensure separation of duties where necessary			X				
7. Need-To-Know Controls							
*Define need to know controls			X				
Explain the importance of need to know controls			X				
C. Incident Handling And Response							
1. Emergency Destruction Procedures							

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*Explain the importance of emergency destruction procedures					X		
2. Organizational/Agency Information Assurance Emergency Response Teams							
*Explain the role of organizational/agency information assurance emergency response teams					X		
D. Continuity Of Operations Planning							
1. Business Recovery							
*Define business recovery			X		X		
Explain the importance of business recovery			X		X		
2. Contingency/Continuity of Operations Planning							
*Explain the importance of contingency/continuity of operations planning			X		X		
Ensure the establishment and testing of contingency/continuity of operations plans					X		
3. Disaster Recovery							
*Explain the importance of disaster recovery			X		X		
4. Disaster Recovery Plan							
*Explain the importance of recovery plan			X		X		
Ensure the establishment and testing of recovery plans					X		
5. Incident response policies							
*Explain the importance of incident response policy					X		
6. Law enforcement interfaces/policies							
*Discuss law enforcement interfaces				X			
Discuss law enforcement policies				X			
Explain the importance of law enforcement interfaces				X			
7. Reconstitution							
*Define principles of system reconstitution					X		
Explain the importance of principles of system reconstitution					X		
8. Restoration							
*Explain the importance of restoration to continuity of operation					X		

FUNCTION 5 - ENSURE PROGRAM MANAGERS DEFINE

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*Discuss system security architecture							
Explain how system security architecture supports continuity of operations CONOPS						X	
FUNCTION 6 - ASSIGN RESPONSIBILITIES							
N/A							
1. Certification and Accreditation (C&A)							
*Discuss responsibilities associated with accreditation			X				
Discuss roles associated with certification			X				
Explain importance of certification and accreditation (C&A)			X				
Facilitate the C&A process			X				
2. Information Ownership							
*Explain the importance of establishing information ownership						X	
3. System Certifiers and Accreditors							
*Discuss risk as it applies to certification and accreditation			X				
4. Risk Analysts							
*Discuss risk analyst's reports			X				
Discuss systems certifiers and accreditors in risk mitigation			X				
5. Information System Security Manager (ISSM)							
*Define the role of Information Assurance Manager (ISSM)			X				
6. Information System Security Officer (ISSO)							
*Define the role of System Security Officer (ISSO)			X				
FUNCTION 7 - DEFINE CRITICALITY AND SENSITIVITY							
N/A							
1. Aggregation							
*Explain the importance of the vulnerabilities associated with aggregation						X	
2. Disclosure of Classified/Sensitive Information							
*Explain the liabilities associated with disclosure of classified/sensitive information			X		X		
FUNCTION 8 - ALLOCATE RESOURCES							
N/A							

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1. Resource Roles and Responsibilities							
*Discuss the respective roles and responsibilities of resource management staff			X				
Assign/appoint key resource managers			X				
2. Budget/Resource Allocation							
*Evaluate the information assurance budget			X				
Explain the importance of the information assurance budget			X				
Defend the budget for information assurance			X				
3. Business Aspects of Information Security							
*Discuss business aspects of information security						X	
Discuss protection of commercial proprietary information						X	
Explain the importance of business aspects of information security						X	
Explain the importance of protecting commercial proprietary information						X	
FUNCTION 9 - MULTIPLE AND JOINT ACCREDITATION							
N/A							
1. Memoranda of Understanding/Agreement (MOU/MOA)							
*Explain the importance of MOU/MOA			X				
Facilitate development and execution of MOU/MOA			X				
FUNCTION 10 - ASSESS NETWORK SECURITY							
N/A							
1. Connectivity							
*Discuss connected organizations		X					X
Discuss connectivity involved in communications		X					X
Explain the importance of connectivity involved in communications		X					X
2. Emissions Security (EMSEC) and TEMPEST							
*Define TEMPEST requirements			X				
Discuss threats from Emissions Security (EMSEC)			X				

Discuss threats from TEMPEST failures
 Explain the importance of the threats from Emissions Security (EMSEC)
 Explain the importance of the threats from TEMPEST failures.

3. Wireless Technology
 *Discuss electronic emanations
 Discuss threats from electronic emanations
 Explain the importance of wireless technology
 Explain the risks associated with portable wireless systems, viz., PDAs, etc.
 Explain the importance of vulnerabilities associated with connected systems wireless technology

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Discuss threats from TEMPEST failures		X				
Explain the importance of the threats from Emissions Security (EMSEC)		X				
Explain the importance of the threats from TEMPEST failures.		X				
3. Wireless Technology						
*Discuss electronic emanations	X					X
Discuss threats from electronic emanations						X
Explain the importance of wireless technology	X					X
Explain the risks associated with portable wireless systems, viz., PDAs, etc.						X
Explain the importance of vulnerabilities associated with connected systems wireless technology						X