NDIA
AT THE HEART OF THE MISSION

PROGRAM SUMMARY AND STUDY GUIDE

Configuration And Data Management Certification

NDIA Technical Information Division | Professional Certification Section
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This document contains summary information and study guidance for individuals preparing for the NDIA Professional Certification Examination in Configuration and Data Management. It is not to be construed as a complete guide or as a guarantee of success in the examination.

As of November 2024

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NDIA

WHO WE ARE

The National Defense Industrial Association is the trusted leader in defense and national security associations. As a 501(c)(3) corporate and individual membership association, NDIA engages thoughtful and innovative leaders to exchange ideas, information, and capabilities that lead to the development of the best policies, practices, products, and technologies to ensure the safety and security of our nation. NDIA's membership embodies the full spectrum of corporate, government, academic, and individual stakeholders who form a vigorous, responsive, and collaborative community in support of defense and national security. For more than 100 years, NDIA and its predecessor organizations have been at the heart of the mission by dedicating their time, expertise, and energy to ensuring our warfighters have the best training, equipment, and support. For more information, visit **NDIA.org**

FOREWORD

This document contains summary information and study guidance for individuals preparing for the National Defense Industrial Association (NDIA) Professional Certification Examination in Configuration and Data Management (CDM). It is not to be construed as a complete guide or as a guarantee of success in the examination. The study guide lists, but does not include, references used as a basis for the examination. Whether you are preparing for the Manager, Specialist, or Apprentice Examination, the study guide can assist you. It is in your best interest to review the study guide prior to initiating a study plan.

The references listed under "Examination References" should be available from the technical library at the organization where you work or from the sponsoring industry organization such as ANSI/IEEE. These references are also available for order from Global Engineering Documents in Englewood, CO. Department of Defense (DoD) and Military (MIL) documents are available for download on the DoD and MIL websites as well as from the ASSIST Database at quicksearch.dla.mil or at dsp.dla.mil.

This document will be updated on an annual basis to account for significant additions, deletions, or changes that are required to assure current information is provided to the recipients of the information listed herein.

Questions or comments concerning the Professional Certification Section or this document should be directed to the following contacts.

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TECHNICAL INFORMATION DIVISION

WHO WE ARE

The Technical Information Division (TID) is concerned with all aspects of technical documentation—concept, analysis, preparation, management, control, and dissemination. The Division's fields of interest include the configuration management of drawings, specifications, and digital data; management of engineering drawings, specifications, and standards; data management; policies and processes; computer-aided documentation techniques; and International Organization for Standardization requirements. The Division has developmental and administrative responsibility over the NDIA Configuration and Data Management (CDM) Certification Program.

CDM CERTIFICATION

PROGRAM HIGHLIGHTS

- Combined configuration and data management certification reflecting global trends in the CDM profession
- Focus on configuration and data management in commercial, government, and international applications with significant emphasis on data management
- Examinations based on industry, government and international guidance standards, which form the basis for current CDM processes, including an entry-level examination as part of the Apprentice Program
- Recertification process providing currency options for previously NDIA-certified CDM professionals
- Scheduled certification preparation courses in conjunction with NDIA events focused on CDM
- Examinations available upon request at specified locations in the United Kingdom and elsewhere
- Available on-site preparation courses and certification examinations for companies

NDIA CERTIFICATION

PROGRAM SUMMARY

The configuration and data management disciplines are critically important in the design, development, production, test, integration, and maintenance of complex products. These disciplines are vital and have many global applications in both commercial and government circumstances. Most organizations recognize CDM processes as keystones in two of the most critical business requirements: managing risk and controlling cost. Thus, more often than not, CDM is a value-added, essential part of business.

Accordingly, a reliable means to identify and recognize well-qualified, experienced CDM professionals is essential to establish professionalism in these disciplines. The NDIA Technical Information Division initiated CDM certification in 1990. The NDIA CDM Certification continues to be the most recognized and respected program due to its continuing adherence to the requirement of candidates meeting high standards in terms of experience and knowledge. In 1990, a one-time “grandfather” program provided a vehicle for NDIA to certify individuals who had qualifying “lifetime experience” of at least 15 years in CM and DM plus a four-year college degree. More than 200 CM and DM professionals received approval as Certified Configuration Managers (CCM) and Certified Data Managers (CDM). Since 1991, individuals with the required experience and the successful completion of the examination continue to earn the NDIA certification. The United Kingdom conducted the first certifications in 2000, now offering certifications each year.

Not surprisingly, many individuals view the CDM discipline as an avenue for applying their talents to the business world. Accordingly, the NDIA TID has established a CDM Apprentice Program that provides a method for entry-level individuals to be designated as a CDM Apprentice, which sets up a progression ladder leading toward CDM certification after attaining the NDIA experience requirements for certification. This program also allows those entering into the discipline to become knowledgeable of the functional aspects of CDM and, thereby, determine whether they desire to continue in the discipline.

PROGRAM ENHANCEMENTS

During the past few years, significant changes have taken place in DoD, NASA, and commercial acquisition processes. DoD reform has focused on reducing reliance on DoD/MIL specifications and standards, increasing the use of performance specifications, and emphasizing cost savings associated with the use of Commercial Off-the-Shelf (COTS) and Non-Developmental Items (NDI). In a parallel manner, there have been significant increases in commercial CDM applications, many of which are associated with the global industry’s use of ISO Quality Management System Standards that focus on CDM as well as on EIA-649 (Consensus Standard for Configuration Management) and ISO/IEC 12207-2008 (Software Life Cycle Processes). These guidance documents form the basis of current CDM processes. The need to balance cost competitiveness and professional CDM processes drives these changes.

The NDIA CDM Certification undergoes a yearly review to ensure that it remains current with changes in the CDM discipline. This yearly review examines new or revised industry, government, and international guidance standards for inclusion, normally following the year after their release. Examination questions are heavily weighted toward generic CDM rather than government contract CDM; however, the majority of the individuals who apply for the NDIA CDM Certification work on government contracts. NDIA offers certifications internationally as configuration and data management processes are inherently worldwide in scope, with specific concentration in the United Kingdom. Many international applications incorporate the industry-based CDM processes developed and currently used in commercial and government contracts. Each certification examination includes relevant ISO/IEC international guidance documents, including the ISO 9000 Quality Management system series, with primary focus on CDM subjects.

In January 2003, NDIA initiated a CDM Recertification Program, providing an option for individuals who already received an NDIA CDM Certification. With major continuing changes in the discipline, such as those identified herein, NDIA recognizes that no certification can be valid indefinitely. Recertification provides a way for those already certified to renew their certification every five years. There are optional methods available. The Recertification Plan containing the policy and process is on the NDIA website at NDIA.org/Education.

EXAMINATION AND CANDIDATE REQUIREMENTS

NDIA has established two CDM certification levels: CDM Manager and CDM Specialist. To qualify for the Manager-level certification, 10 years of combined CDM experience is required; to qualify for the Specialist-level certification, five years of combined CDM experience is required. The examinations are extensive, cover the major functions of CDM, and are in four parts—each consisting of objective and essay questions. Objective questions are of three difficulty levels: easy, moderate, and difficult. While Manager-level certification questions consist of the moderate and difficult categories, Specialist-level certification questions consist of the easy and moderate categories. Essay questions are based on the increasing experience levels of Specialist and Manager candidates. The passing score is 70%; the average success rate for those without specific preparation training is 52%. Examination schedules are typically posted after major conferences supported by NDIA or upon request by an organization/company. The examination requires a full day to complete.

NDIA PROGRAM BENEFITS

BENEFITS OF THE NDIA APPRENTICE PROGRAM

The NDIA CDM Apprentice Program, initiated in September 2003, is not a CDM Certification Program. However, candidates who successfully pass the CDM Apprentice Examination receive a certificate from NDIA. To qualify for the CDM Apprentice Examination, fewer than five years of combined CDM experience is required. The examination is considerably less difficult than the examination required of the Specialist- and Manager-level certifications; however, it does include the same CDM functional knowledge as the current Specialist- and Manager-level examinations. The examination is in four parts—each consisting of objective and essay questions. Essay questions are appropriate for the entry-level experience of typical Apprentice-level candidates. The passing score is 70%. Examination schedules are typically posted after major conferences supported by NDIA or upon request by an organization/company.

Many individuals have recommended that the NDIA Technical Information Division initiate a recognition program for the growing number of individuals who have recently entered the CDM discipline but do not meet the minimum five years of experience for certification. In response, the NDIA TID created this Apprentice program, providing a track for individuals who intend to remain in the CDM field and work toward NDIA CDM Certification. This Apprentice program also allows such individuals to achieve designation as a CDM Apprentice as well as recognition by peers and management alike for their serious intent to progress in the discipline while they work toward NDIA CDM Certification after acquiring the required five years of experience. It is expected that those achieving designation as a CDM Apprentice will receive some of the same benefits as NDIA-certified CDM professionals.

BENEFITS OF NDIA CERTIFICATION

The Technical Information Division CDM Certification is now in its 26th year, and those achieving the designation are realizing the many benefits of certification. First, they receive recognition among their peers as experienced, exceptionally well-qualified CDM professionals who have proven themselves by meeting the high standards established by NDIA. Second, their certification is sponsored and authorized by the world's most prominent government-industry association. While there are other certification programs, none requires the combined experience and knowledge standards established by the NDIA TID. There is no equivalent certification!

Additionally, the broad recognition of NDIA CDM Certification throughout government and industry as well as internationally has resulted in many benefits for NDIA-certified individuals and the companies or agencies where they are employed. For example:

- There are requests for proposals (RFPs) asking that developers use NDIA-certified professionals to perform CDM. This fact has motivated more companies to not only support staff certification but also hire certified staff.
- When you are NDIA certified, you can easily apply your status and knowledge to help your organization become or remain ISO certified.
- Many companies emphasize in RFP responses that NDIA-certified CDM professionals will be working on their contracts.
- Some job descriptions now require NDIA CDM Certification to be considered prior to promotion to higher-level CDM positions.
- Increasingly, companies and government agencies sponsor employee candidates by paying certification fees and associated travel expenses. This sponsorship is an important method of demonstrating support for CDM staff and the certification program.

CERTIFICATION PREPARATION COURSE

The Professional Certification Section of the TID Executive Board presents an intensive two-day preparation course designed to prepare individuals for the certification examination. The preparation course is available throughout the year and continues to be offered because many candidates have indicated that their company or agency provides little effective training to assist CDM staff in achieving certification. Many CDM practitioners have little experience in the broad range of activities and processes of the discipline; thus, the primary thrust of the course is to provide insight into functions and processes. The course includes and emphasizes industry and international CDM practices, including applicable guidance standards itemized in the study guide, as well as government acquisition policies and contracting processes. The course is conducted by NDIA-certified CDM Managers approved by the NDIA TID.

The course has a proven record of effectiveness, with a more than 80% success rate for candidates completing the NDIA TID course versus a 52% success rate for candidates completing other preparation. Most all who complete the NDIA TID course have endorsed its effectiveness in providing candidates a powerful edge in the examination.

COURSE LOGISTICS

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ADDITIONAL INFORMATION

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CERTIFICATION FEES

TWO-DAY PREP COURSE AND EXAMINATION

NDIA Member Prep Course and Exam (in person)	$700
NDIA Member Prep Course and Exam (virtual)	$600
Non-Member Prep Course and Exam (in person)	$800
Non-Member Prep Course and Exam (virtual)	$750
Prep Course and Retake Exam (in person)	$500
Prep Course and Retake Exam (virtual)	$450
Prep Course (in person)	$350
Prep Course (virtual)	$300

EXAMINATION ONLY

NDIA Members (in person)	$350
NDIA Members (virtual)	$350
Non-Members (in person)	$450
Non-Members (virtual	$450
Retake Exam (in person)	$150
Retake Exam (virtual)	$250

RECERTIFICATION (EXAMINATION ONLY)

NDIA Members (In person)	$275
Non-Members (Virtual)	$330

NOTE: All application fees are listed in U.S. Dollars, include a one-year NDIA membership, and are subject to change. These fees apply to the course and examination when conducted in conjunction with the conferences supported by NDIA and listed in the schedule. Contact Chuck Billingsley for information regarding course fees at other locations.

EXAMINATION SCHEDULE

An NDIA CDM Certification Examination Schedule is available online when locations are identified and can be accessed at NDIA.org/CDMSchedule. Contact Chuck Billingsley for additional unpublished examination locations made available throughout the year.

TECHNICAL INFORMATION DIVISION PROFESSIONAL CERTIFICATION SECTION

The NDIA TID Professional Certification Section manages NDIA CDM Certification activities. The Section Chair reports to the Chair of the TID Executive Board. The Section Chair champions and promotes program expansion; prepares the study guide and examinations; coordinates schedules; conducts examinations at locations determined by demand; scores examinations; requests certification awards be mailed; and maintains certification records.

Professional Certification Section members (and other individual contributors) develop the certification preparation course, instruct the preparation course, and administer the examination on behalf of NDIA. The TID Executive Board approves Professional Certification Section membership.

YOU MUST ACT TO BECOME NDIA CERTIFIED. The purpose of this program summary is to provide information for those interested in NDIA CDM Certification. However, just knowing about the program does nothing to benefit you! If you are active in commercial, government, or international CDM and have or will soon have the experience levels stated herein, now is the time to prepare for your career advancement by attaining an NDIA CDM Certification. Remember: Only you are responsible for, most interested in, and qualified to manage your career! You can achieve certification through NDIA and, as a result, realize the recognition and benefits of being an NDIA-certified CDM professional. In today's business environment, you need every edge you can obtain. NDIA CDM Certification formally identifies and recognizes you as an experienced and skilled CDM professional. Ask yourself this question: In today's global environment, can I afford not to be NDIA-certified as a CDM professional?

CERTIFICATION STUDY GUIDE

THE CONFIGURATION AND DATA MANAGEMENT EXAMINATION

NDIA offers separate CDM examinations for Specialist- and Manager-level candidates, with the difference being degree of difficulty. The examination questions, based on "best practice" processes, are appropriate for the each experience level. The questions reflect the guidance provided in the references listed at the end of this guide and can be answered successfully using the candidate's knowledge and years of experience. **The Specialist- and Manager-level examinations have four parts, each consisting of 40 objective questions and five essay questions, three of which must be answered**. Objective questions are valued at 40% of the total score while essay questions are valued at the remaining 60%. The examination is closed book and requires a full day to complete. The examination is scheduled between 8:00 am and 5:00 pm local time, with appropriate breaks between parts.

In addition, NDIA offers a separate CDM examination for Apprentice-level candidates, with questions that are appropriate for entry-level experience; are based primarily on "best practice" CDM processes used in commercial, government, and international applications; and reflect the guidance provided in the references listed at the end of this guide. **The Apprentice-level examination has four parts, each consisting of 60 objective questions and one essay question.** Administration of the apprentice examination is in conjunction with the Certification Examination described above.

Following is a breakdown of the certification examination by subject area.

PART 1

CDM Functions and Principles; Identification; Engineering Drawings; Specifications; Requests for Proposals

- CM and DM Planning and Management
- Configuration Identification
- Specifications
- Product Identifiers
- CDM Responses to Requests for Proposals
- Engineering Drawings: Types, Associated Lists, and Engineering Drawing Practices
- Data Item Descriptions (DIDs) and Data Acquisition Documents
- Software Lifecycle Data

PART 2

Change Management: Data Preparation and Accuracy

- CM and DM Planning and Management
- Request for Change: Types of Change, Classification, and Request for Variance
- Managing Document Changes and Engineering Drawing Revisions;
- Managing Product Configuration Information
- Contract Data Management
- Technical Data Planning
- Software CM Change Management

PART 3

Configuration Status Accounting: CSA Systems; CSA Data; Reports; Interface Control; and Software Libraries

- CM and DM Planning and Management
- Configuration Status Accounting Process: CSA Systems and Data
- Technical Data Packages: Types, Purposes, and Baselines
- Performance Measurement (Metrics)
- Organizing Product Information and Software Libraries
- Managing Interfaces and Use of ICWGs
- DFARS: Legal Aspects of Technical Data

PART 4

Configuration Management Plan Verification and Audit; COTS/NDI Issues; International CDM: ISO Standards; and Technical Data Inspection

- CM and DM Planning and Management
- Verification: Hardware, Software, Methods, and Processes
- Reviews and Audits: Types
- Developer/Customer/Supplier Audit Responsibilities and Locations
- International CDM: ISO Standards
- Managing COTS Issues
- Data Accuracy: Inspection and Acceptance of Technical Data

CERTIFICATION PREPARATION AND EXAMINATION GUIDANCE

PREPARING FOR THE EXAMINATION

Keep in mind the following tips when preparing for the certification examination:

1. The average score for all applicants is 71%, with an average scoring range from 40% to 91%.
2. 90% of those who pass the examination score between 70% and 78%; 90% of those who do not pass the examination score between 55% and 68%.
3. The breakdown for reference sources for questions is approximately as follows:
    - Industry Standards 45%
    - International Standards 35%
    - DoD and MIL Standards 20%

The following study methods are recommended:

1. Study the reference materials and use them in preparing for the examination. Be sure to get the benefit of those with experience and knowledge in areas where you are least experienced.
2. Remember that this is not an examination of your current job; it covers the entire CDM discipline as documented in the reference materials.

TAKING THE EXAMINATION

Answering Objective Questions

1. Read every word of each Multiple-Choice. True/False, or Mix-and-Match question and answer. Evaluate each answer before making your selection. Do not skim over questions or quickly select the answer you first think is the correct one. For multiple-choice questions, eliminate “far-out” answers to increase your success rate percentage.
2. Answer every objective question; a blank answer counts as an incorrect answer.

RESPONDING TO ESSAY QUESTIONS

No specific answers are provided for sample essay questions in this study guide; however, the following is provided as guidance for preparing essay responses.

Read the question thoroughly to assure you understand the necessary responses. All essay questions are constructed in the following format:

1. An introductory paragraph identifying the subject area of the question. (Do not respond to this paragraph)
2. The basic question. (Do not respond to this question as it is so broad your answer could be too extensive for the time allowed)
3. The question focus points are numbered and are the specific areas you need to address in your response. Number your response accordingly. Each focus point will have an assigned point value.

When responding to all of the focus points, it is your responsibility to convince the scoring team of your focus area knowledge. You are writing to a group of NDIA-certified CDM professionals who understand the business and who assign points based on their perception of your knowledge as you have demonstrated it. Give thorough and complete responses that go beyond simple one-line answers in the lined pages that follow the essay question.

Essay question scoring is done in a subjective manner. There are no canned answers. However, the scoring team may use reference citations for guidance. At least three members of the team perform scoring independently; then, the team lead assigns a final score.

Specific references are not required when responding to the essay questions. However, be sure to include sufficient information in your response to convince the scoring team of your knowledge of the focus area.

PASSING THE EXAMINATION

There are two ways to pass the examination: 1) Achieve an minimum total score of 70%, which requires at least 280 of the maximum 400 points, or 2) Without an minimum total score of 70%, each of the four examination parts are scored individually and, when 70% is achieved on any part, that part is passed. Individuals who do not pass the entire examination may retake the failed sections at any exam location (by application) within a 24-month period. If the examination is not completed and passed within 24 months, the examination process starts anew.

EXAMINATION SCORING

All examination scoring is completed by at least three NDIA-certified CDM professionals. The Team Lead, a Certified CDM Manager, reviews all examination scores. Certified CDM Managers score Manager-level examinations and may score Specialist- and Apprentice-level examinations. Certified CDM Specialists score Specialist- and Apprentice-level examinations. It typically takes three weeks to receive scores via email, including a score summary for each part of the examination. Examination booklets are not returned to candidates.

SAMPLE EXAMINATION QUESTIONS

The following questions are provided for illustration purposes and may or may not be in the current Examination Database. References may or may not be current.

PART 1

MULTIPLE CHOICE

A Vendor Item Control drawing:

A. Provides a description and acceptance criteria for commercial or vendor-developed items procurable from a specialized segment of industry

B. Was formerly called a specification control drawing

C. Is no longer used on commercial drawings

D. A, B, and C

E. A and B

Answer: E (Ref: ASME Y14.24, Sec. 10.2)

TRUE/FALSE

A software configuration identification scheme should cover elements of the software engineering environment.

Answer: T (Ref: ISO 12207.2, Par. 6.2.2.1 Guidance)

ESSAY

To maintain effective configuration identification, there may be no more important activity than the assignment of product identifiers. All products are assigned unique identifiers so one product may be distinguished from other products; one configuration of a product may be distinguished from another; the source of a product may be determined; and the correct product information may be retrieved.

Discuss product identifiers, levels of product identifiers, individual unit vs. group identifiers, and document identifiers.

Focus on the following in your response:

1. Identify/State specific reasons for assigning product and document identifiers. (3 points)
2. Describe the basic uses of product and document identifiers. (4 points)
3. State specifically the developer interest in identifiers. (3 points)
4. State specifically the customer interest in identifiers. (3 points)
5. Explain the identifier relationship between a part and its design document. (2 points)
6. Describe the methodology for identifying individual units of a product versus identifying groups of units of a product. (2 points)
7. Describe/Identify the guideline for assigning a new unique product identifier to an existing product. (3 points)

NOTE: It is recommended that you provide a significant response for each focus area. Provide enough information to allow the scoring team to evaluate your level of knowledge of the focus area.

References: EIA 649B IEEE 828/1042; ISO 10007; ISO TR 15846; MIL STD 973

PART 2

MULTIPLE CHOICE

The process for controlling changes should be documented and includes:

A. A description of, justification for, and record of the change

B. Details of how the change should be disposition

C. Details of how the change should be implemented and verified

D. A, B, and C

E. None of the above

Answer: D (Ref: ISO 10007 Par. 5 .4)

TRUE/FALSE

Software configuration management may be performed by combinations of software, methods, tools, and techniques; and, SCM requirements will vary considerably depending on which tools are used to implement SCM.

Answer: F (Ref: ISO TR 15846 Intro. Page 1)

ESSAY

Describe the primary functions necessary when processing proposed changes, including: Evaluation; Impact Assessment; Effectivity; Cost; Approval/Disapproval; Implementation; and Verification.

Summarize significant elements of the change management process.

Focus on the following in your response:

1. Describe/Define change management. (4 points)
2. Itemize the functions/tasks of change management. (6 points)
3. Describe the content and purpose of each change management function. (10 points)

NOTE: Base the response on your experience and knowledge. The scoring team will evaluate your answer based on the accuracy and depth of information you provide for each focus areas.

References: EIA 649; EIA 649 Handbook; ISO 10007; ISO 12207-2008; IEEE 828; ISO TR 15846

PART 3

MULTIPLE CHOICE

Inspection of TDP elements includes which of the following:

A. A customer assigned identification

B. Legibility and reproducibility

C. Accuracy of subcontractor references

D. A, B, and C

E. None of the above.

Answer: B (Ref: MIL STD 31000)

TRUE/FALSE

When data provided is on physical media such as disks or tapes, appropriate identification is affixed to the media to identify its contents. When it is impractical to include the entire file identification, an additional media item with the needed complete data should be provided.

Answer: F (Ref: EIA 649)

ESSAY

On acquisition contracts, there are various methods to determine the need for technical information, the type information, and its delivery schedule. The information can range from design, performance, and manufacturing information to installation, operation, and maintenance data.

Summarize the types of product information that may be included in a product acquisition contract; use either a commercial or DoD acquisition scenario.

Focus on the following in your response:

1. Describe methods that may be used to determine the data provided. (8 points)
2. Discuss major risk factors involved for the developer and customer. (6 points)
3. Describe various types of technical information that developers typically prepare, and their use and value to the users. (6 points)

NOTE: Base your response on your experience, training, and knowledge.

References: ISO 9000; ISO 9001; EIA 649; ISO 12207-2008; DOD 5010.12M; EIA 859

PART 4

MULTIPLE CHOICE

The configuration verification and audit function:

A. Ensures product quality and that a state-of-the-art design has been achieved

B. Establishes that the performance and functional requirements defined in configuration documentation have been met

C. B and E

D. Identifies potential cost overruns

E. Validates the processes used to provide adequate control and visibility

Answer: C (Ref: EIA 649 Par. 5.5)

TRUE/FALSE

The release and delivery of software products and documentation are formally controlled configuration management activities.

Answer: T (Ref: ISO 12207)

ESSAY

As in many other areas of CDM, the requirements and basics of the discipline are similar as they are applied to both hardware and software products. However, there are aspects of software that often require configuration management to use some different tools and processes, and to fully consider the varying attributes of software. Specifically, the software verification and validation process must determine if the software product fulfills the requirements.

Discuss software verification and validation processes in terms of the below subjects.

Focus on the following in your response:

1. Define software verification and software verification process. (2 points)
2. Define software validation and software validation process. (2 points)
3. List the specific tasks of software verification. (4 points)
4. Describe/Itemize/List the activities for each software verification task. (8 points)
5. Describe/Itemize/List the activities of each software validation task. (4 points)

NOTE: No specific reference need be used in responding to this question. Include sufficient information in your response to convince the scoring team of your knowledge in each focus area.

References: IEEE 12207-2008

PROGRAM SUCCESS

When evaluating any certification program, the number of individuals certified is an important consideration and is one valid measure of its success. The NDIA CDM Certification is the clear industry leader—by far. As of June 2024, NDIA has certified several thousands of configuration and data management professionals.

EXAMINATION REFERENCES

Weight numbers "1" and "2" have been assigned to the references below; "1" requires the most study and "2" the least. Essay questions are based on subject matter addressed in references weighted "1." The current NDIA CDM Certification preparation course covers all reference documents listed below. **NOTE:** The best references for each year become available at the end of December.

INDUSTRY STANDARDS

Weight	Document Number	Title
1	EIA 649	National Consensus Standard for Configuration Management
2	EIA HDBK 649	National Consensus Standard for Configuration Management
2	EIA 649-1	SAE Configuration Management Requirements for Defense Contracts
2	EIA 649-2	Configuration Management Requirements for NASA Enterprises
1	ANSI/IEEE 828	IEEE Standard for Software Configuration Management Plans
1	ANSI/IEEE 1042	Software Configuration Management [Withdrawn] still being used, thus it is still in the reference list
1	ASME Y14.24	Types and Applications of Engineering Drawings
1	ASME Y14.34	Associated Lists
1	ASME Y14.35	Revision of Engineering Drawings and Associated Lists
2	ASME Y14.41	Digital Product Definition Data Practices
1	ASME Y14.100	Engineering Drawing Practices
2	EIA 859	Data Management
2	EIA – HB - 859	Implementation Guide for Data Management

INTERNATIONAL STANDARDS

Weight	Document Number	Title
1	IEEE STD 12207-2008	Systems and Software Engineering – Software Life Cycle Processes
1	ISO/IEC/IEEE 15289	Systems and Software Engineering – Content of Life Cycle Information Products (documentation)
2	UNI CEI ISO/IEC TR 15846	Technical Report Information Technology – Software Life Cycle Processes – Configuration Management 2004-08-01
1	ISO 9000	Quality Management Systems-Fundamentals and Vocabulary
1	ISO 9001	Quality Management Systems - Requirements
2	ISO 9004	Quality Management Systems – Managing for the sustained success of an organization - A quality management approach
2	ISO 10007	Quality Management – Guidelines for Configuration Management

GOVERNMENT STANDARDS AND SPECIFICATIONS

Weight	Document Number	Title
1	DoD 5010.12-M	Procedures for the Acquisition & Management of Technical Data
1	MIL STD 961	Defense and Program Unique Specifications Format and Content
2	MIL STD 963	Preparation Item Descriptions
1	MIL STD 973 (Notice 5)	Configuration Management [Cancelled] continues to be used, thus it is still in the reference list
2	MIL STD 31000	Standard Practice – Technical Data Packages
1	MIL HDBK 61	Configuration Management Guidance