INTRODUCTION

ABOUT THIS BOOK

ARE 5 Practice Exam for the Architect Registration Exam contains over 600 problems organized into six divisions that follow the structure of version 5 of the Architect Registration Exam (ARE 5). Each division includes the same number and types of problems and covers the same subject areas in its corresponding division of the ARE.

• Division 1: Practice Management, 80 problems
• Division 2: Project Management, 95 problems
• Division 3: Programming & Analysis, 95 problems
• Division 4: Project Planning & Design, 120 problems
• Division 5: Project Development & Documentation, 120 problems
• Division 6: Construction & Evaluation, 95 problems

This book is designed to be used in conjunction with PPI’s ARE 5 Review Manual and ARE 5 Practice Problems. Like this book, each companion book covers all six divisions in a single volume.
THE ARCHITECT REGISTRATION EXAM 5

Version 5 of the Architect Registration Exam (ARE 5) consists of six divisions, each of which is a separate, standalone test taking between 3.5 hours and 5 hours. You may take the divisions in any order, but you must complete all six divisions within a five-year period.

The topics covered on each division and the approximate distribution of problems are as follows.

Division 1: Practice Management

Business operations (20–26%)
- assessing resources within the practice
- applying regulations and requirements that govern work environment
- applying ethical standards to comply with accepted principles in given situations
- applying appropriate standard of care for given situations

Finances, risk, and development of practice (29–35%)
- evaluating practice’s financial well-being
- identifying practice policies and methodologies for risk, legal exposures, and resolutions
- selecting and applying practice strategies for given situations

Practice-wide delivery of services (22–28%)
- analyzing and determining response for client services requests
- analyzing the applicability of contract types and delivery methods
- determining project’s potential risk and/or reward and its impact on practice

Practice methodologies (17–23%)
- analyzing impact of practice methodologies in relation to structure and organization of practice
- evaluating design, coordination, and documentation methodologies

Division 2: Project Management

Resource management (7–13%)
- determining criteria required for assembling project team
- assessing criteria required for allocating and managing project resources

Project work planning (17–23%)
- developing and maintaining project work plan
- determining criteria required for developing and maintaining project schedule
- determining appropriate communication to project team—owner, contractor, consultants, and internal staff

Contracts (25–31%)
- evaluating and verifying adherence to owner/architect agreement
- interpreting key elements of and verifying adherence to architect/consultant agreement
- interpreting key elements of owner/contractor agreement
• interpreting key elements of owner/consultant agreement to integrate consultant’s work into project

Project execution (17–23%)
• evaluating compliance with construction budget
• evaluating and address changes in scope of work and scope creep
• evaluating project documentation to ensure it supports specified delivery method
• identifying and conforming with the requirements set forth by authorities having jurisdiction in order to obtain approvals for the project

Project quality control (19–25%)
• applying procedures required for adherence to laws and regulations relating to project
• identifying steps in maintaining project quality control and reducing risks and liabilities
• performing quality control reviews of project documentation throughout life of project
• evaluating management of design process to maintain integrity of design objectives

Division 3: Programming & Analysis

Environmental and contextual conditions (14–21%)
• evaluating site-specific environmental and socio-cultural opportunities
• evaluating site-specific environmental constraints
• determining optimal use of onsite resources by incorporating sustainability principles

Codes and regulations (16–22%)
• identifying relevant code requirements for building and site types
• identifying relevant zoning and land use requirements
• identifying relevant local and site-specific requirements

Site analysis and programming (21–27%)
• evaluating relevant qualitative and quantitative attributes of site as they relate to program
• synthesizing site reports with other documentation and analysis
• analyzing graphical representations regarding site analysis and site programming

Building analysis and programming (37–43%)
• evaluating relevant qualitative and quantitative attributes of new or existing building as they relate to program
• evaluating documentation, reports, assessments, and analyses to inform building program
• identifying and prioritizing components of building program
• assessing spatial and functional relationships for building program
• recommending a preliminary project budget and schedule
• identifying alternatives for building and structural systems for programmatic requirements, preliminary budget, and schedule
• analyzing graphical representations regarding building analysis and building programming
Division 4: Project Planning & Design

Environmental conditions and context (10–16%)
- determining location of building and site improvements based on site analysis
- determining sustainable principles to apply to design
- determining impact of neighborhood context on project design

Codes and regulations (16–22%)
- applying zoning and environmental regulations to site and building design
- applying building codes to building design
- integrating multiple codes to a project design

Building systems, materials, and assemblies (19–25%)
- determining mechanical, electrical, and plumbing systems
- determining structural systems
- determining special systems such as acoustics, communications, lighting, security, conveying, and fire suppression
- determining materials and assemblies to meet programmatic, budgetary, and regulatory requirements

Project integration of program and systems (32–38%)
- determining building configuration
- integrating building systems into project design
- integrating program requirements into project design
- integrating environmental and contextual conditions into project design

Project costs and budgeting (8–14%)
- evaluating design alternatives based on program
- performing cost evaluation
- evaluating cost considerations during design process

Division 5: Project Development & Documentation

Integration of building materials and systems (31–37%)
- analyzing integration of architectural systems and technologies to meet project goals
- determining size of mechanical, electrical, plumbing systems and components to meet project goals
- determining size of structural systems to meet project goals
- integrating specialty systems such as acoustics, lighting, fire suppression, conveying, security, and communications to meet project goals
- detailing the integration of multiple building systems and technologies
- coordinating mechanical, electrical, plumbing, structural, and specialty systems and technologies

Construction documentation (32–38%)
- determining appropriate documentation of building design
• determining appropriate documentation of site features
• determining appropriate documentation of detailed building drawings within individual architectural systems
• applying required standards to assemble a set of clear and coordinated construction documentation
• determining impact of project changes on documentation requirements and method to communicate those changes to owner and design team

Project manual and specifications (12–18%)
• identifying and prioritizing components needed to write, maintain, and refine project manual
• identifying and prioritizing components needed to write, maintain and refine project specifications
• coordinating specifications with construction documentation

Codes and regulations (8–14%)
• determining adherence to building regulatory requirements at detail level
• determining adherence with specialty regulatory requirements at detail level

Construction cost estimates (2–8%)
• analyzing construction cost estimates to confirm alignment with project design

Division 6: Construction & Evaluation
Preconstruction activities (17–23%)
• interpreting architect’s roles and responsibilities during preconstruction, based on delivery method
• analyzing criteria for selecting contractors
• analyzing aspects of contract or design to adjust project costs

Construction observation (32–38%)
• evaluating architect’s role during construction activities
• evaluating construction conformance with contract documents, codes, regulations, and sustainability requirements
• determining construction progress

Administrative procedures and protocols (32–38%)
• determining appropriate additional information to supplement contract documents
• evaluating submittals including shop drawings, samples, mock-ups, product data, and test results
• evaluating contractor’s application for payment
• evaluating responses to nonconformance with contract documents

Project closeout and evaluation (7–13%)
• applying procedural concepts to complete closeout activities
• evaluating building design and performance
EXAM PROBLEM TYPES
There are several types of problems on ARE 5 and in this book.

- multiple-choice problems
- check-all-that-apply problems
- fill-in-the-blank problems
- hot spot problems
- drag-and-place problems
- case study problems

Multiple-Choice Problems
Multiple-choice problems have two types. One type of multiple-choice problem is based on written, graphic, or photographic information. You will need to examine the information and select the correct answer from four given options. Some problems may require calculations. A second type of multiple-choice problem describes a situation that could be encountered in actual practice. Drawings, diagrams, photographs, forms, tables, or other data may also be given. The problem requires you to select the best answer from four options.

Multiple-choice problems often require you to do more than just select an answer based on memory. At times it will be necessary to combine several facts, analyze data, perform a calculation, or review a drawing.

Check-All-That-Apply Problems
Check-all-that-apply problems are a variation of a multiple-choice problem, where six options are given, and you must choose all the correct options. The problem tells how many of the options are correct, from two to four. You must choose all the correct options to receive credit; partial credit is not given.

Fill-in-the-Blank Problems
Fill-in-the-blank problems require you to fill in a blank with a value that you have derived from a table or a calculation.

Hot Spot Problems
Hot spot problems are used to assess visual judgment, evaluation, or prediction. Hot spot problems include the information needed to make a determination, along with an image (e.g., diagram, floor plan) and instructions on how to interact with the image. The problems will indicate that you should place a single target, also known as a hot spot icon, on the base image in the correct location or general area. On the exam, you will place the target on the image by moving the computer cursor to the correct location on the image and clicking on it. You will see crosshairs to help you position the point of click. You will be able to click on an alternate spot if you think your first choice is not correct. Your choice is not registered until you exit the problem. You can click anywhere within an acceptable area range and still be scored as correct.

Drag-and-Place Problems
Drag-and-place problems are similar to hot spot problems, but whereas hot spot problems involve placing just one target on the base image, drag-and-place problems involve placing two to six design elements on the base image. Drag-and-place problems are used to assess visual judgment or evaluation with multiple pieces of information. The problem statement describes what information is to be used to make the determination, and provides instructions on how to interact with the image or graphic item.

A drag-and-place problem, for example, may require you to drag and place design elements such as walls or beams onto the base image. On the exam, you will use the computer cursor to place the
elements on the image by clicking and holding elements and dragging and releasing the elements on the correct location on the image. Depending on the question, you may use an element more than once or not at all. This type of question also provides an acceptable area range for placing the elements. The range may be small for questions about a detail or large for something like a site plan.

**Case Study Problems**

Each division's exam includes one to two case studies. Case studies are performance problem types comprising a scenario, a set of related resource documents (for example, code resources, drawings, and specifications), and a set of case study-specific problems. During the exam, you will be able to click on browser-like tabs at the top of the computer screen and flip back and forth between the case study scenario and resource documents. The case studies will test your ability to examine and use multiple pieces of information to make decisions about scenarios that could be encountered in the practice of architecture.

Case study problems may be multiple-choice, check-all-that-apply, fill-in-the-blank, hot spot, or drag-and-place.

For more information and tips on how to prepare for ARE 5, consult the *ARE 5 Review Manual* or visit PPI's website, [ppi2pass.com/arefaq](http://ppi2pass.com/arefaq).