



Knowledge for Creating
and Sustaining
the Built Environment

CERTIFIED CONSTRUCTION CONTRACT ADMINISTRATOR PROGRAM

CCCA EXAMINATION STUDY GUIDE

**THE CONSTRUCTION SPECIFICATIONS INSTITUTE
99 CANAL CENTER PLAZA, SUITE 300
ALEXANDRIA, VA 22314
(P) 800-689-2900 (F) 703-684-0465
(E) csi@csinet.org (W) www.csinet.org**

This Page Deliberately Left Blank

CERTIFIED CONSTRUCTION CONTRACT ADMINISTRATOR EXAMINATION STUDY GUIDE

(For use in preparation for exams to be administered March 2009 or thereafter)

PROGRAM OVERVIEW	1
EXAM OVERVIEW	2
SOURCE MATERIALS	3
PREPARING FOR THE EXAM.....	4
STUDY GUIDE ORGANIZATION.....	6
ABBREVIATIONS/ACRONYMS.....	7
Study Unit No. 1 – Documents Used During Construction and Project Delivery Methods.....	8
Study Unit No. 2 – Roles and Responsibilities	10
Study Unit No. 3 – Preconstruction	11
Study Unit No. 4 – Procurement.....	13
Study Unit No. 5 – Meetings	15
Study Unit No. 6 – Submittals	16
Study Unit No. 7 – Site Visits, Observations, and Inspection.....	18
Study Unit No. 8 – Quality Assurance and Quality Control	20
Study Unit No. 9 – Interpretations and Modifications	21
Study Unit No. 10 – Executing the Work.....	23
Study Unit No. 11 – Claims and Disputes.....	24
Study Unit No. 12 – Measurement and Payment.....	26
Study Unit No. 13 – Project Closeout.....	28
Study Unit No. 14 – Facility Management.....	30
SAMPLE QUESTION FORMATS.....	31
NOTES	33
USER RESPONSE FORM – CCCA EXAMINATION STUDY GUIDE.....	35

This Page Deliberately Left Blank

PROGRAM OVERVIEW

Congratulations on taking the career-enhancing step of studying for the Certified Construction Contract Administrator (CCCA) examination! The Construction Specifications Institute (CSI) sincerely hopes that you will be among the candidates who successfully demonstrate their knowledge of the construction process by achieving a passing score on the exam and utilizing the CCCA certification to improve the quality of the design, specification, construction, and management of the built environment.

Objective

The objective of the CCCA Program is to improve construction administration and to accomplish the following:

1. Provide a means for construction contract administrators to demonstrate their knowledge in these areas:
 - a. Construction Process
 - b. Contractual Relationships
 - c. Construction Contract Administration Procedures
2. Encourage the elevation of the competence of construction contract administrators
3. Enhance the image of construction contract administrators
4. Encourage construction contract administrators to become familiar with construction contract administration principles as recommended by CSI

Definition of Certified Construction Contract Administrator

A Certified Construction Contract Administrator is a person who has successfully completed both the Construction Documents Technology (CDT) and CCCA examinations, and has demonstrated the minimum knowledge and ability to administer a contract for construction as prescribed by CSI.

Qualifications of a Certified Construction Contract Administrator

1. Fulfill Application Requirements:
 - a. Submit written application for examination.
 - b. Pay examination fee.
2. Meet Application Prerequisites:
 - a. CDT certificate holder.
 - b. A minimum of 2 years of experience in the construction administration process.
3. Pass the CCCA examination with a score of 75 or higher.
4. Maintain designation by adhering to renewal requirements.

Membership in CSI is not required.

EXAMINATION OVERVIEW

The exam includes 200 questions, each worth 1/2 point for a total of 100 points. A passing score on the exam is 75 or higher. Candidates have four hours to complete the exam.

Exam Summary

The proportion of the exam dedicated to each subject area is as follows:

Study Unit No.1: Documents Used During Construction and Project Delivery Methods	6%
Study Unit No. 2: Roles and Responsibilities	4%
Study Unit No. 3: Preconstruction	5%
Study Unit No. 4: Procurement	8%
Study Unit No. 5: Meetings	5%
Study Unit No. 6: Submittals	8%
Study Unit No. 7: Site Visits, Observation, and Inspection	10%
Study Unit No. 8: Quality Assurance and Quality Control	6%
Study Unit No. 9: Interpretations and Modifications	16%
Study Unit No. 10: Executing the Work	6%
Study Unit No. 11: Claims and Disputes	8%
Study Unit No. 12: Measurement and Payment	7%
Study Unit No. 13: Project Closeout	8%
Study Unit No. 14: Facility Management	3%

SOURCE MATERIALS

The examination is based solely on the following documents and this study guide:

CSI Publications

- *Project Resource Manual – CSI Manual of Practice (PRM)*
- *MasterFormat™* (2004 Edition)
- *UniFormat™* (1998 Edition)
- *SectionFormat™* (2007 Edition)
- *PageFormat™* (2007 Edition)

These materials are available from:

The Construction Specifications Institute
99 Canal Center Plaza, Suite 300
Alexandria, VA 22314
Ph: (800) 689-2900; Fax: (703) 684-0465
Email: csi@csinet.org
www.csinet.org (click on Bookstore)

Contract Documents

The general conditions of the contract and contract forms **common** to the following documents, available through the organizations listed:

AIA Document A201 – 2007	- OR -	EJCDC C-700 – 2007
AIA Document A101 – 2007		EJCDC C-520 – 2007
AIA Document B201 - 2007		EJCDC E-500 - 2002
American Institute of Architects		National Society of Professional Engineers
1735 New York Avenue, NW		1420 King Street
Washington, DC 20006-5292		Alexandria, VA 22314-2794
Ph: (800) 242-3837		Ph: (703) 684-2800
Fax: (202) 626-7547		Fax: (703) 836-4875
www.aia.org		www.nspe.org

Study Guide Addendum

Addendum to CSI Examination Study Guides, September 1, 2008

Important Note About Source Materials

The Project Resource Manual – CSI Manual of Practice (PRM) has not yet been updated to reflect the 2007 versions of SectionFormat, PageFormat, and the AIA and EJCDC contract documents. Therefore, some of the information in the PRM is out of date. While a brief summary of the changes is provided in the Addendum to this study guide, candidates are **strongly urged** to obtain and study the 2007 versions of the source documents and not rely solely on the PRM or on older versions of the documents.

PREPARING FOR THE EXAM

Performing a Self-Evaluation

The following questions will help you decide if you are ready to prepare for taking the examination:

1. Do you have access to the *Project Resource Manual – CSI Manual of Practice* (PRM) and the **current editions** of other CSI publications relevant to the exam? Do you thoroughly understand them?
2. Do you use, or are you thoroughly familiar with, the **current editions** of the EJCDC or AIA General Conditions of the Contract and the EJCDC or AIA Owner-Contractor Agreements, as well as agreements for design?
3. If the answer to question 1 or 2 is “No,” are you willing to study the required reference materials in a disciplined manner over several months?
4. Are you willing to attend a series of CSI chapter-sponsored study groups extending over several weeks, if available in your area?

Using the Study Guide

A thorough reading, study, and understanding of the referenced source materials is necessary to achieve a passing score. A candidate whose study efforts thoroughly cover the source materials listed in each study unit will not encounter subjects on the exam that were not covered in the material.

Please use this study guide to help you through the source materials, and call upon the local CSI chapter representatives for assistance as you continue in your quest for knowledge of the construction process. Note that successful candidates prepare for the exam well ahead of the test date. Best wishes for a successful result.

Utilizing Study Tools Not Included in this Guide

Study Groups

Several local CSI chapters offer review courses or group study sessions for this exam. Exam candidates are not required to enroll in study sessions. The discipline of these structured classes and the interaction with fellow candidates, however, has proven helpful to most candidates. Most of these chapter study groups are coordinated through the Certification and Education Committees. They are generally led by group leaders who have passed the CCCA examination. Contact your local CSI chapter or your CSI Region Certification Chair for assistance in locating study sessions in your area.

Online Resources

The CSI website, www.csinet.org/certification, lists additional study information and resources.

Passing the Exam

Candidates may have been away from an academic, test-taking environment for many years. We offer the following suggestions:

1. Preparation should start as soon as possible. Putting off study until the last minute so that information is fresh in your mind is a faulty concept. Cramming the night before or the morning of the examination is also discouraged.
2. Practice answering test questions. A small sample of the types of questions on the examination is included in this study guide. Remember, in multiple-choice questions, usually one or two answers are definitely incorrect. Two answers may seem correct, but only one is right based on the reference materials. Note: None of the questions in this study guide will be used on the actual examination.
3. This can be a difficult examination for the unprepared candidate. The exam thoroughly tests the candidate's knowledge and comprehension of the PRM and related CSI publications and the general conditions and agreements in common use (AIA Documents A101, A201, B201 and EJCDC C700, C-520, E-500). Candidates who took the CDT exam prior to 2009 will have studied different source material and should take care to review all sections of the PRM as well as the updated source materials referenced above.
4. Before the day of the examination, candidates should obtain directions to their test site and, if driving, find out where to park. Allow ample time. Dress comfortably. A good night's sleep and a relaxed attitude are more important than trying to "learn one more thing."
5. Remember that the exam is based on CSI's recommended practices as stated in the PRM. Departures from PRM principles as practiced by individual offices must be disregarded to succeed on this examination.

STUDY GUIDE ORGANIZATION

The study guide is organized in the same manner as the PRM. It follows the chronological order of the facility life cycle, with study units that correspond to each stage of the life cycle of the facility. The study units in this guide are intended to serve as a "road map" for study of the source materials.

Study Unit Organization

Each study unit is organized as follows:

Weight of the Unit on the Examination

The PRM is a comprehensive document. It serves as the primary source for the CDT examination as well as the advanced certification exams, including the CCCA. As passing the CDT exam is a prerequisite to taking the CCCA exam, basic knowledge of the PRM is assumed. Study units are focused on more in-depth knowledge of the PRM and other source documents. Therefore, some units are weighted more heavily than others. Candidates should pay close attention to each unit's weight on the exam and budget study time accordingly.

Examination Objectives

Each unit has a statement summarizing the basic knowledge and comprehension expected of a successful CCCA candidate.

Source Materials

Questions included on the examination are carefully referenced to specific statements in the source materials. Some study units specify basic knowledge of the source materials, while others require a more detailed knowledge of source materials. This section will provide guidance as to the level of knowledge and comprehension of the source materials that is required for each subject area.

Study Checklist

This section outlines the specific elements of information that the candidate should study, and the primary locations in the source materials where the information can be found.

Additional Study Materials Included in the Study Guide

Sample Questions

The sample questions are designed to illustrate the format used for test questions and to provide practice in selecting correct answers from among several alternatives. These questions will not appear on the exam as presented and are NOT a summary of tested material.

ABBREVIATIONS/ACRONYMS

ADR	Alternative Dispute Resolution
A/E	Architect/Engineer
AIA	American Institute of Architects
CCCA	Certified Construction Contract Administrator
CDT	Construction Documents Technologist
CSI	Construction Specifications Institute
EJCDC	Engineers Joint Contract Documents Committee
PRM	Project Resource Manual - CSI Manual of Practice
RFI	Request for Interpretation

Study Unit No. 1 – Documents Used During Construction and Project Delivery Methods

Weight on Examination: 6%

Approximately 12 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure understanding of documents used during construction and the effects variations in project delivery methods have on construction contract administration.

Source Materials

PRM Module 5 - Construction Documents
PRM Module 7 - Construction
AIA Document A101 - 2007
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 – 2002
EJCDC C-700 - 2007
EJCDC C-520 – 2007

Note: The Project Resource Manual – CSI Manual of Practice (PRM) has not yet been updated to reflect the 2007 versions of the AIA and EJCDC contract documents, *PageFormat™*, and *SectionFormat™*. While a brief summary of changes is provided in the Addendum to this study guide, candidates are **strongly urged** to obtain and study the 2007 versions of the source documents and not rely solely on the PRM or on older versions of the documents.

Candidate is expected to understand construction contract administration; the basic principles in each of the contract documents and their relationships, including the owner architect/engineer (A/E) and the owner-contractor agreements, the conditions of the contract, Division 01—General Requirements, Division 02-49 specifications, drawings, modifications, and addenda; contract document requirements for each major construction contract administration activity, including meetings, submittals, observations/inspections, interpretations/modifications, claims/disputes, measurement/payment, quality assurance/quality control, and project closeout; and the importance of feedback to improve future construction documents.

Candidate is expected to understand the various types of construction contracts, including how construction contract administration is affected by each type of contract; and how the roles and responsibilities of the owner, contractor, and A/E change with each project delivery method.

Study Checklist

- A. Definition of Construction Contract Administration (PRM Module 7.1)
- B. Contractual Documents Used in Construction Contract Administration (PRM Module 7.3)
 - 1. Owner-A/E agreements
 - 2. Owner-contractor agreement
 - 3. Conditions of the contract
 - 4. Division 01—general requirements
 - 5. Divisions 02-49 specifications
 - 6. Contract drawings
 - 7. Addenda
 - 8. Modifications
 - 9. Notice to proceed
- C. Contract Document Relationships (PRM Modules 5.1, 5.9, 7.1)
- D. Contract Document Requirements for Each Major Construction Contract Administration Activity (PRM Modules 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12; AIA or EJCDC documents)
 - 1. Meetings
 - 2. Submittals
 - 3. Site visits, observation, and inspection
 - 4. Quality assurance and quality control
 - 5. Interpretations and modifications
 - 6. Executing the work
 - 7. Claims and disputes
 - 8. Measurement and payment
 - 9. Project closeout
- E. Project Feedback (PRM Modules 7.6, 7.8, 7.12)
- F. Contract Administration and Project Delivery Methods (PRM Module 7.1)
 - 1. Single prime contract
 - 2. Multiple prime contracts
 - 3. Construction management contracts in both advisor or agent and constructor roles
 - 4. Design-build contract
 - 5. Owner-build contract

Study Unit No. 2 – Roles and Responsibilities

Weight on Examination: 4%

Approximately 8 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of roles and responsibilities between parties during construction.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC Document E-500 - 2002
EJCDC C-700 – 2007

Note: The Project Resource Manual – CSI Manual of Practice (PRM) has not yet been updated to reflect the 2007 versions of the AIA and EJCDC contract documents, *PageFormat™*, and *SectionFormat™*. While a brief summary of changes is provided in the Addendum to this study guide, candidates are **strongly urged** to obtain and study the 2007 versions of the source documents and not rely solely on the PRM or on older versions of the documents.

Candidate is expected to understand the role of the A/E, owner, and contractor during construction; the application and certification/recommendation for the payment process; the source of expectations by each party to the contract; and the expectations of the A/E, owner, and contractor by others in the construction contract administration process.

Study Checklist

- A. Role of Each Party During Construction (PRM Module 7.2; AIA or EJCDC documents)
 - 1. A/E's administrative duties
 - 2. Participants' expectations of the A/E
 - 3. Owner's responsibilities and rights
 - 4. Participants' expectations of the owner
 - 5. Contractor's responsibilities
 - 6. Participants' expectations of the contractor
 - 7. Initial decision maker
- B. Team Approach (PRM Module 7.1; AIA or EJCDC Documents)
 - 1. Team approach
 - 2. Benefits to working as a team
 - 3. Obstacles to working as a team
 - 4. Team building and partnering
- C. Communication During the Construction Process (PRM Module 7.2)
- D. Contractual Responsibilities for Payment Process (PRM Module 7.11)

Study Unit No. 3 – Preconstruction

Weight on Examination: 5%

Approximately 10 questions from material directly referenced in the source materials from the study unit will appear on the exam.

Examination Objective

- Measure knowledge of preconstruction submittals and administrative procedures.

Source Materials

PRM Module 5 - Construction Documents
PRM Module 7 - Construction
AIA Document A101 - 2007
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 - 2007
EJCDC C-520 – 2007

Candidate is expected to understand the various preconstruction submittals and the importance of processing these submittals prior to construction; the roles of the owner, A/E, and contractor in reviewing preconstruction submittals and temporary facilities and controls; the purpose, content, and procedures of the notice to proceed, the construction agreement, and building permitting process; the purpose of, the agenda for, and the participants in a preconstruction conference; and the purpose of project filing and record retrieval systems.

Study Checklist

- A. Preconstruction Submittals (PRM Module 7.3)
 - 1. Certificates of insurance
 - 2. Surety bonds
 - 3. Subcontractor lists and product lists
 - 4. Schedules
 - a. Construction progress schedule
 - b. Submittal schedule
 - c. Schedule of values

- B. The Construction Agreement (PRM Module 7.3; AIA or EJCDC documents)
 - 1. Who prepares and executes the construction agreement
 - 2. Basic elements of the construction agreement

- C. Notice to Proceed (PRM Module 7.3)
 - 1. Purpose
 - 2. Content

- D. Preconstruction Meetings (PRM Module 7.4)
 - 1. Purpose and participants
 - 2. Procedural meeting
 - 3. Site mobilization meeting

- E. Record Keeping and Reporting (PRM Module 7.6)
 - 1. Project record keeping
 - 2. A/E's documentation
 - 3. Additional documentation

- F. Establishing a Field Office (PRM Module 7.6)

- G. Temporary Facilities and Controls (PRM Modules 5.6 and 7.3)

- H. Authorities Having Jurisdiction (PRM Module 7.6; AIA or EJCDC documents)

Study Unit No. 4 – Procurement

Weight on Examination: 8%

Approximately 16 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of Bidding/Negotiating/Purchasing Activities, collectively known as Procurement.

Source Materials

PRM Module 6 – Bidding/Negotiating/Purchasing
AIA Document A101 - 2007
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 - 2007
EJCDC C-520 – 2007

Candidate is expected to understand the concept of pricing; pricing considerations for the various project delivery methods; the bidding, negotiating, and subcontracting processes; the participants and the processes of purchasing of goods; and the effect of funding sources on the project delivery method.

Study Checklist

- A. The Concept of Pricing (PRM Module 6.1)
 - 1. Pricing methods
 - 2. Purchasing
 - 3. Project funding

- B. Pricing Considerations (PRM Module 6.2)
 - 1. Pricing categories
 - 2. Competitive pricing
 - 3. Value analysis of substitutions
 - 4. Pricing under various delivery methods

- C. Project Information (PRM Module 6.3)
 - 1. Distribution of information
 - 2. Control of information

- D. Bidding (PRM Module 6.4)
 - 1. General considerations
 - 2. Public bidding process
 - 3. Private bidding process

- E. Negotiating (PRM Module 6.5)
 - 1. Participants
 - 2. Procurement documents
 - 3. Negotiating procedures
 - 4. Value Analysis

- F. Subcontracting (PRM Module 6.6)
 - 1. Subcontractor prices
 - 2. Subcontractor issues and concerns
 - 3. Bid shopping
 - 4. Subcontractor bidding environment

- G. Award of Contract (PRM Modules 6.7)

- H. Purchasing of Goods (PRM Module 6.8)
 - 1. General considerations
 - 2. Participants
 - 3. Documents
 - 4. Processes
 - 5. Cost impacts and concerns

- I. Agreements (PRM Module 6.9, AIA or EJCDC documents)

Study Unit No. 5 – Meetings

Weight on Examination: 5%

Approximately 10 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure understanding of construction stage meeting procedures.

Source Materials

PRM Module 7 - Construction

Candidate is expected to understand the purpose and frequency for each type of meeting; who directs, attends, and records minutes of meetings, and the typical agenda items; and the purpose, distribution, review, and limitations of meeting minutes.

Study Checklist

- A. Procedure and Administration of Meetings (PRM Module 7.4)
 - 1. Location and facilities
 - 2. Schedules
 - 3. Participants
 - 4. Administration
 - 5. Minutes

- B. Types of Meetings (PRM Module 7.4)
 - 1. Progress meetings
 - a. Participants
 - b. Agenda
 - 2. Preinstallation meetings
 - a. Purpose
 - b. Timing
 - c. Participants
 - d. Agenda
 - 3. Closeout meeting
 - 4. Other meetings

Study Unit No. 6 – Submittals

Weight on Examination: 8%

Approximately 16 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of construction stage submittals.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
EJCDC C-700 - 2007

Candidate is expected to understand the various types of construction stage submittals and their relationship to the contract documents; the submittal preparation, processing, and review procedures, including the use of submittal review stamps and the importance of maintaining logs and a filing system; and the purpose of each submittal type, and the responsibilities of each participant in preparing and reviewing submittals.

Study Checklist

- A. Construction Stage Submittals (PRM Module 7.5)
 - 1. Shop drawings
 - 2. Coordination drawings
 - 3. Product data
 - 4. Samples
 - 5. Quality assurance/quality control submittals
 - 6. Informational submittals
 - 7. Construction photographs
 - 8. Closeout submittals

- B. Submittal Review Process (PRM Module 7.5)
 - 1. Submittal preparation
 - 2. Submittal review
 - a. Incomplete submittals
 - b. Partial submittals
 - c. Submittals not requiring review
 - d. Submittal stamps

- C. Project Submittal Responsibilities (PRM Module 7.5; AIA or EJCDC documents)
 - 1. Subcontractor/supplier
 - 2. Contractor
 - 3. A/E
 - 4. Consultants
 - 5. Owner

- D. Maintaining Logs and Files (PRM Module 7.5)
 - 1. Importance to contractor and A/E
 - 2. Elements of a submittal log

- E. Submittal Processing Procedures (PRM Module 7.5; AIA or EJCDC documents)
 - 1. Submittal processing of a transmittal form
 - 2. Use of reproductions
 - 3. Prompt processing

- F. Schedule of Values (PRM Module 7.11)
 - 1. Submitted and approved prior to first payment application
 - 2. Complements construction progress schedule

Study Unit No. 7 – Site Visits, Observation, and Inspection

Weight on Examination: 10%

Approximately 20 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of site visit, observation, and inspection procedures.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 – 2007

Note: The Project Resource Manual – CSI Manual of Practice (PRM) has not yet been updated to reflect the 2007 versions of the AIA and EJCDC contract documents, *PageFormat™*, and *SectionFormat™*. While a brief summary of changes is provided in the Addendum to this study guide, candidates are **strongly urged** to obtain and study the 2007 versions of the source documents and not rely solely on the PRM or on older versions of the documents.

Candidate is expected to understand the difference between observations and inspections; the A/E responsibilities for observations and inspections; the contractor's responsibilities for inspections; the importance of keeping the owner informed and methods for doing so; the owner, A/E, and contractor limitations of authority; the responsibilities for defective and nonconforming work; the importance of record keeping and reporting; and procedures for maintaining field record documents.

Study Checklist

- A. Construction Observations and Inspections (PRM Module 7.6)
- B. Contract Requirements and A/E Responsibilities (PRM Module 7.6; AIA or EJCDC documents)
 1. A/E site visits
 - a. Role and frequency
 - b. Scheduling
 2. Limitations of responsibility
 3. More extensive site representation
 4. A/E inspections
 - a. Number and purpose
 - b. Punch lists
 - c. Requirements of contractor

- C. Owner Responsibilities (PRM Module 7.6; AIA or EJCDC documents)
 - 1. Special inspections
 - 2. Owner observations
- D. Contractor Responsibilities (PRM Module 7.6; AIA or EJCDC documents)
 - 1. Contractor's supervision
 - 2. Contractor inspections
 - 3. Contractor's punch list
- E. Working Relationship (PRM Module 7.6)
 - 1. Team concept
 - 2. Conduct at the project site
 - 3. Project site safety
 - 4. Accidents
 - 5. Tolerances and clearances
- F. Defective and Nonconforming Work (PRM Module 7.6)
 - 1. A/E's authority for rejecting work
 - 2. Owner's decisions on defective work
 - 3. Stopping the work
- G. Delivery, Storage, and Protection of Products (PRM Module 7.6)
- H. Record Keeping and Reporting (PRM Module 7.6)
 - 1. Field observation reports
 - 2. Use of photographs and video
 - 3. Use of forms and log forms
 - 4. Filing and retrieval of documentation
- I. Project Record Documents (PRM Module 7.6)

Study Unit No. 8 – Quality Assurance and Quality Control

Weight on Examination: 6%

Approximately 12 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of construction stage quality assurance and quality control services and procedures.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 – 2007
SectionFormat – 2007

Candidate is expected to understand the difference between quality assurance and quality control; contract document requirements regarding quality; and construction contract administration activities related to quality.

Study Checklist

- A. Establishing Quality (PRM Module 7.7; AIA or EJCDC documents)
 1. Participants affect quality
 - a. A/E's observation and inspection role
 - b. Contractor responsibilities
 - c. Others' responsibilities
 2. Examples of quality assurance
 3. Examples of quality control
 4. Concurrent quality assurance/quality control processes
- B. Quality Established by the Contract Documents (PRM Module 7.7; AIA or EJCDC documents)
 1. Quality assurance in standard general conditions
 2. Quality control in standard general conditions
 3. Specifications
 - a. Locations for quality assurance requirements in *SectionFormat*
 - b. Locations for quality control requirements in *SectionFormat*

Study Unit No. 9 – Interpretations and Modifications

Weight on Examination: 16%

Approximately 32 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure understanding of procedures for interpretation and modification of contract documents.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 - 2007

Optional References: PRM Module 5 - Construction Documents

Candidate is expected to understand the procedures and purposes of a Request for Interpretation (RFI) and the responsibilities of the contractor and the A/E for preparing, processing, and responding to an RFI; the procedures and responsibilities for interpreting contract documents; and the general condition provisions and procedures for managing unknown and unforeseen conditions at the project, including suspected hazardous materials.

Candidate is also expected to understand the procedures for contract document modifications and changes to the contract; the construction change process and necessary documentation; change order procedures; and how substitutions may cause contract document modifications.

Study Checklist

- A. Requests for Interpretations (PRM Module 7.8)
- B. Interpretation of Contract Documents (PRM Module 7.8; AIA or EJCDC documents)
 1. A/E is the interpreter
 2. A/E decisions will be consistent with intent of what may be reasonably inferable from contract documents
 3. Timeliness of interpretations
 4. Claims situations and methods to foster dispute resolution
- C. Unknown Conditions (PRM Module 7.8)
 1. Hazardous materials
 2. Unforeseen conditions
 3. Alteration Work

- D. Modifications and Changes to the Project (PRM Module 7.8; AIA or EJCDC documents)
 - 1. Reasons contract document modifications may be necessary
 - 2. Construction change process and documentation
 - 3. Proposal requests
 - 4. Change order request
 - 5. Minor changes
 - 6. Change directives
 - 7. Change orders

- E. Change Order Procedures (PRM Module 7.8)
 - 1. Methods of determining cost increase or decrease for change order
 - 2. Areas of concern for determining the effect of a change
 - 3. Posting modifications to the contract documents

- F. Substitutions (PRM Module 7.8)
 - 1. How substitutions may cause contract document modifications
 - 2. How to determine if substitutions are allowed during construction
 - 3. When substitutions should not be considered
 - 4. Substitutions after the procurement stage

- G. Evaluation of Substitution Requests (PRM Module 7.8)
 - 1. Product
 - 2. Manufacturer
 - 3. Product representative
 - 4. Installation and installer
 - 5. Response to substitution request

Study Unit No. 10 – Executing the Work

Weight on Examination: 6%

Approximately 12 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of procedures for monitoring and enforcement of project schedule and project time completion.

Source Materials

PRM Module 7 - Construction
AIA Document A101 - 2007
AIA Document A201 - 2007
EJCDC C-700 - 2007
EJCDC C-520 - 2007

Candidate is expected to understand the purpose and importance of schedules and complying with schedules; the project time provisions typically established within the contract documents, and the ramifications of not performing responsibilities in a timely manner, including the effect on the project schedule; the typical contract provisions for handling delays, and which types of delays are and are not excusable; and liquidated damage and bonus/penalty clauses.

Study Checklist

- A. Sequencing the Work (PRM Module 7.9)
- B. Scheduling the Work (PRM Module 7.9)
- C. Project Time Provisions (PRM Modules 7.3; 7.4; AIA or EJCDC documents)
 - 1. Time limits
 - 2. Weather delays
 - 3. Other delays
 - 4. Liquidated damage and bonus/penalty clauses

Study Unit No. 11 – Claims and Disputes

Weight on Examination: 8%

Approximately 16 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of procedures dealing with claims and disputes during construction.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 – 2007

Note: The Project Resource Manual – CSI Manual of Practice (PRM) has not yet been updated to reflect the 2007 versions of the AIA and EJCDC contract documents, *PageFormat™*, and *SectionFormat™*. While a brief summary of changes is provided in the Addendum to this study guide, candidates are **strongly urged** to obtain and study the 2007 versions of the source documents and not rely solely on the PRM or on older versions of the documents.

Candidate is expected to understand the difference between a claim and a dispute, and the sources of claims and the claims process; the methods for initiating and handling claims, including the determination and verification of valid claims; the A/E's responsibility in the claims process; and the methods of preventing disputes and dispute resolution procedures.

Study Checklist

- A. Claims and Disputes (PRM Module 7.10)
- B. Claims (PRM Module 7.10.2; AIA or EJCDC documents)
 1. Sources of claims
 - a. Contractor claims
 - b. Owner claims
 - c. Third-party claims
 2. Contractual provisions governing claims
 - a. Subcontractors, suppliers, and other third parties must make claims through the prime contractor (an exception is the mechanic's lien)
 - b. General conditions of the construction contract promote expeditious settling of claims by stipulating strict time constraints for filing, handling, and deciding
 - c. A/E may request documentation from the claimant
 3. Submitting claims
 - a. A/E's responsibility as the impartial interpreter of the contract documents

- b. Claims must be filed initially with the A/E (or initial decision maker)
 - c. Claims are initially decided by the A/E (or initial decision maker) as a condition precedent to dispute resolution
 - 4. Processing and settling claims
- C. Entitlement (PRM Module 7.10)
 - 1. Contractor entitlement
 - a. Work not reasonably inferred in the contract documents
 - b. Timely initiation of the claim
 - 2. Owner entitlement
 - a. Work not reasonably inferred in the contract documents
 - b. Timely notification required
- D. Resolving Claims (PRM Module 7.10)
 - 1. Claims involving adjustments in contract sum or time require supporting documentation
 - a. Claims for additional cost are reviewed against A/E's independent estimate of cost, based on contractor's schedule of values and published estimating guides
 - b. Claims for extra time rely on documentation in the form of planned schedules, as-built schedules, and contemporaneous job site records
 - 2. A/E may order additional testing and sampling to prove or disprove defective or nonconforming work
 - a. Testing should be in accordance with recognized standards
 - b. Interested parties should have the opportunity to witness testing
 - 3. Dispute avoidance
 - a. Each party understanding the interests and limitations of the other
 - b. A/E's role
 - c. Keys are communication, documentation, and claim resolution action plans
- E. Disputes (PRM Module 7.10; AIA or EJCDC documents)
 - 1. When a claim cannot be resolved through negotiation
 - 2. Contractual provisions governing disputes
 - 3. Notification of demand for dispute resolution
 - 4. Alternative dispute resolution
 - 5. Methods of ADR
 - a. Binding - binding arbitration, judicial reference
 - b. Nonbinding - mediation, nonbinding arbitration, mini-trial, disputes review board

Study Unit No. 12 – Measurement and Payment

Weight on Examination: 7%

Approximately 14 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of measurement and payment procedures.

Source Materials

PRM Module 7 - Construction
AIA Document A201 - 2007
AIA Document B201 - 2007
EJCDC E-500 - 2002
EJCDC C-700 - 2007

Candidate is expected to understand the various methods of measurement depending on the basis of payment used for a project; the purpose and uses of a schedule of values, what it should contain, and how to recognize an inaccurately proportioned schedule; and the application and payment process, including retainage and the certification statements on an application for payment.

Study Checklist

- A. Payment Intervals (PRM Module 7.11)
 - 1. Periodic progress payments
 - 2. Provisional payments
 - 3. Single payment
- B. Basis of Payment (PRM Module 7.11)
 - 1. Stipulated sum involves estimating quantity and value of partially completed work
 - 2. Unit price payment involves actual measurement or counting of bid items
 - 3. Cost-plus payment involves obtaining bona fide material and equipment invoices and payroll documentation
- C. Contractual Responsibilities (PRM Module 7.11)
 - 1. Responsibilities of the A/E
 - 2. Payment procedure responsibilities
- D. Schedule of Values (PRM Module 7.11)
 - 1. Properly proportioned itemization of the costs of individual components
 - 2. Complements the progress schedule
 - 3. Should account for startup and completion activities
 - 4. Eases payment process
 - 5. Should include change orders as they occur

- E. Application for Payment (PRM Module 7.11; AIA or EJCDC Documents)
 - 1. Application forms
 - 2. Contractor's preparation of application
 - 3. A/E's review of application
 - a. A/E may certify/recommend an amount less than what the contractor requests
 - b. Expedient method to correct errors is to correct by hand and initial correction

- F. Progress Payments (PRM Module 7.11)
 - 1. Partial payments do not constitute acceptance of the work
 - 2. Are in proportion to measurements

- G. Retainage (PRM Module 7.11)
 - 1. Definition and purpose
 - 2. Different methods of retainage reduction have different results in improving a contractor's cash flow

- H. Withholding Payment (PRM Module 7.11)
 - 1. Conditions under which the A/E may recommend withholding of payment by owner

- I. Failure to Make Payments (PRM Module 7.11)
 - 1. Owner's obligation to make payment within a stipulated time of receipt of the A/E's certification/recommendation
 - 2. Potential consequences of owner's failure to make payment

- J. Liens (PRM Module 7.11)
 - 1. Liens on property
 - 2. Stop notices - liens on construction funds

- K. Final Payment (PRM Module 7.11)
 - 1. Liquidated damages and penalty/bonus clauses
 - 2. Substantial completion, partial occupancy, final acceptance, and payment
 - 3. Final payment

Study Unit No. 13 – Project Closeout

Weight on Examination: 8%

Approximately 16 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of procedures for project closeout, including substantial and final completion.

Source Materials

PRM Module 7 - Construction
PRM Module 8 – Facility Management
AIA Document A201 - 2007
EJCDC C-700 - 2007

Candidate is expected to understand the purpose and significance of substantial and final completion of the project; roles and responsibilities of each participant in determining substantial completion and project closeout; procedures for project closeout; the purpose of liquidated damages and the effect they have on final payment procedures; and the elements of a successful project, post-occupancy activities, and the importance of project feedback.

Study Checklist

- A. Participants and Responsibilities (PRM Module 7.12; AIA or EJCDC documents)
- B. Closeout (PRM Module 7.12; AIA or EJCDC documents)
 - 1. Meeting
 - 2. Starting of systems and equipment
 - 3. Record documents
 - 4. Operation and maintenance manuals
 - 5. Operating software
 - 6. Spare parts, extra materials, and tools
 - 7. Demonstration of systems and equipment and training
 - 8. Commissioning
 - 9. Time of completion
 - 10. Substantial completion
 - 11. Authorities having jurisdiction
 - 12. Punch lists
 - 13. Notification by contractor
 - 14. Inspection of work
 - 15. Certification
 - 16. Owner's right to completed work
 - 17. Adjustment of retainage
 - 18. Final completion
 - 19. Final inspection and final payment
 - a. Issuance of final payment constitutes final acceptance
 - b. Contractor waives making any (new) claims if final payment is accepted

- c. Owner waives making any (new) claims upon issuing final payment
 - 20. Closeout submittals
 - 21. Final charge order
 - 22. Liquidated damages and penalty/bonus clauses
 - 23. Warranties and correction period
- C. Post-Construction Services/Project Feedback (PRM Module 7.12)

Study Unit No. 14 – Facility Management

Weight on Examination: 3%

Approximately 6 questions from material directly referenced in the source materials for this study unit will appear on the exam.

Examination Objective

- Measure knowledge of the concept of facility management, the facility manager's role in project closeout, and the transition between the construction phase and the facility management phase of the facility lifecycle.

Source Materials

PRM Module 8 – Facility Management

Candidate is expected to understand the concept of facility management, the facility manager's role in project closeout, and the construction contract administrator's role in this process.

Study Checklist

- A. Introduction (PRM Module 8.1)
 - 1. Facility Management
 - 2. Roles and responsibilities

- B. Facility Manager's Role in Project Closeout (PRM Module 8.2)
 - 1. Operations and maintenance data
 - 2. Demonstrations and training
 - 3. Punch lists
 - 4. Authorities having jurisdiction
 - 5. Substantial completion
 - 6. Commissioning
 - 7. Project record documents
 - 8. Correction period and warranties
 - 9. Warranty and correction period inspections

SAMPLE QUESTION FORMATS

The sample questions used in this study guide do NOT necessarily represent those questions used in the examination. They are intended to familiarize you with the types of questions and formats that will be presented on the examination. Examination questions may not be limited to the types represented below.

Multiple Choice Question

Multiple choice questions are questions where the participant selects from a number of choices as answers in reply to a text or formula question. The participant must select a single choice as the answer.

1. Construction Contract Administration begins
 - A. when the contract documents are issued for bid or negotiation.
 - B. when the owner-contractor agreement is executed.
 - C. when construction commences.
 - D. during the contract document phase of the A/E's services.

Answer: B

Matching Question

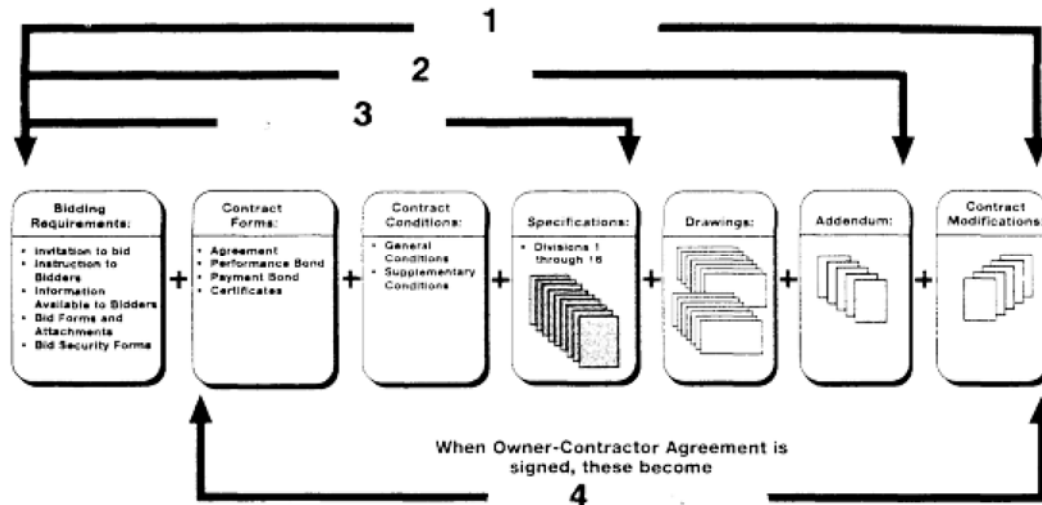
Matching questions are questions where the participant matches a number of choices as answers in reply to a series of text or formula questions. Choices may be used more than once.

2. Match the appropriate party or parties with the corresponding duty or responsibility. A letter may be used more than once in the exercise.
 - A. Contractor
 - B. Architect/Engineer
 - C. Architect/Engineer AND Contractor
 - D. Owner OR Contractor

1. Initiates requests for interpretation. D
2. Interprets the documents. B
3. Is responsible for job site safety. A
4. Reviews submittals. C

3. Matching Graphic Question - Name the missing elements from the following diagram:

- | | |
|-------|---------------------------|
| 1. C. | A. Project Manual |
| 2. B. | B. Bidding Documents |
| 3. A. | C. Construction Documents |
| 4. D. | D. Contract Documents |



Scenario Question

Scenario questions outline or model of an expected or supposed sequence of events.

The lighting fixture schedule indicates 1,000 total fixtures are required for the project. The reflected ceiling plan shows the 1,000 fixtures. However, architectural interior elevations indicate 32 decorative wall sconces that are not on the lighting fixture schedule, or indicated on the electrical power plans. The wall sconces are specified. The Contractor submits an RFI after award of contract requesting clarification.

Based on the above scenario, answer the following question in the space provided.

4. The contractor's RFI should:
 - A. have been sent during the bidding phase.
 - B. be directed to the architect/engineer.
 - C. be sent to the electrical engineer.
 - D. have been sent by the electrical subcontractor.

Answer: B

NOTES

NOTES

USER RESPONSE FORM - CCCA EXAMINATION STUDY GUIDE

As part of CSI's effort to keep documents current, we encourage you to comment on the contents and effectiveness of this document. Please use this form to record recommended changes or additions. Thank you for sharing your experience and helping to keep CSI a leader in the industry.

TO:
Institute Certification Committee
c/o Certification Manager
The Construction Specifications Institute
99 Canal Center Plaza, Suite 300
Alexandria, VA 22314
Telephone: (703) 684-0300 (800) 689-2900
Fax: (703) 684-0465
Email: csi@csinet.org

FROM:
Name: _____
Firm: _____
Address: _____
City/State/Zip: _____
Phone: _____
Fax: _____
Email: _____
Date: _____

STUDY UNIT / PAGE NUMBER / _____

STUDY UNIT / PAGE NUMBER / _____

STUDY UNIT / PAGE NUMBER / _____
